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## **Voluntary work in Europe**

### **- the influence of perceived financial security in the choice of volunteering**

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**Abstract:** The core of many modern societies can be described through exchanges of goods and services. These reciprocal actions are constantly increasing in frequency, and constitute a daily struggle for people with high demand on their time. In contrast to people's busy schedules, there is a popular trend to give away one's time by for example performing voluntary work. Previous research has even indicated that the ones choosing to volunteer tend to have a higher opportunity cost of time. It is therefore of great social and economic interest to further examine the characteristics of volunteers to better understand the benefits and costs associated with performing voluntary activities. By using a pooled cross-sectional dataset with two rounds from the European Social Survey, we aim to investigate if a higher perceived financial security has a positive impact on the probability of having performed voluntary work and to give further insights to the behaviour within voluntarism. With significant results, we find evidence that a stronger perceived financial situation is estimated to have a positive impact on the likeliness of having performed voluntary work.

Keywords: voluntary work, opportunity cost, perceived household income

JEL: A3, D1, E24, J22

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# 1. Introduction

Throughout history humans have formed societies to be weightily dependent on exchange. Everywhere in our daily life there are individuals entering different forms of agreements with the basic structure that one gives something to someone else with the expectation to receive something in return. These reciprocal interactions have for long been an important cornerstone in both our social, as well as, our economic development. Consequently, contributing to an improved standard of living for many inhabitants. This has affected the possible shape of the exchange. Without having to endanger one's financial situation, individuals can agree to receive less or even nothing in return. Moreover, shifting one's daily focus towards a more pro-social and altruistic behaviour rather than being self-centred concerning one's own needs. The opportunity to freely give away one's time by performing voluntary work is a classic yet interesting example. This sequential option raises the question if a stronger financial position correlates with actually choosing to offer free labour. The purpose of this thesis is therefore to investigate if higher perceived financial security has a positive impact on the probability of having performed voluntary work.

Voluntarism has for long been a central pillar in our societies. A voluntary activity is in short terms work done without monetary compensation, and includes everything from community work, international aid engagements to volunteering in sports associations. The wide range of civil society organisations has involved both an integral impact to social and political movements and progresses, but also constituted greatly of educational, environmental, and health engagements (UNV, 2011). The research field of voluntarism is rich and broad. Numerous researches have indicated a relationship between volunteering and positive economic and political outcomes. Voluntary work has also been proposed as an alternative option to “inefficient” government activity and thus fulfilling a possible gap between the private and the public sector (Weisbrod, 1975). Additionally, volunteering has been claimed to foster civil society and building trust (Putnam, 1993; Fukuyama, 1995). Overall, volunteering contributes to social capital and communities' welfare, which has shown to increase further development (Putnam, 2000; Wilson, 2012). Voluntary work has not only proved to offer several benefits on a communal level but also on an individual level (Borgonovi, 2008; Wilson, 2000, 2012; Wilson & Musick, 1999). For example there are studies demonstrating a positive relationship between volunteering and physical and mental health (Grimm, Spring & Dietz, 2007; Thoits & Hewitt, 2001), as well as to academic learning (Melchior, 1998), and finally to the ability of coping with life events (Midlarsky, 1991).

Voluntary work is thereby not only of great importance for the actual beneficiary and voluntary organisations, but also highly relevant for governments and individual participants. However, the personal benefits associated with volunteering can have negative implications if they are unevenly distributed between individuals. Researchers have shown different levels of participation among different income groups, where the propensity to volunteer tends to increase with income (Toppe, Kirsch & Michel, 2002; Verba, Schlozman & Brady, 1995). In a world with increased income gaps (Stone, Trisi, Sherman & DeBot, 2015; Dabla-Norris et al. 2015), the importance of this issue can become even greater and should

therefore further be investigated. Moreover, given different economic systems, currencies, purchasing power and political engagement across Europe, we believe that a measurement of perceived financial security can give a nuanced picture compared to the level of income.

In addition to different level of participation, Freeman, among others, argues that when choosing to perform voluntary work the volunteer has to experience greater utility from the first hour volunteered compared to an hour spent on paid work or leisure. Concerning this matter, he raised the importance to study an individual's opportunity cost of time to explain the choice of performing unpaid work. Inter alia, he applied the standard labour supply substitution behaviour to volunteering, and the model's predicted result would be to see people with higher opportunity cost of time (i.e. high wage) to volunteer less. However, in the majority of demographic cases Freeman found that the ones volunteering were mainly people with higher potential earnings or greater demands on their time, such as employed, married individuals with larger families, in their peak age of earnings 35–54, highly educated and professionally positioned people (1997). This observed tendency in voluntarism enquires the possibility to examine other measurements of opportunity cost than Freeman's estimate based on wage, such as *perceived* financial security. Freeman explained his results with the implications of social pressure when one is requested to volunteer, this will also further be developed and taken into consideration.

This thesis consists of an econometric analysis on empirical data collected through the European Social Survey (ESS) in 2006 and 2012, and the aim of the thesis is to give insights to the behaviour of volunteers in relation to their perceived financial situation. One's perceived financial situation is subjectively grounded but will imply additional explanations to the matter. The ESS constitutes of an extensive database with randomly chosen respondents all over Europe and is widely used among researchers, it will therefore give a comprehensive and reliable picture in our empirical analysis. The method chosen is a Linear Probability model, and the results indicate a positive relationship between perceived financial situation and the likeliness of having performed voluntary work.

The remainder of this thesis is structured as follows, in Section 2 previous research concerning voluntary work is described, in Section 3 the empirical question and the hypothesis are presented, in Section 4 the empirical method is explained followed by Section 5 where the results of the study are analysed, in Section 6 these findings are discussed to finally be concluded in Section 7.

## **2. Background**

### **2.1 Definition and variation of voluntary work**

The research field of voluntarism is complex in the sense that there are many different definitions used for voluntary work. In 1999, Smith tried to distinguish criteria involving the different definitions. Firstly, there is the discussion concerning reward, if the volunteer undertakes the activity of purely altruistic reasons or if there is a matter of so called “warm glow” (feeling better of helping others), present in the action. Next is the opinion of free will, if voluntary work is performed only because the volunteer wants to or if social pressure plays a role in the decision to give away one’s time. Both in the first and the second criteria it is hard to draw a clear line between what is purely altruistic and what is impure altruistic, as well as, how much is free will and how great the effect of social pressure is. Further discussion about this is found in Section 3.1.2. Thirdly, there are differing interpretations if the beneficiary can be someone the volunteer knows such as a friend, a family member, a neighbour, or if it has to be a complete stranger. Moreover, opposing views also exist if the voluntary activity has to be done in formal settings such as through an organisation or if it can be done informally. Lastly are the diverse demands of the level of commitment, where some definitions involve certain regularity others allow for a single occasion to be counted as volunteering.

The United Nations Volunteers have defined voluntary work as an action that is performed on one’s own free will, which is mainly undertaken for non-pecuniary reasons and for the benefits to others, and this is the definition that will be used in this thesis (UNV, 2011).

Voluntary activities can take many different forms and can be found within a broad range of segments in society; there is political engagements, involvements in sports and outdoors clubs, cultural and hobby activities, business and professional organisations, humanitarian and environment organisations, religious communities and much more. A common view is that these activities are characterised by generosity, the behaviour of frequently and abundantly doing good to others (Science of Generosity, 2012). Broadly speaking, one may include so called informal help, as in for example assisting someone to cross the street, in such behaviour. The scope of this thesis will however be voluntary work for voluntary or charitable organisations.

### **2.2 The importance of voluntary work**

In the production of services voluntarism constitutes a significant resource and has played an important role internationally (Menchik & Weisbrod 1987; Mook, Handy & Quarter, 2007). For instance voluntary activities can be used as a political mean in trying to reduce public expenses and thus ameliorate a country’s budget deficit during financial downturns. Moreover, financial downturns are often associated with higher unemployment rates. Combining unemployment with an increasingly ageing population raises

the relevance of part-time occupations with voluntary work. Worth mentioning is that temporary voluntary work has shown to have a positive impact in gaining both confidence and qualification for unemployed. Furthermore, performing voluntary activities have positive signals in the labour market and research has shown that volunteers increase their probability to improve the outlook of their career, to receive better professions and to reach higher earnings (Hackl et al. 2007; Katz & Rosenberg, 2005; Menchik & Weisbrod, 1987; Proteau & Wolff, 2006). There are also more examples of this among students who have the chance of enhancing their résumés with voluntary work and thus attract extra attention in admissions (Serow, 1991; Friedland & Morimoto, 2005). As well as among women who have raised children or newly arrived immigrants, there are opportunities to attain local work experience and also improve the chance of re-entering the labour force (Handy & Greenspan, 2009; Schram & Dunsing, 1981).

Finally, most countries calculate their GDP from what has yearly been produced in the public and private sector, and since voluntary work often falls into a third, non-profit sector these volunteer contributions are in many cases excluded from the national accounts (Menchik & Weisbrod 1987; Mook, Handy & Quarter, 2007). Even though voluntary labour fulfils the general characteristics of an economic activity by using resources to produce goods and services to satisfy human needs, it often goes unnoticed in economic terms making it challenging to exactly quantify the historical impact of voluntary work. Consequently, it is an interesting sector to study and additional research in this field is of great relevance.

### **3. Previous research**

#### **3.1 Individual level**

To our best knowledge, researchers seem to commonly divide the determinants of volunteering into two frameworks. Firstly, volunteering can be decided upon individual characteristic such as wage and non-wage income, or community characteristics such as level of accumulated social capital. In the upcoming section, earlier researched individual benefits and characteristics will be described followed by characteristics of communities.

##### **3.1.1 Individual benefits**

In addition to warm glow, the volunteer can potentially also receive other benefits of volunteering. These benefits are important to determine, to better understand the choice that individuals face between performing voluntary work and their opportunity cost of time. In Benenson and Stagg's work from 2016, they point out a few main nonfinancial assets individuals can build by volunteering, two of these are social capital and human capital. They argue that especially low-income workers have great opportunities to improve their lives and support their communities by voluntarism.

##### **Social capital**

From an individual asset-based framework, social capital refers to the accumulated value of actual or potential resources connected to social relationships (Bourdieu, 1986). Social capital consists of two main components namely social network and trust (Adler & Kwon, 2002; Glanville & Bienenstock, 2009; Paxton 1999). There is a great deal of research indicating that volunteers taking part in civic engagements, such as voluntary activities, gain social capital (Cnaan & Goldberg-Glen, 1991; Glaeser, Liabson & Sacerdote, 2002; Prouteau & Wolff, 2007; Putnam, 2000; Wilson 2012, Wilson & Musick, 1999).

In addition to what previously has been stated regarding the positive impact voluntary work can have on one's professional career, individuals can through voluntary activities access social capital which in turn can imply personal benefits such as social support or information that might be useful in finding employment and in recruitment processes (Lin, 2001; Paxton, 1999).

The core of social capital is that people invest in their social relationships with the expectation of receiving some return (Lin, 2001). By volunteering in an association people form trusting relationships that in turn raise the expectation that the investment will be reciprocated (Putnam, 2000). For example individuals may volunteer in their child's football club with the expectation that another parent will do this later on.

Finally, there are also studies that show that the creation of social capital gained when volunteering is overrated. The main argument here is that the time one volunteers in voluntary associations is of such small proportion compared to time spent with family and friends, or at the workplace, at the school or in

the neighbourhood (Freitag, 2003; Dekker, 2009).

### **Human capital**

Human capital can be described to involve skills and knowledge that enable personal, social as well as economic welfare (Rosenbaum, 1986). In 1993, Becker argued that training and education are the most central ways to invest in human capital. Moreover, with an investment focused approach volunteering would institute a platform where one can acquire these skills and there is also research supporting this (Hackl, Halla & Pruckner, 2007; Wilson & Musick, 1999).

To summarise, these previously mentioned contributions of voluntary work provide helpful information regarding an individual's time allocation between paid work, voluntary work and leisure. Furthermore, the importance of this research cannot only be seen on an individual level but also be of great help to governments and other institutions when forming effective policy designs.

#### **3.1.2 Impure or pure altruistic motives**

When researches try to distinguish the motives to why people chose to volunteer, the interpretation of the reward of volunteering is highly significant. These interpretations can be divided into two main frameworks, the private consumption model and the public goods model. From the viewpoint of the private consumption model it is the actual act of giving time that motivates the volunteer. That is the warm glow that the volunteers feel by helping someone else. In the public goods model, giving time by volunteering is done for the benefit of others by increasing the supply of the public good. The recipients' well being is in focus, which the volunteer is mostly concerned of (Duncan, 1999; Schiff, 1990; Unger, 1991). This is seen to be a purely altruistic model, nevertheless the model has not been verified by data. Because if the volunteers only cared about the supply of voluntary work, their engagement would be lowered if government spending on the provision of public goods increased, a so-called crowding out effect. The opposite, higher levels of voluntary work has actually been observed in periods with higher government spending on social welfare (Salamon & Sokolowski, 2001; Duncan, 1999). These observations imply that volunteers care about warm glow or other private benefits. Consequently, researches usually use a combination of the two motives, the impure altruistic model, involving both the private and the public benefits of voluntary work (Andreoni, 1989, 1990).

#### **3.1.3 Measurements of warm glow**

There are a numerous amount of research stating the positive benefits with volunteering, there amongst improved mental and physical health (Greenfield & Marks, 2004; Li & Ferraro, 2006; Musick & Wilson, 2008; Thoits & Hewitt, 2001). However, when it comes to the positive benefits that warm glow can have on individuals' health, these seem to be harder to describe. Most attempts of quantifying warm glow is made by asking why people choose to volunteer and if they do it because it makes them feel better about themselves (Cnann & Goldberg-Glen, 1991). But there are also other ways of trying to describe the

obtainment of warm glow with another field of research, namely happiness. The foundation of this explanation is that it is the relative income rather than the absolute income that determines individuals' level of happiness (Easterling, 1995, 2006, 1996; Frey & Stutzer, 2002; Luttmer, 2005). This argument can also be applied to an individual's relative levels of human and social capital, and health. Moreover, there is also empirical evidence that indicate that higher levels of health, social status and education correlate with higher levels of happiness (Bonsang, 2006). Thus when these characteristics are put in relation to others this can consequently create an experienced positional advantages compared to individuals possessing a smaller amount of these resources. An example of this can be found in many human services where the volunteer has a relative positional advantage in regards to health, income, or social and human capital compared to the beneficiary. The satisfaction of helping others is attained and amplified by the differentiation in resources between the volunteer and the beneficiary. Thereby, the warm glow is originated from the actual act of giving one's time and helping others in combination with their positional advantage (Handy & Mook, 2011). It is therefore of additional interest to examine if individuals with a better perceived financial situation have greater tendency to perform voluntary work because they experience more warm glow, which in turn are caused by their positional advantage. If voluntary work helps fostering further human and social capital, these positional advantages might infer greater resource gaps between individuals.

### **3.1.4 Conspicuous consumption**

In regards to the private consumption model, which allows for impure altruistic motives, volunteering behaviour can also be explained by "conspicuous consumption". In some cases pro-social behaviour such as volunteers' engagements can have signalling effects to their surroundings (Bénabou & Tirole, 2006). If people's voluntary involvements are visible and official to others, they will most likely be associated with pro-social values and consequently and indirectly affect their social standing. Veblen was in 1899 among the first ones to recognise conspicuous consumption, which later was further researched concerning prestige, status and positional goods (Hirsch, 1976; Frank, 1985, 1999).

Recently, there have been debates concerning people's consumption patterns. In some cases social norms discourages conspicuous consumption, especially of more luxury goods. Consequently, to still visualise one's wealth other signals have to be used. Moreover, people with a very strong financial situation could potentially be interested in differentiating themselves from others, less wealthier ones or even nouveau rich, who have not applied these changed social norms to their lifestyles (Feltovich, Harbaugh & To, 2000). Giving away one's time could show that a wealthy individual is above these considerations concerning luxury goods. Voluntary work shows a signal that can be clearly visible but which also is more costly to mimic. By volunteering one does not only give up time that could be spent on paid work but that also could have been spent on leisure. Donations can likewise be an altruistic signal and play an important part in indicating someone's status, however, if this is put in comparison to one's equally wealthy

surrounding peers other signals are necessary to stand out. Any financially secure person can make a donation, but the antes of volunteering are argued to be higher (Handy & Mook, 2011). This possible behaviour pattern within voluntarism could be present for the individuals with the highest perceived financial security.

### **3.2 Characteristics of communities**

Scholars, as well as, philosophers have long asked themselves what produces generous individuals who are willing to cooperate, share, and help each other through collective actions. One given explanation to this has been the local level of social bonds and its role in producing individual actions for the public good. A known advocate of this belief is Robert Putman who in 1993 with his work *Making Democracy Work* explained that the level of social capital could help explain differences in civic life. By accumulating individuals' social capital within different regions in Italy, he found that communities with high social capital, had facilitated the coordination and cooperation for the mutual benefit and where the ones that thrived (Putnam 1995).

In the beginning of 2016 Glanville, Paxton and Wang used the European Social Survey to asses the predicted effects of individual and contextual level social capital on volunteering, charitable giving and informal helping. These researchers suggest that regional level of social capital predicts greater volunteering. This study is interesting and relevant for this thesis for two main reasons, firstly, because they focused on the same population, though only partly the same sample, and secondly, because of their findings about the importance of accumulated social capital for a high level of volunteering, as well as, the opportunity for individuals to gain social capital through voluntary activities.

### **3.3 Freeman's research on volunteering behaviour**

In 1997 Freeman examined what motivates people in the USA to volunteer. What distinguished his research to many others was the approach for looking for substitution and income effects present in the decision to volunteer. To examine if these effects exist within voluntary work, Freeman used the standard labour supply model. In the contrast to the earlier proposed patterns of volunteering behaviour, the model's predicted results would be that people with high opportunity cost of time, such as high earnings, would tend to volunteer less, and vice versa. However, his results indicated that only a minor part of the differences in volunteering could be explained by this theory, namely that elderly tend to volunteer more than working people. Instead he found that individuals with high opportunity cost of time and demand on their time tend to volunteer more, which is in line with the previously mentioned research. This still does not mean that the model is not applicable. It is possible that the proxies were not accurate, which would raise the relevance for additional measurements concerning substitution behaviour.

In addition to warm glow, positional advantage and conspicuous consumption, Freeman also highlights possible social influences in the decision to volunteer. Freeman's second, main finding was that many only

volunteer when they are requested. He therefore argues that volunteering should not be thought of as standard consumer behaviour, but rather a so called “conscience good”, that people feel social pressure and thus morally obliged to volunteer when they are asked, but which they would just as soon let someone else perform. In regard to the previously mentioned research and by combining and accounting for Freeman’s two findings in one gathered model would bring a greater overall perspective of volunteering behaviour.

## 4. Research question

The benchmark of Freeman's research from 1997 is the standard labour supply model. As stated above, he investigated if there is a substitution behaviour concerning voluntary work. This would imply that people with higher opportunity cost of time should volunteer less and that people with lower opportunity cost of time should volunteer more. The differences found in level of participation in voluntary activities could only partially be explained with this theory, which makes the choice of variables involved in the regression especially interesting. Freeman calculated opportunity cost of time by hourly earnings of the respondent, however, using wage as independent variable comes with several drawbacks. A person can either have a high or a low wage but still be highly, financially dependent on that wage. Thus, wage size would have to be put into comparison with for example the person's expenses to give a better, overall view of their financial situation. There is also a vagueness concerning hourly earnings to not include for income earned outside of work, which can imply measurement errors. It is likewise possible that people attain other financial resources apart from their wage, for example by being supported by friends and family. In this thesis the aim is therefore rather to focus on a more subjective view of the respondents' opportunity cost of time, namely to be explained by their perceived financial situation. The reason for this is to reach a more relative measurement of individuals' dependence of their income compared to their financial situation, which will offer a better understanding of the economics of volunteering. Freeman's research also shows that there is a relationship between the respondent and the respondent's partner, if one volunteers the other person also tend to volunteer. This would further support the value to examine the respondent's feeling about their household's income and not their individual wage.

In consideration to Freeman's work concerning opportunity cost within voluntary work, it is not only important to examine the effects of an alternative independent variable, but to additionally bring further insights to the levels of voluntary participation among different income groups. It is therefore of relevance to investigate if a better perceived financial security fits the previously discovered pattern of wealthier individuals' tendencies to volunteer more. This will deepen the understanding of volunteering behaviour to not only involve absolute numbers of income. The previously mentioned, nonfinancial assets attained when performing voluntary work are of great personal value, and society as a whole would benefit if these are evenly achieved among individuals from different social groups.

**Hypothesis:** Individuals feeling more financially secure are more likely to have volunteered compared to individuals feeling less financially secure.

$$H_0: \beta_1 \leq 0$$

$$H_1: \beta_1 > 0$$

where  $\beta_1$  is the coefficient for the variable perceived financial security.

## 5. Empirical method

### 5.1 Choice of econometric approach

In this research a pooled cross-sectional sample is created with data from the European Social Survey (ESS). The dataset consists of random samples collected at two occasions, in 2006 and in 2012, but are both from the same population. This two-round dataset gives a sample of 92 026 observations. To our best knowledge and in regard to the size of this sample, there is no similar research made in this field of study. This large and recent, pooled cross-sectional sample will provide new insights concerning standard labour supply substitution behaviour in voluntary work.

A linear probability model (LPM) is chosen since we have a binary outcome, either the respondent has volunteered the last 12 months or the respondent has not. Consequently, the dependent variable in the regression is either 0 (have not volunteered) or 1 (have volunteered). The questionnaire was designed to ask how often the respondent performed voluntary work, thus all the positive answers, regardless the frequency, are accumulated and given the value of 1.

When having a dependent variable with a binary outcome there are two other options to the LPM, namely the probit model (PM) and the logit model (LM) (Wooldridge, 2013). Since neither of the PM and the LM assume linearity between the dependent and the independent variables, they are often considered more sophisticated compared to the LPM. Nevertheless, the LPM is commonly used in economic studies and especially when studying comparisons of group differences in coefficients (Greene, 2012; Holm, Ernæs & Karlsson, 2014), which still makes the LPM a suitable choice.

A LPM is simply estimated by Ordinary Least Square (OLS), thus our pooled LPM takes the following form:

$$Y_{it} = \beta_0 + \beta_1 X_{it} + \beta_2 X_{it} + \dots + \beta_n X_{it} + v_{it}$$

Where we define,  $v_{it} = a_i + u_{it}$

The combined error term in this model consists of a fixed effect  $a_i$ , which involves factors that are persistent over time, but which can vary between countries. Secondly, an idiosyncratic error term  $u_{it}$  is included to account for variations over time within countries, for example temporarily shocks that may have had an impact on the tendency to perform voluntary work, such as environmental catastrophes or refugee waves.

One of the drawbacks with this type of model is that it does not justify the time-invariant country specific fixed effects,  $a_i$ , which, in turn, can result in biased coefficients. To ensure unbiased coefficients, the Gauss-Markov assumptions need to be fulfilled (MLR 1– MLR 4). The first three conditions are fulfilled; linear in parameters (MLR 1), random sampling (MLR 2) and no perfect collinearity (MLR 3). However the MLR 4,  $Cov(X_{it}, a_i + u_{it}) = 0$  is unlikely to be fulfilled (Wooldridge, 2013), to still justify the condition and consequently avoid attaining biased estimated coefficients, the model will include dummy variables to represent each country. Likewise, to also justify for time trend implication, dummy variables for the rounds of the ESS are also included.

Since the dependent variable in the LPM has a binary outcome it must contain heteroskedasticity and it therefore undermines the OLS standard errors and test statistics, by violating MLR 5. The LPM does also violate the assumption of normal distribution of the error terms. To still use the OLS estimation, we compute robust standard errors in our test statistics to control for this heteroskedasticity (Wooldridge, 2013).

Further implications such with omitted variable biased could possible be present since perceived financial situation replaces both hourly earnings and absolute income. It would be beneficial to account for income to ensure that it is not only individuals with a high income that also have a high-perceived financial situation. However, this income variable was not included because of two main reasons. Firstly, by including both these variables, there is the risk of multicollinearity, possibly violating MLR 3. Secondly, there would be several measurement and comparability complications involved with the variable income. In contrast to Freeman, this sample is cross-national and there are thus various currencies, different dates for exchange rates used by the ESS, differences in purchasing power, taxation systems, political governance, cultural difference and so on, which makes the income measurement difficult to apply but also to interpret. Worth mentioning, country differences are accounted for. Additionally, there is also the possible measurement error that respondents report an incorrect sum of their income, which all together speaks in favour of only having perceived financial situation as independent variable of interest.

The null hypothesis will first be tested to examine if the coefficient is non-zero, which will be done by performing a F-test. In regard to the result of this test, a one sided t-test will then be performed to predict the value of the coefficient, and thus to possibly be able to reject the null hypothesis at a high significance level. This would consequently support the hypothesis.

It is rather simple to insert combinations of values for the independent variables in the LPM and thereafter receive a prediction. However, since these predictions concerns probabilities and it is possible that they have a value greater than one or less than zero, these probabilities can be problematic to handle. A further issue is that a probability cannot be linearly related to the possible values of all the independent variables (Wooldridge, 2013). Having relatively low values of the coefficients reduce the likeliness of receiving a probability that is greater than one and thus impossible. Nevertheless, there is still a drawback

that the marginal effect in the regression is constant for all one-point increases of a variable and this has to be taken into consideration when analysing the results. This has implications if a one-point increase in the scale of a variable is seen to be relatively higher than the estimated marginal effect by a coefficient. Finally, the LPM is suitable when the values of the independent variables are close to the average of the sample (Wooldridge, 2013). Observing the distribution of the variable perceived financial situation, we find that the majority, 44% of the respondents, has implied that they are coping on their household income which is close to the mean of the sample, see appendix 9.1.2.

## 5.2 Data description

The European Social Survey (ESS) is an individual cross-national survey that is conducted in Europe every second year with the start in 2001. Seven rounds are thus collected between 2001 and 2014. The rounds of 2006 and 2012 have been chosen since these are the only rounds that include the same question about participation in voluntary activities. There are additionally one other round that contains questions concerning voluntary work, but because of formulation differences and thus comparability limitations, it could not be included. When pooling the two rounds from 2006 and 2012, a sample of 28 countries and 92 026 respondents is created. The respondents are chosen randomly without regards to their nationality, citizenships, language or legal status. The surveys are conducted through a face-to-face interview with newly selected, cross-sectional samples (ESS Sampling Guidelines, 2014). Consequently, there is no longitudinal study between the rounds and the same respondent should not participate more than once. The aim of the ESS is to observe changes to people's attitudes, values and behaviour in Europe. The scope of the survey is individuals aged 15 and over (ESS, 2016).

### Weights

The dataset used in this thesis, consists of two rounds and has multiple countries involved. Consequently, to avoid possible sample bias and measurement errors, design and populations weights have to be accounted for.

Since there might be an unequal probability of participation in the sample due to sampling design, the ESS have calculated design weights to correct for this and this weight is used in the regression. This is named as *DWEIGHT*.

Since there are not proportional amounts of observation compared to countries' population size, a population weight is included. When not accounting for a potential unequal population sizes, the regression could possible include biased estimates with for example larger countries being under-represented or smaller countries being over-represented, or vice versa (ESS, 2016). The *PWEIGHT* is calculated as the following:

$$PWEIGHT = (\text{Population size aged over 15 years and above} \\ \div \text{Net sample size in country}) \times 10\,000$$

Finally, to correct for both the weights in the same regression, the weights are joint as follows:

$$wgt = PWEIGHT \times DWEIGHT$$

### **Potential bias**

When analysing a dataset from this type of survey, the uncertainty concerning the respondents' interpretation of the question has to be taken into consideration. To begin with, there is the question about participation in voluntary activities. People's interpretation of voluntary work often varies, where some may only include voluntary work within humanitarian organisations, others can possibly only associate it with religious communities, and a third group might forget to think about voluntary work they did in their local sports club. Starting off by naming a few examples of voluntary work is a way to exemplify for the respondents, but might also affect their way of thinking about other possible accurate activities. Since this question is the dependent variable in the regression, it is worth mentioning the likeliness that not all respondents are aware of potential voluntary work they have performed or potentially including activities that should not be defined as volunteering.

There does not only exist a possible vagueness about the interpretation of the question but also in regard to the scale the respondents choose to answer with. The problem lies in that different respondents have their own interpretation of what for example a three out of a five means, this can potentially lead to measurement errors when there are difficulties to achieve a shared understanding of both the question and the scale. In some questions each level of the scale is explained by a short description. For example, the question concerning how the respondents feel about their household income. In the question regarding how satisfied the respondents feel about their life, a description is only given to the lowest and highest values, leaving more room for a personal interpretation.

Secondly, in self-reporting data such as the ESS, there is the concern of respondents not giving trustworthy answers. Especially in cases like these with a face-to-face interview, the respondents might feel they want to present themselves in a more positive manner than what actually is the case. Consequently, they might tend to leave false or exaggerated answers (Wooldridge, 2013). Nevertheless, the ESS has commonly and globally been used by several researches and is seen to be a reliable dataset with for example being recognised the European Research Infrastructure Consortium (ERIC) status in 2013 (ESS, 2016). Additionally, by having pooled two rounds and also using recommended weights, these potential deviations are hopefully ruled out.

Lastly is the recurrent issue with surveys in general, and that is who actually answers the survey. Since the ESS is done on a voluntary basis, the respondents are not obliged to participate but are merely encouraged to do so, there is a possible bias that people who often volunteer also are more likely to give one hour of their time to perform this type of survey. Moreover, there is also the possibility that people living less central and thus further away from the location of the interview, choose not to participate because of the time and cost of travel. Since people living in larger cities are more likely to be asked to volunteer and volunteer participation is linked to request (Wilson, 2000; Freeman, 1997), this can potentially lead to a bias. Finally, since the method of selecting respondents is executed strictly randomly and also forbids any quota sampling for countries, the measurement errors and potential bias is hopefully kept to a minimum.

### **Control and further adjustments**

When analysing a pooled cross-sectional dataset variations between years and countries have to be controlled for. Firstly, dummy variables for the two different EES rounds, 2006 and 2012, are created to adjust for the possibility that the observations may be differently distributed at different points in time. Since it is only two rounds with six years time difference, we choose the number of the round as the dummy variable and the first round of our dataset, round of 2006, as our base year, to control for time effects. By performing this dummy variable we control for the time trends that exist throughout the countries in the dataset. Secondly, dummy variables for all of the 28 countries are created for country fixed effects to account for differences between countries, such as different taxation systems and political governance. This is not only a methodical choice, but might also be explanatory with the likelihood that differences in culture might affect the propensity to volunteer. On the other hand, the sample used in Freeman's research only included Americans.

Finally and as previously stated, we have computed robust standard errors in the test statistics to control for the heteroskedasticity in the LPM and also checked for multicollinearity. For further discussions of control see next section, variable description.

## **5.3 Designing the regression model**

The regression model is built to investigate if there is substitution behaviour within the labour supply for voluntary work, this is done by estimating the opportunity cost of the individuals based on their perceived financial situation. The results from the regression will help to explain the factors that have positive influences on having performed voluntary activities. Since Freeman only partly found support for substitution behaviour based on opportunity cost, calculated as hourly earnings, we have chosen another measurement and also chosen to include supplementary explanatory variables. Firstly and in regard to the standard labour supply model, a specification regarding other occupations, as well as, a distinction between unemployed actively and not actively looking for a job are included. This will in a better way categorise the respondents and thus show the impact of attaining different daily duties. Additionally, a

variable to signify working overtime is included to further explain substitution behaviour. Longer working hours can possibly imply higher marginal return of work and higher experienced marginal utility of time spent on leisure (Schady, 2001). Freeman raised the impact of social influences, but only partially took this into consideration in his regression. To improve the accuracy and to investigate other potential behaviour patterns apart from opportunity cost, proxies for the likeliness of being asked and social pressure are accounted for. Finally, since the main previous findings in the research field of voluntarism indicate that religiousness and physical health correlate with voluntary work, proxies for these have also been included in the model. To our best knowledge this type of regression has not been made for the European population or in relation to this dataset's size and recentness.

### **5.3.1 Dependent variable**

As previously stated, the question asked in the ESS about voluntary work was how frequently the respondent had performed voluntary work the last 12 months. The scale went from never to at least once a week. To better see an overall tendency for volunteering in relation to opportunity cost of time, the question was converted from how often to a yes if the respondent had volunteered the last 12 months or to a no if the respondent had not volunteered. Furthermore, the question was formulated to include voluntary work performed in a voluntary or charitable organisation. A limitation with this measurement is the aspect of time, by only letting the respondent include voluntary work performed the last 12 months, all activities older than one year are excluded. It is questionable how different the behaviours of those having volunteered within the last 12 months or the ones having volunteered within the last two or three years are.

### **5.3.1 Independent variable of interest**

The question how the respondents feel about their household income is used as a proxy for their financial security. A central drawback with using a question concerning the respondents' own perception is that current circumstances easily can affect their opinions. For example, if a respondent with an overall stable financial situation would have recently experienced payment difficulties, this can influence the answer given by the respondent. Considering the size of the sample used in this thesis, this issue is likely to be ruled out.

In addition to the previously mentioned arguments concerning the choice of perceived financial security, measurement errors concerning people reporting untrue earning numbers are avoided. However, since the survey is executed face-to-face with the respondent, there might still be a potential measurement error if people for example are ashamed of admitting financial difficulties. As previously stated, one might argue that by excluding a numerical measurement such as income as an independent variable, can create omitted variable biased. However, by including the dummies for each country, differences in income and financial systems are likely to be controlled for.

### 5.1 Table showing the regression variables

|                                                         |                                                                                                                                                                                       |
|---------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Dependent variable:</b>                              | Voluntary work                                                                                                                                                                        |
| <b>Independent variable of interest:</b>                | Feeling about household income (perceived financial security)                                                                                                                         |
| <b>Control variables<br/>individual characteristics</b> | Age<br>Gender<br>Education<br>Employment<br>Civil status<br>Children<br>Religious attendance<br>Urban                                                                                 |
| <b>extension</b>                                        | Life satisfaction<br>Working hours<br>Social life                                                                                                                                     |
| <b>other variables</b>                                  | Dummy variables for each country, Sweden as the base case<br>Dummy variables for each round of the ESS, round 3 (2006) as the base year<br>Weight variables for population and design |

### 5.4 Variable description

The presented regression model has in addition to time and country differences been controlled for several variables on an individual level. This is done to further attempt to rule out any alternative explanations in this cross-sectional data. Firstly, control variables for inducing sociodemographic characteristics are included and discussed in regard to the dependent variable and the independent variable of interest. A list of these variables is included below.

5.2 Table showing variable description

| Variable               | Name        | Description                                                                                    | Scale  | Lowest value meaning                    | Highest value meaning                |
|------------------------|-------------|------------------------------------------------------------------------------------------------|--------|-----------------------------------------|--------------------------------------|
| Voluntary work         | yesvol      | Involved in work for voluntary or charitable organisations last 12 months                      | Dummy  | No                                      | Yes                                  |
| Financial security     | fliphincfel | Feeling about household's income nowadays                                                      | 1–4    | Living very difficult on present income | Living comfortably on present income |
| Age                    | agea        | Age of respondent, calculated                                                                  | 14–103 | N/A                                     | N/A                                  |
| Gender                 | male        | Dummy variable if male                                                                         | Dummy  | No                                      | Yes                                  |
| Highly educated        | highed      | Dummy variable if more than 12 years of completed full time education                          | Dummy  | No                                      | Yes                                  |
| Employment             | paidwrk     | Dummy variable if main activity during last 7 days: paid work                                  | Dummy  | No                                      | Yes                                  |
|                        | eductn      | Dummy variable if main activity during last 7 days: education                                  | Dummy  | No                                      | Yes                                  |
|                        | unemplya    | Dummy variable if main activity during last 7 days: unemployed, actively looking for a job     | Dummy  | No                                      | Yes                                  |
|                        | unemplyi    | Dummy variable if main activity during last 7 days: unemployed, not actively looking for a job | Dummy  | No                                      | Yes                                  |
|                        | retrd       | Dummy variable if main activity during last 7 days: retired                                    | Dummy  | No                                      | Yes                                  |
|                        | housewrk    | Dummy variable if main activity during last 7 days: household work                             | Dummy  | No                                      | Yes                                  |
| Civil status           | livtogether | Dummy variable if living with husband/wife/partner at household grid                           | Dummy  | No                                      | Yes                                  |
| Children               | livwchld    | Dummy variable if children lives at home                                                       | Dummy  | No                                      | Yes                                  |
| Religious attendance   | fliprlgatnd | Apart from special occasions, weddings & funerals, frequency of attending religious services   | 1–7    | Never                                   | Every day                            |
| Satisfaction with life | stflife     | How satisfied with life as a whole                                                             | 0–10   | Extremely dissatisfied                  | Extremely satisfied                  |
| Work hours             | overtime    | Dummy variable if working more than 40 hours per week                                          | Dummy  | No                                      | Yes                                  |
| Social life            | sclmeet     | How often socialise with friends, relatives and colleagues                                     | 1–7    | Never                                   | Every day                            |
| Urban                  | urban       | How to describe your area where you live                                                       | Dummy  | No                                      | Yes                                  |

## **Age and gender**

Age is included to control for the likeliness that the respondents have different demand on their time during different times in life. For example, in the interval 35–54 it is likely that the respondents are career driven having their peak earnings. Moreover, there has been shown that age and volunteering are positively related (Curtis et al., 2001; Ruitner & De Graaf, 2006). Age of the respondent is measured in years at the time of the interview.

Gender is controlled for because rates of volunteering have shown to differ between men and women. However, there is research with opposing results. On average in European societies, there is evidence for that men tend to participate more in voluntary associations than women (Curtis, Baer & Grabb, 2001), though, women are more likely to provide help in longer and closer private relationships (Beutel & Marini, 1995; Eagly & Crowley, 1986). But in Freeman's work in 1997, he found that women are slightly more likely to volunteer than men. He therefore argues that this fits his interpretation of volunteer behaviour with the simple cost of time, possibly since men tend to have higher wages than women. To summarise, it is thus highly relevant to examine the implication of gender.

## **Education**

There are several, plausible reasons to why education should be controlled for. Firstly, higher education could imply higher financial stability. This could be the case for two reasons, a certain level of financial stability is needed to have the opportunity to educate oneself and having an educational background is in some industries beneficial for a higher wage. A second argument being that higher education would imply a more informed respondent and thus also be more likely to be aware of possibilities to volunteer. Lastly, since education has shown to be an important predictor of volunteering (Wiepking & Maas, 2009; Wilson & Musick, 1997; Wilson, 2012), and if highly educated people socialise with likeminded the probability that you are asked to volunteer is greater. As previously stated, Freeman found request to be of importance when analysing volunteering behaviour.

Education is measured by the years of full-time education that the respondents have completed, and since Freeman found tendency for more highly educated people to volunteer, a dummy is created to indicate a high level of education, defined as having more than 12 years of full-time education. Since Freeman executed his regression on a national sample he could use a consistent measurement for education, namely grade completed. However, since education systems vary across Europe, it is more suitable to instead count the years of education of the respondents and then divided the responses by a dummy. More than 12 years of education is chosen to be counted as highly educated because this is often the start of further education after, what often is to be compared to, upper secondary school.

## **Employment**

Adding employment as a control variable is important for two main reasons. Firstly, if one is employed it is more likely that one is more financially secure, especially in comparison to an unemployed. Moreover, by having a paid work one also has a greater opportunity cost in monetary terms if the volunteer activity would occur during office hours. Secondly, if one is employed one consequently has less leisure time to volunteer if the voluntary activity would occur after office hours. The two variables for unemployment, actively looking for a job and not actively looking for a job, are included to investigate if there are differences between the ones showing an interest in re-entering the labour force and the ones not. As previously stated, voluntary participation can imply benefits when applying for work, it would therefore be interesting to see if there is a higher tendency among the ones actively looking for job to volunteer.

Furthermore, when applying the standard labour supply model a higher opportunity cost in monetary terms would indicate less likeliness to substitute for voluntary work. Thus, implying high relevance to control for employment. Retired individuals should have higher tendency to volunteer to fit the prediction of this model. Similarly, students' main occupation does not involve a payment but involves time spent on studies. Consequently, a low opportunity cost in monetary terms, but implying less leisure time compared to retired people. A comparable reasoning is applied to individuals performing household work. In addition to Freeman's result that volunteers often are individuals in their peak earnings, he found two tendencies, firstly, that elderly volunteer more, and secondly, that students volunteer less than other adults.

## **Civil status and children**

An indication of marriage or other civil partnership is included for two reasons. Firstly, having or especially living with a partner indicates higher demand on one's time. Secondly, a partnership would also imply greater, combined social network and thus higher likeliness of being asked. Especially in today's modern society it is of great importance to reformulate the variable of civic status to not only include marriage but other civil partnerships, thereby, Freeman's variable of marriage is instead reformulated as living with husband, wife or partner at household grid.

The reasoning for controlling for living with children is similar to controlling for civil status. Having children in the household has also been seen as a predicator of volunteering (Smith, 1994). The explanation given to this relationship is that children living at the household leads to greater participation in community activities and consequently more social contacts (Wilson & Musick, 1997).

To summarise, a larger family takes up more of someone's leisure time and implies higher demand of time, but also increases one's network and involvements with other organisations, which in turn raises the likelihood to be requested.

## **Religious attendance**

Since many countries within Europe tend to have taken a more secularised direction, it is interesting to investigate the tendency concerning the current relationship between religion and voluntary participation. Religious associations often organise events based on voluntary work. Belonging to a religious community also implies possibilities for the individuals to broaden their social network. Moreover, these social networks often constitute of likeminded people, who in turn, are likely to value altruism higher, and spend time in an environment where humanity is a central pillar.

The reason for why the frequency of religious attendance is used instead of for example asking how religious the respondents experience themselves to be, is to not only be an indication of altruistic values but that the level of participation in religious events and the size of their social networks are dependent on how frequently the individuals take part in these activities. Religious attendance is measured through the question how often the respondents take part in religious services apart from special occasions such as weddings and funerals. Previous research has shown that religiosity is an important and strong determinant of volunteering (De Hart & Dekker, 2005; Ruiter & De Graaf, 2006; Wilson & Janoski, 1995).

## **Satisfied with life**

As previously described with the benefits including warm glow and the mental and physical health they all correspond to give a higher satisfaction in life. Thereby, how satisfied the respondents feel about their lives is the proxy for their overall happiness. In addition to the motives to attain warm glow, one might argue that a higher satisfaction in life would also imply greater focus on the surroundings and thus helping others.

## **Working hours**

In cases of long working hours one might expect to find support for substitution behaviour between hours spent on work and probability of volunteering. In the case of long workdays, this can be seen as an indicator of a high opportunity cost of time. Firstly because it is likely that the person then experiences a high marginal return, and secondly because the value of the hours left for leisure, then increases. A dummy was created to account for people working more than 40 hours per week, which is to be viewed as the line drawn for a normal workweek. The amount of working hours does naturally differ among different countries around Europe, which is a drawback of this dummy.

## **Social life**

Moreover, one of the most widespread explanations in research on the determinants of volunteering is that individuals with larger social networks tend to volunteer more (Musick & Wilson, 2008). The reason for this is that individuals with larger networks increase their information about volunteering opportunities and the likelihood of being asked to volunteer.

Being asked to perform voluntary work has shown to be the strongest indicator that a person will volunteer (Sunden et al., 2007). Data concerning requests is not available for this sample, however, having an active social life will in this model function as a proxy for social network and thus indicate the likeliness of being asked. This is noticeably not a perfect substitute since it does not imply the same consequences as when being asked, but it is the best proxy found for this sample.

Finally, it can be challenging to distinguish if the reason for performing voluntary work is social pressure. Moreover, it is questionable if an individual would want to admit that they performed the voluntary activity because they felt socially obligated to.

### **Urban**

If an individual lives in a rural or urban domicile can possibly have effects on attitudes to local volunteering and the level of information concerning possibilities to volunteer, as well as, the likeliness of being asked. Firstly it is possible that people living in small communities have a stronger solidarity and thus also feel a stronger social pressure if they were asked. However, living in a bigger city would imply greater availability to information about volunteering and also several opportunities to volunteer.

Urban versus rural residence and residential stability may also shape individual's community identity and influence their decisions to volunteer (Wilson, 2000). The respondents' description of their domicile as "a big city" or "the suburbs or outskirts of a big city" were coded as "urban", and respondents' description of their domicile as "town or small city", "country village" or "farm or home in countryside" were coded as "non-urban".

## 6. Results

### 6.1 Data description

Below follows the description of the dataset for the variables included in the regression.

#### 6.1 Table showing summary statistics

| Name                       | Variable    | N     | Mean    | St. deviation | Min | Max |
|----------------------------|-------------|-------|---------|---------------|-----|-----|
| Voluntary work             | yesvol      | 95177 | 0.2382  | 0.4260        | 0   | 1   |
| Perceived household income | fliphincfel | 93983 | 2.8695  | 0.9079        | 1   | 4   |
| Calculated age             | agea        | 94761 | 48.0641 | 18.5825       | 15  | 103 |
| Gender                     | male        | 95177 | 0.4549  | 0.4980        | 0   | 1   |
| Highly education           | hidged      | 95177 | 0.4632  | 0.4980        | 0   | 1   |
| Employment                 | paidwrk     | 95177 | 0.5172  | 0.4997        | 0   | 1   |
|                            | eductn      | 95177 | 0.0981  | 0.2974        | 0   | 1   |
|                            | unemploya   | 95177 | 0.0458  | 0.2090        | 0   | 1   |
|                            | unemployi   | 95177 | 0.0218  | 0.1460        | 0   | 1   |
|                            | retrd       | 95177 | 0.2588  | 0.4380        | 0   | 1   |
|                            | houseswrk   | 95177 | 0.1984  | 0.3988        | 0   | 1   |
| Living with partner        | livtogether | 95177 | 0.5840  | 0.4928        | 0   | 1   |
| Living with children       | livqchld    | 95177 | 0.3787  | 0.4851        | 0   | 1   |
| Religious attendance       | flprlgatnd  | 94402 | 2.5790  | 1.5192        | 1   | 7   |
| Satisfied with life        | stflife     | 94623 | 6.7876  | 2.3752        | 0   | 10  |
| Working overtime           | overtime    | 95177 | 0.5160  | 0.4997        | 0   | 1   |
| Social life                | sclmeet     | 94608 | 4.8878  | 1.6151        | 1   | 7   |
| Urban                      | urban       | 95177 | 0.3310  | 0.4706        | 0   | 1   |

Below follow the results of the LPM-regression where the correlation of people's perceived financial security and the probability of having performed voluntary work is examined. Numerous control variables, as well as, dummy variables are included in the model and altogether the sample constitutes of 91 026 observations and a R-square value of 0.122. The F-statistics and the p-value of the hypothesis tested are also presented.

## 6.2 Table showing the regression output

| VARIABLES    | yesvol                    |
|--------------|---------------------------|
| fliphincfel  | 0.0152***<br>(0.00186)    |
| agea         | 0.000788***<br>(0.000117) |
| male         | 0.00947***<br>(0.00285)   |
| highed       | 0.0806***<br>(0.00292)    |
| paidwrk      | 0.0519***<br>(0.00445)    |
| eductn       | 0.0671***<br>(0.00644)    |
| unemploya    | 0.0262***<br>(0.00702)    |
| uemployi     | 0.00999<br>(0.00884)      |
| retrd        | 0.0114**<br>(0.00553)     |
| houseswrk    | 0.0146***<br>(0.00381)    |
| livtogether  | 0.0238***<br>(0.00303)    |
| livwchld     | 0.0246***<br>(0.00319)    |
| fliprlgatnd  | 0.0470***<br>(0.00102)    |
| stflife      | 0.00461***<br>(0.000640)  |
| overtime     | -0.00718***<br>(0.00277)  |
| sclmeet      | 0.0227***<br>(0.000866)   |
| urban        | -0.0267***<br>(0.00286)   |
| Constant     | -0.225***<br>(0.0125)     |
| Observations | 92,026                    |
| R-squared    | 0.122                     |

Robust standard errors in brackets

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Dummy variables for the ESS rounds and countries are hidden from this table. For full regression see appendix.

### 6.3 Table showing the results from testing the hypothesis

|                       | Regression model |           |
|-----------------------|------------------|-----------|
|                       | F-statistic      | P-value   |
| <b>Hypothesis:</b>    |                  |           |
| $H_0: \beta_1 \leq 0$ | 66.85            | 1.484e-16 |

#### Estimated effect of perceived financial situation in voluntary work

The results from the output of the regression show that an individual's feeling about his/her household income has an estimated positive impact on his/her likeliness to have volunteered at a high significance level ( $p < 0.01$ ). If everything else in the model is held fixed, this means that if individuals experience a one-point increase in their perceived financial security their probability to have volunteered is implied to increase by 0.0152, and in percentage an increase by 1,52%. That is the marginal effect of a one-point increase on the scale of their feeling about their household income on the probability of having performed voluntary work is always 0.0152, given that everything else is held fixed. The scale goes from one to four and when literally applying the regression model this could possible imply a maximum increase in probability by  $0.0152(3) = 0.0456$  when only considering individuals' perceived financial situation.

#### Hypothesis testing

As stated, the independent variable of interest has a positive estimated correlation with the probability to have performed voluntary work,  $\beta_1 = 0.0152$ . The hypothesis was tested by a F-test and a one-sided t-test, the F-statistic received was 66.85 and p-value of 1.484e-16. In the one-sided t-test, the predicted value of the coefficient was tested, and with a p-value of 1.484e-16, means we can reject our null hypothesis. The p-value is remarkably low; however, as previously ensured, the standard errors are corrected for heteroskedasticity and possible biased estimates were handled by control variables, thus, the model meets the conditions to perform t and F statistics. We can thus reject that perceived financial security has a non-existing correlation with the probability of having performed voluntary work.

#### Estimated effect of control variables

In the model we find statistically significant results at a 1% significance level for all the control variables, except for retirement and individuals who are unemployed and not actively looking for a job. All variables have a positive impact on the probability of having performed voluntary work, except from living in urban areas and working over 40 hours a week. The result for the variable *urban* is unexpected since a higher probability of being asked was assumed to be present in metropolitan areas. A negative impact of the variable *overtime*, supports the standard labour supply substitution behaviour since a high number of

working hours can indicate a high marginal return and also because time spent outside the office are then valued higher.

The coefficient of the variable *male* indicates a slightly stronger probability of having performed voluntary work among men than women. This is not in line with Freeman's research, moreover, with the assumption that men have higher wages than women, this does not support the standard labour supply in consideration to opportunity cost of time. The coefficient of the variable for *age* does only have a slightly positive influence to the probability of having performed voluntary work. The coefficient with the greatest value is that of the dummy variable *highed*, with a value of 0.0806. The positive value of the coefficient was expected, but to be the greatest was an interesting outcome. The relevance of employment is also notable to observe. Highest positive value of the occupation coefficients is the one for students, secondly for employed, thereafter for employed actively looking for a job and an unexpected low value for retirees. Both students and retirees fit the standard labour supply substitution behaviour by having a lower monetary opportunity cost. The coefficients for *livtogether*, *livwchld* and *schmeet* are all positive and relatively high, which is expected since these variables indicate a greater social network and higher possibilities of being requested. The positive value of the coefficient for *sliprlgatnd*, is in line with previous research and was expected, once again, concerning the size of social network and for altruistic values. Finally, the coefficient of the variable *stlife* has a low, positive value indicating an unexpectedly low impact on the probability of having participated in voluntary work.

## 7. Discussion

In regard to the research question the results from the sample can be summarised in the following points:

1. A stronger perceived financial situation is estimated to have a positive impact on the probability of having performed voluntary work.
2. The control variables with the highest predicated, explanatory values are highly educated, being a student, performing paid work and attending religious services.

In the next section the results will be analysed and further discussed in consideration to the previously stated research in the field.

### 7.1 Findings

With this empirical analysis the null hypothesis can be rejected. Furthermore, by controlling for numerous factors, this supports our hypothesis that perceived financial security has a positive correlation with the probability of having performed voluntary work.

Freeman calculated opportunity cost as hourly earnings and showed that hourly earnings are positively correlated with the tendency to perform voluntary work. In this thesis, the respondents' feeling about their household income is the proxy for perceived financial security. Thus our results need to be interpreted differently. By including a variable concerning how the respondents feel about their household income, we incorporate a relative and subjective view of how they are coping with their income in comparison to their expenses. Thereby, an opportunity cost in numerical, monetary terms is not presented. We can therefore not determine the importance of the absolute size of the opportunity cost, but state that individuals who feel safe enough concerning their overall financial situation tend to have a higher probability of having performed voluntary work. Thus, they show tendencies to be more willing to substitute their time of either work or leisure to perform voluntary work, likewise, they show tendencies to be willing to give up the opportunity cost involving either work or leisure. This further raises two issues. Firstly, if there are personal benefits to be gained by volunteering and the ones who tend to volunteer are people with a better financial situation this might leave people with a worse financial situation further disadvantaged. Secondly, these results might imply that the opportunity cost of time involved in voluntary work does not play such significant role in relation to their overall household economy. This once again, highlights the possible impacts of social pressure and social status in form of conscience goods and conspicuous consumption. It is further likely that these social influences are stronger for more financially secure individuals since these might be thought of having a greater opportunity to give their time to others in need. Additionally, this raises the implications concerning the effect of warm glow in connection to positional advantage. If a higher perceived financial situation has a positive impact of performing voluntary work, this might influence differences in human and social capital between volunteers and non-volunteers, as well as, imply increased income differences between the

participant and the beneficiary, resulting in an increased level of experienced warm glow.

### **Implications of employment**

People's feelings about their household income are likely to be dependent on employment. However, being a student has a surprisingly higher explanatory value than having performed paid work the last seven days. On the other hand, a greater tendency to have performed voluntary work among students can be explained by the opportunity cost of time. It is possible that a student who does not have an income that is dependent on the amount of hours spent on studies, experiences greater marginal utility of instead performing one hour of voluntary work. Even though it is likely that a student studying more receives higher grades and consequently better future, prospect earnings, the marginal utility of one hour voluntary work can possibly be of greater importance by for example improving one's curriculum vitae. Moreover, retirees are also likely to have a lower monetary opportunity cost, however, having retired does not show to have a particularly high impact on the probability of having performed voluntary work. As seen in appendix 9.1.4, there is also a smaller proportion of retirees who have volunteered compared to people performing paid work. Instead of focusing on available time, it is possible that the explanation lies in inferior health among elderly to not be able to perform such activities. Lastly, it is interesting to observe a greater tendency of having performed voluntary work among unemployed who are actively looking for a job, than unemployed who are not actively looking for a job. This might be an indication that people who are actively trying to re-enter the labour force take opportunities to volunteer to gain further work experience and thus improve their chances of employment.

A priori, one might associate higher education with a higher paid employment and thus a better financial situation. On the other hand, higher education can as likely imply a more informed respondent and thus also be more likely to be aware of possibilities to volunteer. Nevertheless, in this study, the greatest coefficient is that of higher education, which is line with previous research.

In addition to one's employment, there are other variables indicating demand on time, such as living with partner, living with children, having a high frequency of social activities, and so on. The receiving results indicate that individuals with higher value of their time tend to have a higher probability of having performed voluntary work. This further implies other explanations than opportunity cost to explain the behaviour of volunteering.

### **Social pressure**

In consideration to the possibility that the opportunity cost of time involved in voluntary work could be relatively weak implies the impact of social pressure. Freeman described voluntary work as a conscience good, that people feel morally obliged to give their time when someone asks them to, but an activity they would as soon let someone else do. With Freeman's results in mind, it is likely that the feeling of social pressure increases with the probability of being asked, and the probability of being asked may depend on

the size of individuals' social network, with whom they socialise and the frequency of participating in these social activities. As previously stated these social aspects were applied to the model.

Firstly, the variables living together with a partner, living with children, attendance in religious services, and social life, are proxies for the size of individuals' social networks, and all the coefficients of these variables are positive and in the range of 0.0227 to 0.0470. Secondly, since the probability of being asked to perform voluntary work depends on with whom one socialises with, attendance in religious services and being highly educated were used as proxies and their coefficients range from 0.0470 to 0.0806. Finally, since the probability of being asked depends on the frequency one socialises, all these above mentioned variables gives an indication of this, but no casual relationship can be presented from this empirical analysis.

However, one variable that does not fit this trend is the variable urban, which, inter alia, was included since people living in metropolitan areas were predicted to have higher likeliness of being asked. The negative value of this variable's coefficient is in line with Freeman's research, and can possibly be explained by the increased affinity present in smaller communities. Also in a sense possibly indicating social pressure. Maybe it is not only more common to help each other in a rural area but also more expected that inhabitants do so.

There are limitations with the model that are important to mention. To begin with a correlation between one's perceived financial situation and the probability of having performed voluntary work is stated, however, this does not explain any causality behind this relationship. Consequently, no determinants concerning cause and effect can be made. Thus, even though it is likely that individuals who become less dependent on their wage can allow them to spend more time helping others, no such conclusions can be made.

Since the empirical design is not an exact replica of Freeman's study, the results cannot be directly compared to his outcomes and conclusions. Moreover, this study is performed on a different population, as well as, during a different time period, which consequently influence the results.

The independent variable of interest in this model is the feeling about the respondent's household income, which is measured through a 1–4 scale, ranging from "living very difficult on present income" to "living comfortably on present income". This scale is relatively slim, and the accuracy of the results could have improved with a wider scale. By looking at the marginal effect of one point increase, and taking this to a maximum this would, as previously stated, literally imply an increase in probability of having performed voluntary work by  $0.0152(3) = 0.0456$ . Since the relative improvement from a one to a four on the scale of feeling about household income, can be said to be highly significant for the individual's lifestyle, the increase in probability of 0.0456 can be arguable low. Additionally, having a subjective question as an independent variable of interest leaves room for interpretations, however, instead of using

an absolute measurement of opportunity cost, this question is still to be viewed as accurate and suitable.

There is also the limitation to in a correct way account for voluntarism. In this study, voluntary work is measured through the question “in the past 12 months, how often did you get involved in work for voluntary or charitable organisations?” and then converted to a binary outcome, if the respondent had volunteered or not. In comparison to Freeman’s study, he chose to both have a model with binary outcome, volunteered or not, and another model where he measured the hours volunteered. Thus, only parts of Freeman’s study can be compared with the results of this thesis. Furthermore, the reason to way the frequency of voluntary participation was not included in this thesis, is because the aim is rather to show greater tendency of choosing to volunteer or not, than the actual level of participation. Moreover, to optionally have accounted for level of participation, the frequency of performing voluntary work could be questioned as less accurate than Freeman’s measurement of hours volunteered.

Correspondingly, research has shown that the context in which questions appear can influence the results of a survey (Schuman & Presser, 1981). For example there are questions in the ESS concerning the importance of helping others and caring about other’s well being. If a respondent is being asked this type of questions before answering if they have performed voluntary work, it is possible that this can have an impact on how the respondent choose to respond. In one additional round of the ESS, unfortunately not available for this dataset, numerous questions about volunteering in different forms and situations were asked. In such situation it may be easier for the respondents to fully remember their potentially performed voluntary activities and also label their actions in an appropriate way. This can possibly have affected the results, however, as seen in the appendix, the amount of participants in voluntary work is relatively high with 24%. On the other hand, this implication works both ways, thus, respondents can also have included work that is not in line with the definition used in this thesis.

To avoid that respondents misinterpret the question, a broader definition of voluntary work can be used by not only including formal volunteering, but also informal volunteering and informal help. Wilson argues that the concept of voluntarism should be widened (2012), furthermore, instead of substituting one concept for another, researchers show that volunteering and informal helping are positively correlated (Burr et al. 2005); Lee & Brudney, 2012; Plagnol & Huppert, 2010; Wilson & Musick, 1997). However, to be able to better compare the results in this thesis with Freeman’s results, informal help was excluded from the scope.

## **7.2 Suggestions for further research**

There are indications in the empirical analysis that higher perceived financial security has a positive impact on the possibility to having performed voluntary work. What would thus be of interest is to further examine if this is caused by higher standard of living or if voluntary work simply is a status symbol among wealthier individuals. Similarly, it would also be of relevance to investigate if less privileged individuals

choose not to volunteer because of financial difficulties. This thesis is a starting point of this discussion, but it is of great importance to continue this work. Even though the results found in this thesis mainly are in line with Freeman's findings, it would be highly significant to consider if our redesigned empirical model could give other outcomes for the American population. By doing this, further additional evidences can possibly be attained for the improved measurement of financial wealth.

## 8. Concluding remarks

The purpose of this thesis is to examine if higher perceived financial security has a positive impact on the probability of having performed voluntary work. Freeman's finding from 1997, that individuals with higher opportunity cost of time tend to volunteer more, was used as a starting point to achieve this purpose. We have argued for the benefits of using perceived financial security as measurement for opportunity cost instead of hourly earnings. The main argument for this choice is to reach a more relative perspective of individuals' dependence on their income compared to their overall financial situation. The hypothesis for this thesis was therefore formulated as follows: individuals feeling more financially secure are more likely to have volunteered compared to individuals feeling less financially secure.

When testing this hypothesis, a pooled cross-sectional dataset was collected from the European Social Survey, to create a sample of 91 026 observations. The results from our regression indicate a predicted positive relationship between perceived financial situation and the probability of having performed voluntary work and are thus in line with Freeman's findings. Moreover variables involving a higher human capital, social status and also value of time, have overall positive coefficients. In regard to the likeliness that voluntary participation increase with higher perceived financial situation, the personal benefits associated with giving away one's time might be unevenly distributed between individuals. If volunteering indicates social status and individuals with worse financial situation are less likely to volunteer, participation in these voluntary activities may further underline social hierarchies. It is therefore of high importance to consider the design of voluntary programmes to encourage and to enable participation of less privileged individuals in society.

A limitation with this thesis is that no conclusions regarding causality can be drawn. That an increased standard of living leads to greater tendency of performing voluntary work can therefore not be stated, only that it has a positive impact. To examine for causality would continue to broaden the research field and bring further insights to volunteering behaviour. The drawback with a rather slim scale of perceived financial security diminishes the accuracy of the results, especially in the possible case of conspicuous consumption among the highest income groups and when discussing the possible increase of warm glow caused by positional advantage.

Finally, it is once again highly relevant to comment on the difficult distinguished and various motives present in voluntary work. The lines between free will and social pressure, as well as, pure altruistic and impure altruistic purposes, continue to involve complications when observing volunteering behaviour and when choosing to apply either the public goods model or the private consumption model. But with the argumentation made in this thesis, the implications concerning perceived financial security bring light to many possible underlying influences involved when offering free labour. In which ways and to which extent is to further be examined.

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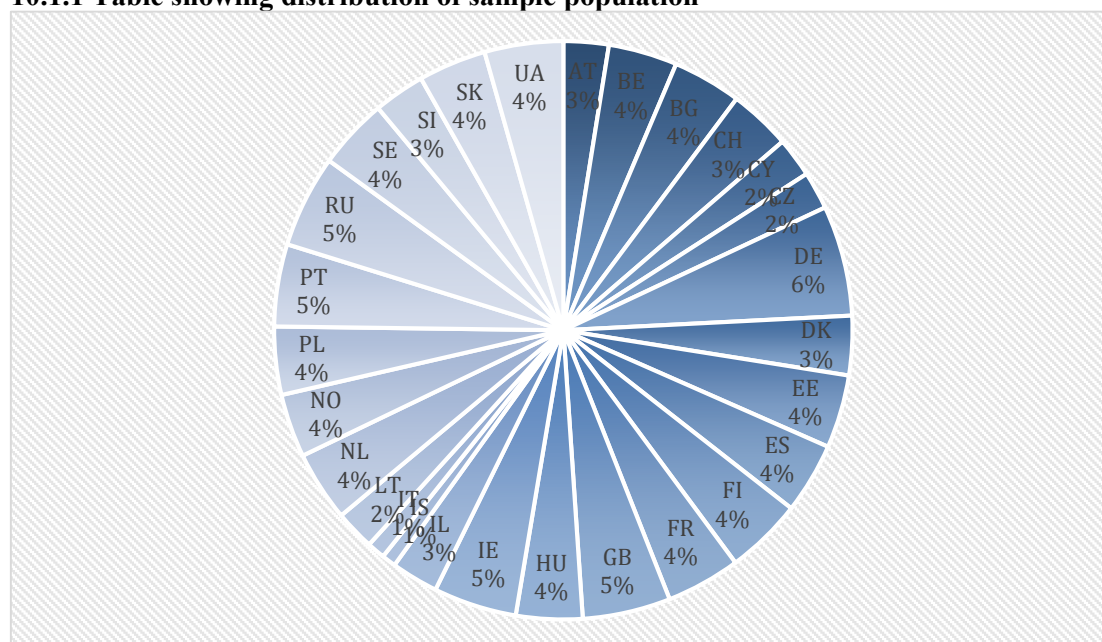
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## 10. Appendix

### 10.1 Descriptive of sample

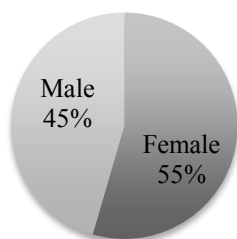
#### 10.1.1 Table showing distribution of sample population



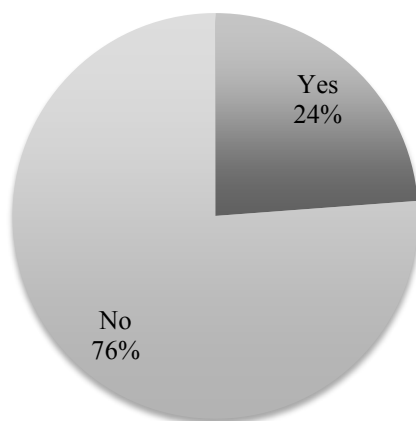
| Country code | Country        | Frequency | Country code | Country     | Frequency |
|--------------|----------------|-----------|--------------|-------------|-----------|
| AT           | Austria        | 2405      | IE           | Ireland     | 4428      |
| BE           | Belgium        | 3667      | IL           | Israel      | 2508      |
| BG           | Bulgaria       | 3660      | IS           | Iceland     | 752       |
| CH           | Switzerland    | 3297      | IT           | Italy       | 960       |
| CY           | Cyprus         | 2111      | LT           | Lithuania   | 2109      |
| CZ           | Czech Republic | 2009      | NL           | Netherlands | 3734      |
| DE           | Germany        | 5874      | NO           | Norway      | 3374      |
| DK           | Denmark        | 3155      | PL           | Poland      | 3619      |
| EE           | Estonia        | 3897      | PT           | Portugal    | 4373      |
| ES           | Spain          | 3765      | RU           | Russia      | 4921      |
| FI           | Finland        | 4093      | SE           | Sweden      | 3774      |
| FR           | France         | 3954      | SI           | Slovenia    | 2733      |
| GB           | Great Britain  | 4680      | SK           | Slovakia    | 3613      |
| HU           | Hungary        | 3532      | UA           | Ukraine     | 4180      |

**10.1.2 Table showing demographic characteristics of the sample**

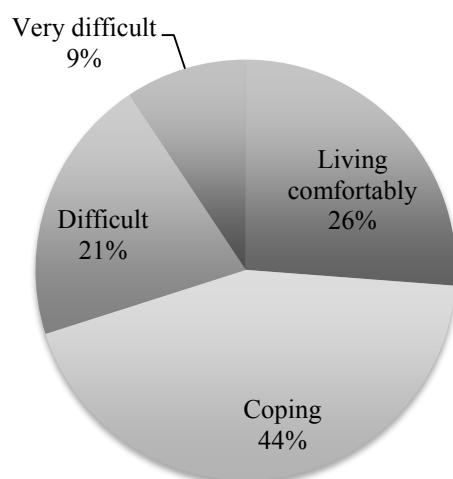
### **Gender**

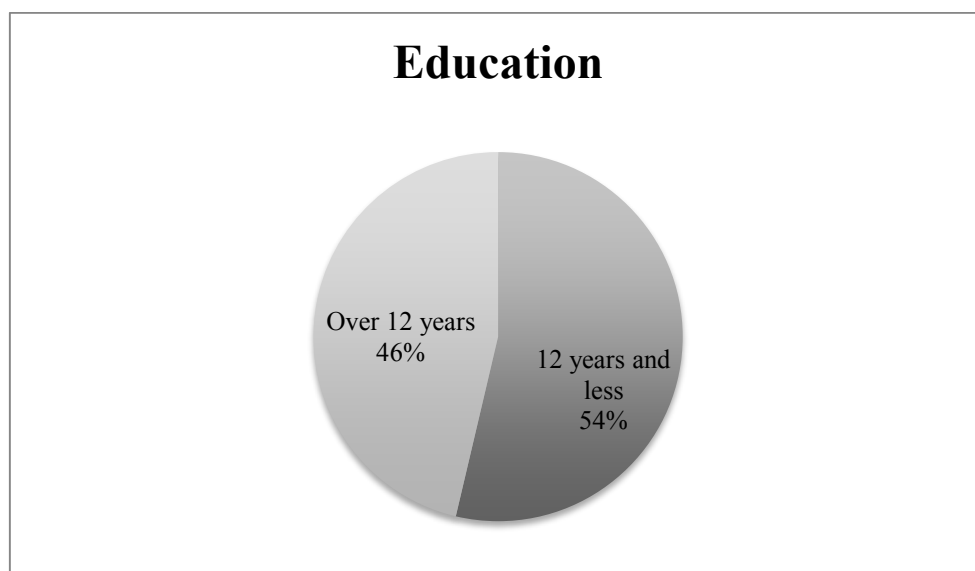


### **Voluntary work**



### **Household income**





**10.1.3 Table showing voluntary work distribution between the variables**

| Name                                                            | Variable     | Yes   | No    | Yes% |
|-----------------------------------------------------------------|--------------|-------|-------|------|
| Highly educated                                                 | highed       | 13134 | 30949 | 30%  |
| Done the last 7 days: paid work                                 | paidwrk      | 13216 | 36014 | 27%  |
| Done the last 7 days: education                                 | eductn       | 2468  | 6867  | 26%  |
| Done the last 7 days: unemployed actively looking for a job     | unemploya    | 779   | 3580  | 18%  |
| Done the last 7 days: unemployed not actively looking for a job | unemployi    | 339   | 1735  | 16%  |
| Doing the last 7 days: retired                                  | retrd        | 4944  | 19689 | 20%  |
| Done the last 7 days: household work                            | householdwrk | 4859  | 14027 | 26%  |
| Gender                                                          | male         | 10559 | 32733 | 24%  |
| Living with partner                                             | livtogether  | 14318 | 41264 | 25%  |
| Living with children                                            | livwchld     | 9148  | 26889 | 25%  |
| Living in urban area                                            | urban        | 6844  | 24659 | 22%  |
| Working more than 40 hours per week                             | overtime     | 12084 | 37031 | 25%  |

#### 10.1.4 Table showing the characteristics of volunteers

| Name                                                            | Variable     | Yes   | No    | Yes% |
|-----------------------------------------------------------------|--------------|-------|-------|------|
| Highly educated                                                 | highed       | 9535  | 13134 | 42%  |
| Done the last 7 days: paid work                                 | paidwrk      | 9453  | 13216 | 42%  |
| Done the last 7 days: education                                 | eductn       | 2468  | 20201 | 11%  |
| Done the last 7 days: unemployed actively looking for a job     | unemploya    | 779   | 21890 | 3%   |
| Done the last 7 days: unemployed not actively looking for a job | unemployi    | 339   | 22330 | 1%   |
| Doing the last 7 days: retired                                  | retrd        | 4944  | 17725 | 22%  |
| Done the last 7 days: household work                            | householdwrk | 4859  | 17810 | 21%  |
| Gender                                                          | male         | 10559 | 12110 | 47%  |
| Living with partner                                             | livtogether  | 14318 | 8351  | 63%  |
| Living with children                                            | livwchld     | 9148  | 13521 | 40%  |
| Living in urban area                                            | urban        | 6844  | 15825 | 30%  |
| Working more than 40 hours per week                             | overtime     | 12084 | 10585 | 53%  |

## 10.2 Full regression output

### 10.2.1 Table showing full regression output including all variables

| VARIABLES   | yesvol                    |
|-------------|---------------------------|
| fliphincfel | 0.0152***<br>(0.00186)    |
| agea        | 0.000788***<br>(0.000117) |
| male        | 0.00947***<br>(0.00285)   |
| highed      | 0.0806***<br>(0.00292)    |
| paidwrk     | 0.0519***<br>(0.00445)    |
| eductn      | 0.0671***<br>(0.00644)    |
| unemploya   | 0.0262***<br>(0.00702)    |
| uemployi    | 0.00999<br>(0.00884)      |
| retrd       | 0.0114**<br>(0.00553)     |
| houseswrk   | 0.0146***<br>(0.00381)    |
| livtogether | 0.0238***<br>(0.00303)    |
| livwchld    | 0.0246***<br>(0.00319)    |
| fliprlgatnd | 0.0470***<br>(0.00102)    |
| stflife     | 0.00461***<br>(0.000640)  |
| overtime    | -0.00718***<br>(0.00277)  |
| sclmeet     | 0.0227***<br>(0.000866)   |
| urban       | -0.0267***<br>(0.00286)   |
| round3      | -0.0278***<br>(0.00284)   |
| AT          | 0.146***<br>(0.0116)      |
| BE          | 0.0766***<br>(0.00954)    |
| BG          | -0.125***                 |

|    |            |
|----|------------|
|    | (0.00798)  |
| CH | 0.203***   |
|    | (0.0108)   |
| CY | -0.0293*** |
|    | (0.0110)   |
| CZ | -0.0568*** |
|    | (0.00993)  |
| DE | 0.188***   |
|    | (0.00895)  |
| DK | 0.107***   |
|    | (0.0105)   |
| EE | -0.0468*** |
|    | (0.00835)  |
| ES | 0.0738***  |
|    | (0.00974)  |
| FI | 0.0883***  |
|    | (0.00941)  |
| FR | 0.0975***  |
|    | (0.00947)  |
| GB | 0.122***   |
|    | (0.00914)  |
| HU | -0.0359*** |
|    | (0.00846)  |
| IE | 0.0672***  |
|    | (0.00970)  |
| IL | 0.0316***  |
|    | (0.0111)   |
| IS | 0.145***   |
|    | (0.0190)   |
| IT | 0.0361**   |
|    | (0.0163)   |
| LT | -0.117***  |
|    | (0.00946)  |
| NL | 0.208***   |
|    | (0.0101)   |
| NO | 0.210***   |
|    | (0.0105)   |
| PL | -0.149***  |
|    | (0.00871)  |
| PT | -0.0320*** |
|    | (0.00889)  |
| RU | -0.0305*** |
|    | (0.00839)  |
| SI | 0.0582***  |
|    | (0.0105)   |
| SK | -0.0975*** |
|    | (0.00886)  |
| UA | -0.0607*** |

|                                    |           |
|------------------------------------|-----------|
|                                    | (0.00884) |
| weight                             | -0.00123  |
|                                    | (0.00109) |
| Constant                           | -0.225*** |
|                                    | (0.0125)  |
| Observations                       | 92,026    |
| R-squared                          | 0.122     |
| <hr/>                              |           |
| Robust standard errors in brackets |           |
| *** p<0.01, ** p<0.05, * p<0.1     |           |