The Economics of the Volunteering Decision

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Acknowledgments

The conclusion of this thesis marks the end of one of the most important projects of my life.

I have benefitted enormously from the advice of my supervisor Prof.Cesaltina Pires who worked with me during all these years. She has been extremely helpful in guiding my research, suggesting ideas and methods to analyze them, challenging my thoughts and forcing me to clarify my arguments. I am also grateful for her responsiveness to my frequent “unreasonable” requests on her time.

Great recognition goes also to Prof. Leonel Prouteau for all the help provided during the three months of my stay in France, for all his wise advises and critics, and his admirable and available library.

I have to thank my school - Escola Superior de Ciências Empresariais of Polytechnic Institute of Setúbal, for all the support provided during this time in terms of money and the availability of time to work.

I would like to thanks my friends: Luísa for the support given throughout this years, Rui Brites and Rui Rita for all the help on my statistics and econometrics problems, and Gabriela and Odete for their pertinent comments.

I also have to thank the creators of "Naruto" for some stress-reliefing moments.

Finally, I am most grateful to my family. To my son Pedro, for all his extenuating work of English’s revision. To my husband Fernando and daughter Anna, for all their support and for having shown a greater tolerance than one could expect for all the time I was absent. I am sure they are as happy as I am for the end of this project.

The Economics of the Volunteering Decision

Abstract

One objective of this work is to explore and test several explanatory models of volunteering activity. This thesis identifies the factors that determine whether individuals volunteer or not, considering both volunteering in general as well as volunteering in particular types of activities. The factors analyzed include demographic and socioeconomic variables, attitudinal variables and the country of origin. We identify four types of volunteering: social awareness volunteering, political and professional volunteering, educational and leisure volunteering and social justice volunteering. The thesis also studies the interdependencies between the various types of volunteering and analyzes the volunteering decision as a choice among mutually exclusive alternatives that include the possibility of doing simultaneously more than one type of volunteering activity.

Another objective of this work is to explore the motivations for volunteering, to identify the relationship between these motivations and the various types of volunteering work, and to perform an exploratory analysis of the determinants of the different types of motivations. We identify and test three main motivations for volunteering: altruistic motivations, warm glow social oriented motivation and warm glow ego driven motivation. The empirical part of this dissertation was based on the second and fourth waves of the World Value Survey and the European Value Survey.

Keywords: social economy, volunteering decision, motivation for volunteering.

Economia da Decisão de Voluntariado

Resumo

Um dos objectivos do presente trabalho é identificar e testar vários modelos explicativos do voluntariado. Procuramos, por conseguinte, identificar os factores determinantes na decisão de abraçar as actividades voluntárias, tanto no geral como em actividades/sectores específicos. Para o efeito reunimos os vários factores identificados nos seguintes grupos: demográficos, sócio-económicos, atitudinais e por país. São identificados quatro tipos específicos de voluntariado: voluntariado de consciência social, voluntariado político e profissional, voluntariado educacional e de lazer e voluntariado de justiça social.

Um outro objectivo desta tese é explorar as diferentes motivações para o voluntariado e identificar as suas relações com os diversos tipos de voluntariado praticado. Foram considerados três tipos de motivações: altruísta, warm glow de orientação social e warm glow de orientação egoísta. Para além disso, introduzimos no trabalho uma abordagem exploratória dos factores que influenciam as motivações.

O suporte empírico para as análises e testes efectuados foi a base de dados de onda dois e onda quatro da World Value Survey e da European Value Survey.

Palavras-chave: Economia social, decisão de voluntariado, motivação para o voluntariado

Resumo alargado

As pessoas sempre procuraram e procuram a felicidade. O maior desafio que se coloca à Humanidade é encontrar um modo de actuação que nos permita atingir esse objectivo. Layard defende que as pessoas devem trabalhar mais para os outros e concentrarem-se menos nelas próprias para alcançarmos uma sociedade mais feliz.

Este trabalho tem dois objectivos. O primeiro é identificar os factores que influenciam a decisão de um indivíduo ser ou não voluntário, considerando tanto o voluntariado em geral como o voluntariado em certo tipo de actividades (voluntariado de consciência social, voluntariado político e profissional, voluntariado educacional e de lazer, e voluntariado de justiça social). Na tese são ainda exploradas eventuais interligações entre os vários tipos de voluntariado e analisa-se a decisão de voluntariado como uma decisão entre várias alternativas mutuamente exclusivas, onde se incluiu a possibilidade de fazer vários tipos de voluntariado em simultâneo.

Outro objectivo deste trabalho é explorar as motivações para o voluntariado e identificar a relação entre essas motivações e os tipos de voluntariado realizado, incluindo também uma análise exploratória dos factores que influenciam as motivações. Nesta análise são identificados e utilizados três tipos de motivações: altruísta, warm glow de orientação social e warm glow de orientação egoísta.

A abordagem empírica utiliza a base de dados do World Value Survey e European Value Survey, disponível na Internet. A análise e a estimação de modelos utilizam os programas informáticos SPSS, Stata e Limdep.

O trabalho começa por discutir o conceito de economia social e de voluntariado, e o seu posicionamento na economia, bem como a situação do voluntariado em vários países europeus, tendo-se concluído que existem diferenças significativas entre países. São abordados alguns aspectos relacionados com a situação do voluntariado em Portugal, sendo esboçado o perfil do

voluntário português com base no Inquérito Nacional de Ocupação do Tempo e do Inquérito Nacional sobre o Voluntariado.

De seguida, discutem-se as motivações que são a base dos modelos económicos para o voluntariado. O modelo de consumo de bens públicos pressupõe motivações intrínsecas e as motivações extrínsecas estão relacionadas com os modelos de consumo privado e de investimento. Nas abordagens não económicas os investigadores indicam outros tipos de motivações. O comportamento pró-social e a solidariedade são a tónica dominante na sociologia. Em contrapartida, os aspectos da personalidade, identidade e das estruturas sociais são tomados em conta na abordagem psicossociológica do voluntariado.

A parte seguinte de trabalho é dedicada à identificação dos factores que influenciam a decisão de fazer trabalho voluntário. Nesta análise são consideradas variáveis sócio-económicas, demográficas e atitudinais. Para além disso, de forma a captar efeitos específicos de cada país, são também incluídas variáveis dummies dos vários países. A estimação logística confirma a significância destas variáveis e mostra, entre outros, o impacto positivo e estatisticamente significativo da educação e do rendimento, o impacto positivo de viver em cidades pequenas, o efeito em U invertido da idade. No que se refere às variáveis introduzidas por nós na estimação e que constituem uma das mais valias do nosso trabalho, ou seja, variáveis atitudinais e a variável país, obtivemos os seguintes resultados: (i) quanto maior a importância que uma pessoa atribui à religião, maior a probabilidade de essa pessoa ser voluntária; (ii) uma pessoa com um maior nível de satisfação com a sua vida tem maior probabilidade de ser voluntária; (iii) uma pessoa com maior nível de controlo sobre a sua vida tem maior probabilidade de ser voluntário.

Relativamente aos vários países europeus concluímos que, tendo por referência a Áustria (que constitui a categoria de referência) e do ponto de vista da significância estatística, as pessoas que vivem nos países ex-socialistas têm genericamente uma menor probabilidade de serem voluntárias; as pessoas que vivem nos países nórdicos, bem como Belgas e Holandeses apresentam uma probabilidade maior de serem voluntárias; os habitantes dos países ibéricos têm uma probabilidade menor de serem voluntários; relativamente aos habitantes de outros países europeus (Alemanha, França, Itália, Irlanda) não existem diferenças estatisticamente significantes relativamente à sua propensão para o voluntariado em comparação com os Austríacos.

Utilizando o método das componentes principais, os catorze tipos de voluntariado originais são agrupados em quatro grupos, a saber: voluntariado de consciência social, voluntariado

político e profissional, voluntariado educacional e de lazer e voluntariado de justiça social. Para cada um destes grupos de voluntariado são de seguida identificados os factores que o influenciam. Existem duas variáveis (nível de educação e país) que são significativas para todos os tipos de voluntariado. Quanto maior o nível de rendimento maior a probabilidade de ser voluntário, mas somente para os tipos de voluntariado: cultural e educacional e político e profissional.

A idade não é estatisticamente significativa para o tipo de voluntariado educacional e de lazer. As mulheres têm uma maior probabilidade de serem voluntárias do tipo justiça social e os homens do tipo profissional e político e educacional e de lazer, não sendo essa variável significativa no caso do voluntariado de consciência social. Viver numa cidade pequena proporciona maior possibilidade de ser voluntário para todos os tipos de voluntariado excluindo o político e profissional. Ter filhos a partir de 5 anos de idade proporciona uma maior probabilidade de ser voluntário do tipo cultural e educacional, mas ter filhos mais novos tem efeito contrário. Essa variável não é significativa para qualquer outro tipo de voluntariado.

Ter maior nível de satisfação é significativo para todos os tipos de voluntariado, sendo mais importante para a possibilidade de fazer voluntariado do tipo cultural e educacional. Uma maior sensação relativamente ao controlo sobre a sua vida é um indicador importante para todos os tipos de voluntariado, excepto o do tipo profissional e político. As pessoas que valorizam a religião têm uma maior possibilidade de serem voluntários do tipo sensibilidade social e de justiça social, não sendo essa variável importante no caso do voluntariado dos outros dois tipos.

No caso da variável país e analisando os tipos de voluntariado, mantém-se a tendência geral de uma menor disponibilidade para o voluntariado das pessoas dos países ex-socialistas e da Península Ibérica e uma maior disponibilidade para o voluntariado das pessoas dos países nórdicos, bem como Belgas e Holandeses, mas nem sempre de forma estatisticamente significativa.

De seguida são exploradas eventuais interligações entre os vários tipos de voluntariado usando duas abordagens distintas. Na primeira abordagem estima-se a forma reduzida dum modelo Probit multivariado que permite que os termos residuais estejam correlacionados. A segunda abordagem considera a decisão de voluntariado como uma decisão entre várias alternativas mutuamente exclusivas e é estimada através de um modelo logit multinomial. Os resultados do modelo probit multivariado mostram que os factores não observáveis que influenciam um determinado tipo de voluntariado estão positivamente correlacionados com os factores não observáveis que influenciam os outros tipos de voluntariado. Os resultados do modelo multinomial logit são bas-

tante consistentes com os resultados das estimações individuais para cada tipo de voluntariado mas têm a vantagem de revelar os factores que mais influenciam a probabilidade de participar em simultâneo em várias actividades de voluntariado. A educação, o rendimento, o ter emprego part-time, ser empregado por conta própria ou ser estudante influenciam positivamente a probabilidade de fazer vários tipos de voluntariado. O mesmo acontece com as variáveis nível de satisfação com a vida, nível de escolha e controlo e importância da religião. Em contrapartida, ter mais filhos no agregado familiar ou viver em cidades de média-grande ou grande dimensão têm um impacto negativo na probabilidade de fazer mais do que um tipo de voluntariado.

A parte final deste trabalho estuda as motivações para o voluntariado. Começamos por testar se existe alguma relação entre as razões apontadas para o voluntariado e a participação nos vários tipos de voluntariado. Esta análise revela que, embora possa haver enviesamentos nas razões declaradas pelos inquiridos, existe relação entre o tipo de razões declarado e a participação nos vários tipos de voluntariado. De seguida, usando a análise de componentes principais identifica-se as motivações latentes nas razões apontadas para fazer voluntariado. Esta análise revela a existência de três factores que interpretámos usando a classificação de motivações proposta por Andreoni (1990) e Nunes e Onofri (2002): motivação altruísta, motivação warm glow de orientação social e motivação warm glow de orientação egoísta. Introduzindo os três tipos de motivação como variáveis explicativas na decisão de participar em cada um dos tipos de voluntariado verifica-se que o voluntariado de consciência social é motivado por razões altruístas e o voluntariado político e profissional é motivado por razões warm glow de orientação social. Identificámos também, somente de forma exploratória e para suscitar a discussão sobre o tema, factores que influenciam as motivações para fazer voluntariado. Verificámos que as mulheres têm um nível de motivação altruística maior do que os homens, o que corresponde a alguns resultados já identificados por outros investigadores. A religião, o lugar onde as pessoas vivem, o nível de rendimento e de escolaridade são outras características importantes que influenciam as motivações das pessoas para se envolverem no voluntariado. Embora se tenha chegado a conclusões interessantes, consideramos esta parte da análise como exploratória e dadas as especificidades das abordagens poderá ser objecto de análise mais profunda num ambiente pluridisciplinar.

Chapter 1

Introduction

The question about what ultimately causes people's happiness can be found throughout the history through ideals, at least in our occidental culture, since Greek philosophers.

Basically two views concerning the pursuit of happiness emerged. The first view emphasizes that helping others increases people's happiness. Referring to Aristotles, it is stated that true happiness is to be found in the expression of virtue. Hedonists followed the pursuit of happiness, proclaiming the idea that the way to seek pleasure and happiness only for oneself leads to higher subjective well-being. The utilitarianism of John Stuart Mill defended the altruistic hedonism which proclaimed that contribution for the greater good and happiness of all makes everyone happy.

The second view emphasizes that people who pursue their narrow self-interest become happy. A *homo economicus*, who maximizes his or her utility by behaving selfishly, is expected to be happier than people who accept costs to help others.

Another philosophic approach reason for our happiness can be found in biology: the survival of fairness. This philosophic approach relates with fairness, proclaiming that a desire to be just has origin in a biological mechanism of fairness and a survival process in which the fair individuals run less risks to be victims of revenge.(Trammell and Wren, 1977; Schottera *et al,* 1996).

The philosophical question, about whether sacrificing time and money to help others is rewarding and reflected in people's happiness, turns into an empirical question.

Layard (2004)[1] proclaimed that if we want a happier society, we should focus most on the experiences which people value for their intrinsic worth and not on their possessions. So based on his ideas our focus should be, above all, on relationships in the family and in the community. The most important ideal, which may inspire our lives is to take more pleasure in the happiness of others, and to promote it. In this way we might all become less self-absorbed and happier. Volunteering may be one way to achieve that goal.

One of the objectives of this work is to explore and test several explanatory models of volunteering activity. This thesis identifies the factors that determine whether an individual volunteers or not. In particular, we identify several types of volunteering and analyze the factors which influence each type of volunteering. In addition, we investigate whether the decisions of participating in the various types of volunteering are interrelated or not and analyze the volunteering decision as a choice between mutually exclusive alternatives (including the option of doing more than one type of volunteering). The other objective of this thesis is to explore the motivations for volunteering and to identify the relationship between these motivations and the types of volunteering work. In addition, we perform an exploratory analysis of determinants of the various types of motivations. We identify and test three main motivations for volunteering: altruistic motivation, warm glow social oriented motivation and warm glow ego driven motivation. The empirical part of this dissertation was based on data from the World Value Survey and the European Value Survey.

This thesis is organized into 6 chapters. Each chapter (except this and the last ones) has its own introduction and conclusion. The current chapter contains a general introduction to the theme and the objectives of dissertation and presents a brief description of the remaining chapters.

The second chapter discusses the role of volunteering in modern economies. In the first part of the chapter we discuss the role of social economy in market oriented economies, the value of this economy and its importance to the stability and social peace in the countries. We also point out some differences between countries. Next, we focus our attention in the volunteering activity as a component of the social economy. The problem of defining and measuring volunteering activities is addressed and the role of the volunteering activity in the social economy is discussed.

[1] From:Layard R. (2005) Happiness is Back, Prospect Magazine http://www.prospect-magazine.co.uk/article_details.php?id=6761;

The next section in the second chapter is dedicated to a description of some characteristics of volunteering in European countries. Countries were grouped according to their geographic proximity and some other common characteristics. We discuss the volunteering activity in pos-socialist countries, in Mediterranean countries, in northern and in western countries. The last part of this chapter is dedicated to the volunteering activity in Portugal. We describe the historical environment which influenced the volunteer activity and in the last part of this section we discuss the profile of the Portuguese voluntary.

In the third chapter of this work, we present a literature survey on volunteering. We start by describing the most important economic models of volunteering: the consumption and the investment models. After presenting the economic models we also discuss models from other areas of research which study volunteering, namely the sociological and psychosociological models for volunteering. Lastly, the chapter summarizes some of the empirical studies on volunteering, discussing several issues that have been addressed in this literature: wage as the opportunity cost of volunteering and its effect on volunteering, the effect of increasing public contributions on private donations and volunteering, the substitutability or complementarity between money and time donation, and the determinants of volunteering.

The next chapter presents the data used in this work. As it was mentioned before, the data used belongs to the World Value Survey (WVS) and the European Value Survey (EVS). The WVS and EVS had 4 waves of data. In our work, we used the 4th wave of the European Value Survey in chapters 5 and 6, and the 2nd wave data of the WVS in chapter 7. The number of valid answers was the primary reason for selecting these waves as our data. In this chapter we present a descriptive analysis related of the two waves of the WVS and EVS used in the thesis.

Chapter 5 identifies and analyzes the determinant of the volunteering decision. We start by summarizing the determinants of the volunteering decision used in previous studies. Considering previous studies as well as our research in chapter 3, we decided to include demographic variables, socioeconomic variables and attitudinal variables in our analysis. Moreover, to take into account country specific effects we also include country dummy variables. The chapter presents and discusses the results of the logit estimation to explain the decision of volunteering in general. Next, we investigate whether the determinants of volunteer differ among the various types of volunteering activities. Using principal component analysis we identify four types of volunteer work: social awareness volunteering; professional and political volunteering; social jus-

tice volunteering and education and leisure volunteering. For each type of volunteering we then perform a logit estimation in order to identify the determinants of that type of volunteering.

In chapter 6 we analyze whether doing a certain type of volunteering work influences the probability of doing other types of volunteering work. In other words, we investigate whether the decisions of being a volunteer in the various types of volunteering activities are interrelated or not. This analysis uses a multivariate probit model. In addition, we analyze the volunteering decision as a decision among several mutually exclusive alternatives, where the option of doing simultaneously more than one type of volunteering is also considered. The estimation of a multinomial logit model and corresponding marginal effects allows us to identify the impact of the various explanatory variables on the probability of choosing each one of the possible mutually exclusive alternatives.

Chapter 7 of this work analyzes the motivations for volunteering and relates them with the various types of volunteering work. The chapter starts by exploring the issue of whether the reasons for volunteering are related to the various types of unpaid work. Next, an exploratory factorial analysis is performed so as to identify the main factors behind the reasons for volunteering. A classification proposed by Andreoni (1990) and Nunes and Onofri (2002) is used to interpret these three factors: altruistic motivation, warm glow social oriented motivation and warm glow ego driven motivation. The chapter also studies the impact of the various types of motivation on the probability of doing the different types of volunteering activity. Finally, the last part of the chapter is dedicated to an exploratory analysis of the factors that influence the motivations for volunteering.

The last chapter of the thesis presents the main conclusions of the thesis, stressing the most important results and main contributions of this work. In addition, the limitations of our study and ideas for future research are also presented.

Chapter 2

The role of volunteering in modern economies

2.1 Introduction

The objective of this chapter is twofold. On the one hand the chapter discusses conceptual issues such as the definition of volunteering and of social economy and their role in modern economies. On the other hand the chapter intends to provide a brief picture of volunteering in Europe and, in particular, in Portugal.

The chapter starts by defining the concepts of social economy and volunteering. Next we describe the importance of the social economy and of volunteering in modern economies and point out some problems concerning the calculation of the economic value of volunteering. In the next section we present a picture of volunteering in Europe and argue that there exist wide differences across countries concerning the volunteering activities. In the last section of this chapter we present the volunteer activity in Portugal, mentioning some historical conditions which influence that activity and describing the profile of the Portuguese volunteer.

2.2 Social economy and volunteering

2.2.1 The concept of volunteering

In Europe the number of volunteers rounds 100 million, which makes a big difference to our society. A Eurobarometer survey in 2006 revealed that 3 out of 10 Europeans claim to be active in a voluntary activity and that close to 80% of the respondents feel that voluntary activities are an important part of democratic life. But what is volunteering?

In the literature there are many definitions of volunteering which differ in several aspects. While some definitions are based on the individual decision of being a volunteer others are based on a more collective approach of volunteering. While some definitions include only work in a formally organized nonprofit organization others include both formal and informal volunteering. While some definitions exclude any form of compensation others assume that some forms of compensation are permissible. In spite of these differences, all definitions agree that volunteering involves working without receiving the standardized monetary value of the work.

According to Heidrich (1990) (cross ref Berger, (1991)) "a volunteer is a person who chooses to be a member in a formally organized nonprofit organization out of free will and without wages". He distinguishes three types of volunteers roles: leadership, direct service and general support member-at large with irregular participation. This definition excludes individuals who do volunteer work out of the organizational network – the informal volunteering.

On the contrary, in the Volunteering Western Australia website[1] we found a wider definition of volunteering: "Volunteering is an activity which takes lots of different forms: formal or informal, individual or in groups, inside or outdoors, locally or overseas. Volunteering is an activity which can suit every lifestyle, ability, interest and skill, while also having lots of fun in the process! The activity of volunteering, or helping a community group of your own free will, can be described by a variety of terms: community service, activism, good samaritan, pro bono work, civic engagement - the list goes on. Whatever term is used, all volunteering is undertaken".

On the other hand, Smith (1981) focuses his attention on the individual decision of being a volunteer. He defines a volunteer as "an individual engaging in behavior that is not biologically determined (e.g., eating, sleeping), nor economically necessitated (e.g. paid work housework,

[1] Availble in http://www.volunteeringwa.org.au.

home repair), nor sociopolitically compelled (e.g. paying one taxes, clothing oneself before appearing in public), but rather that is essentially (primarily) motivated by the expectation of psychic benefits of some kind as a result of activities that have a market value greater than any remuneration received for such activities."

Social psychologists (Batson, 1998) see volunteering as "a distinctive form of pro social action," in which the volunteer chooses, without prior obligation or commitment, to help others; seeks out an opportunity to do so; serves over an extended period of time; and expends considerable time and effort doing so. This is the idea of *pro bono* work. Govekar (2002) suggested that volunteering is a "conscience good or activity", that is, volunteering is something that people feel morally obliged to do when asked but which they would just as soon let someone else do.

Others (Weemaes and Schokkaert, 2004; Duncan, 1999; Schiff, 1990)) have more welfare economic approach to volunteering and subscribe the view that volunteering means acting to produce a "public" good.

Volunteering stands for any activity in which time is given freely to benefit another person, group, or organization. This definition does not preclude volunteers from benefiting from their work. However some investigators believe that work is not truly volunteered if it is remunerated (Smith, 1991).

In international comparisons there is always a problem concerning the definition of volunteering. In order to solve some of these problems the International Labour Organization, in its 18th International Conference of Labour Statistics in December 2008, discussed the problem of volunteering, proposed a definition of volunteer work and made a number of recommendations (ILO 2008 Report):

- That volunteer activity involves "work", i.e. should be productive, so that it is differentiated from education, leisure and other personal activities.
- That the activity is fundamentally unpaid, though some forms of compensation are permissible (e.g. travel expenses, living costs for persons volunteering far from their home) and value of some eventual others (e.g. that any compensation be no more than one third of what the volunteer could earn in other available pursuits).
- That volunteer work is non-compulsory.

- That the principal beneficiary of volunteer work must be someone outside one's own immediate family.

- That both volunteering directly for individuals or households, and volunteering to or through organizations should be included. The definition should clearly distinguish between these two types of volunteering for reporting purposes and also differentiate among types of institutional units.[2]

In this work we follow the ILO definition of volunteering.

2.2.2 The concept of social economy

Although there is no universal definition of the term "social economy" it is usually accepted to cover the range of organizations which are neither part of the public nor part of the private for-profit sectors. It is a "middle way" or "Third Sector" relying often on innovative partnerships and creative management techniques to enable social economy organizations to operate within a wide range of state legislative and fiscal structures.

The Scandinavian Institute for Social Economy defines social economy as follows: "Social Economy refers to organized activities which primarily aim at serving the community, are being built on democratic values, and are organizationally independent of the public sector. These social and economic activities are run mainly by associations, cooperatives, foundations and similar groups. The main driving force of the Social Economy is the benefit of the public or the members of a particular association, and not the profit motive."[3]

The term «social economy» is not equally accepted/recognized in the various countries. Even in Europe the recognition of the term varies widely across countries. According to Ciriec (Centre International de Recherches et D'information sur I'économie Public, Sociale et Cooperative) Report 2007 the Social Economy term is widely accepted in Belgium, France, Italy, Portugal, Spain, and Sweden. France was the birthplace of this concept.[4]

[2] Report of the Conference - 18th International Conference of Labour Statisticians Geneva, 24 November–5 December 2008 INTERNATIONAL LABOUR ORGANIZATION

[3] Availabe in http://socek.se/ciriec_research_2009.

[4] The term social economy appeared in the economic literature, probably for the first time, in 1830. In that year the French liberal economist Charles Dunoyer published a Treatise on "social economy" that advocated a moral approach to economics.

The countries in which the Social Economy concept has a medium acceptance level and coexists with other concepts (such as nonprofit sector, the voluntary sector and social enterprises or social firms) are Cyprus, Denmark, Finland, Greece, Luxemburg, Latvia, Malta, Poland and the United Kingdom.

In the remaining European countries: Austria, Czech Republic, Estonia, Germany, Hungary, Lithuania, Netherlands, and Slovenia this term has limited recognition. In these countries the related terms like nonprofit sector, voluntary sector and non-governmental organizations enjoy a greater level of recognition.

The social economy, including cooperatives, mutual societies, nonprofit associations, foundations and social enterprises, provides a wide range of products and services across Europe and generates millions of jobs. When policy-makers work to improve the business environment in Europe, they need to ensure that their efforts take into account the specific characteristics of social economy enterprises, particularly Small and Medium Enterprises (SME's).

According to a UK classification,[5] the social economy can be divided into the following three sub-sectors:

- *The community sector* – includes those organizations active on a local or community level, usually small, modestly funded and largely dependent on voluntary, rather than paid, effort. Examples include neighborhood watch, small community associations, civic societies, small support groups, etc.

- *The voluntary sector* – includes those organizations that are: formal (they have a constitution); independent of government and self-governing; not-for-profit and operate with a meaningful degree of volunteer involvement. Examples include housing associations, large charities, large community associations, national campaign organizations, etc.

- *The social enterprise sector* – includes organizations which "are businesses with primarily social objectives whose surpluses are principally reinvested for that purpose in the business or in the community, rather than being driven by the need to maximize profit for shareholders and owners". Examples include cooperatives and credit unions.

The Ciriec Report (2007) proposed a different classification of the Social Economy in: market

[5] Avaliable in http://www.thirdsector.co.uk/.

or business subsector of Social Economy (SE) and the non market subsector of SE.

The market sub-sector of the SE is constituted, in essence, by cooperatives and mutual societies, business groups controlled by cooperatives, and other SE organizations and similar companies, and certain nonprofit institutions serving SE companies. The non market sub-sector is composed of associations and foundations.

Following the above quoted report, both types of SE organizations share some characteristics: *"they are organizations of people who conduct an activity with the main purpose of meeting the needs of persons rather than remunerating capitalist investors."*

According to the above definition, the shared features of these two sub-sectors of the SE are:

- They are private, in other words, they are not part of, or controlled by the public sector;
- They are formally organized, that is to say that they usually have legal identity;
- They have autonomy of decision, meaning that they have full capacity to choose and dismiss their governing bodies and to control and organize all their activities;
- They have freedom of membership, in other words, it is not obligatory to join them;
- Any distribution of profits or surpluses among the user members, should it arise, is not proportional to the capital or to the fees contributed by the members but to their activities or transactions with the organization.
- They pursue an economic activity in its own right, to meet the needs of individuals, households or families. For this reason, SE organizations are said to be organizations of people, not of capital. They work with capital and other non-monetary resources, but not for capital.
- They are democratic organizations. Except for some voluntary organizations that provide non-market services to households, SE primary level or first-tier organizations apply the principle of "one person, one vote" in their decision-making processes, irrespective of the capital or fees contributed by the members. Organizations at other levels are also organized democratically. The members have majority or exclusive control of the decision-making power in the organization."

2.2.3 The role of the social economy

The Ciriec Report 2007 indicates that, in 2002, the European social economy sector had over 11 million paid employees, which was equal to about 6% of the working population of the EU. The highest employment rates was in Netherlands (9.5% of total employment) and the smallest in Latvia (0.03%). The John Hopkins University studied for many years the value of the most important parts of social economy: the nonprofit sector. Their study «Measuring Civil Society and Volunteering»[6] published in 2007 shows that the contribution for GDP of the nonprofit sector, which is a significant part of the social economy, is also very meaningful. The John Hopkins study shows the same numbers considering the recent study of this sector (see Table 2.1).

Table 2.1: Contribution to GDP, NPI v/s Other Industries by Country

	NPI inc.volunt.	Electricity, gas water supply	Construction	Financial intermed.	Transport storage communication
8 country aver.	5.0%	2.4%	5.1%	5.6%	7.0%
Australia 1999	4.7%	2.3%	6.1%	6.3%	7.7%
Belgium2001	5.0%	2.2%	4.4%	5.0%	7.1%
Canada 2000	7.3%	2.7%	4.6%	5.5%	6.4%
Czech Rep. 2004	1.3%	3.4%	5.8%	3.1%	9.6%
France 2002	4,2%	1.5%	4.7%	4.2%	5.7%
Japan 2004	5.2%	2.5%	6.5%	6.7%	6.8%
N. Zealand 2004	4.9%	2.7%	4.6%	6.2%	7.0%
U States 2003	7.2%	2.0%	4.4%	7.7%	5.9%

Source: SNA System National Accouts and OCDE (Gross Value Added and Compensation by Industry)

As we may verify the non profit sector is really important in many economies. In the United States its contribution is larger than electricity, gas and water supply, construction or transport storage communication. Analyzing the most important areas of that contribution the John Hopkins study identifies the following four areas: Culture and Recreation, Education, Research, Health and Social Services (see Table 2.2).

[6] The objective of this study was to produce a "*Handbook on Non-Profit Institutions in the System of National Accounts*" designed to provide a more comprehensive picture of the economic contribution of nonprofit institutions (NPIs).

Table 2.2: Distribution of NPI contribution to Value Added by Country and Field

	Culture recreation	Educational research	Health	Social Services	Others
7 country aver.	17.0%	20.1%	21.9%	18.7%	22.4%
Australia 1999	23.1%	24.7%	12.0%	21.6%	18.5%
Belgium2001	16.5%	1.9%	34.4%	24,5%	22.7%
Canada 2000	8.1%	20.3%	38.4%	11.7%	21.5%
Czech Rep. 2004	12.2%	50.9%	1.8%	3.5%	31.6%
France 2002	29.6%	11.9%	10.9%	35.7%	11.9%
Japan 2004	3.3%	16.5%	45.4%	17.8%	16.9%
N. Zealand 2004	25.9%	14.7%	10.3%	15.8%	33.7%

Source: SNA System National Acccouts and OCDE Data

As mentioned before, the social economy, or the many times called third sector, is a concept which denotes the sphere between state and market. The social economy is placed between the market and the state and mediates the interests between individual and general interests.

In Western European countries, the social economy has been on a steady increase during the last decades. The social economy sector, in European countries, is predominantly financed by public money that is concentrated on those subsections which form the core of the welfare state: education, health and social services. However, public funding is currently being reduced and against this background, government and nonprofit organizations are looking for new ways of cooperation. In other words, the partnership of the sector with the government is changing as well as its position and role in the welfare mix.

According to Anheier and Seibel (1993) "The discovery of a 'third sector' occurred at a time when politician and policy makers in most Western Countries begun reconsidering the dimension of labour between public and private sectors, and to examine ways of reducing the states responsibilities. This intensified interest in the third sector was supported not only by conservative political forces but also by others across the political spectrum.....The broad range of economic and social attributes which exists under the term 'third sector' allowed the politicians to support their own critics and interpellation on the true 'welfare states crisis', we may find out the significance of social economy services".

The CIRIEC Report shares the same idea:

"It was not until the crisis of the Welfare State and the mixed economy systems in the last quarter of the 20th century that some European countries saw a reawakening of interest in the typical organizations of the SE, whether business alternatives to the formats of the capitalist and public sectors, such as cooperatives and mutual societies, or non-market organizations, mostly associations and foundations. This interest sprang from the difficulties that the market economies were encountering in finding satisfactory solutions to such major problems as massive long-term unemployment, social exclusion, welfare in the rural world and in run-down urban areas, health, education, the quality of life of pensioners, sustainable growth and other issues. These are social needs that are not being sufficiently or adequately supplied either by private capitalist agents or by the public sector and for which no easy solution is to be found through market self-adjustment mechanisms or traditional macroeconomic policies".

2.2.4 The role of volunteering in the economy

The voluntary activity is an important part of civil society life. It allows the reinforcement of the individual's democratic participation and social cohesion. Both society as a whole and the individual volunteers benefit wherever people engage together on activities to help each other, support those in need, preserve our environment, campaign for human rights, or initiate actions to help ensure that everyone enjoys a decent life. All these actions conduct to an increase of social cohesion.

"Volunteering brings benefits to both society at large and the individual volunteer. It makes important contributions, economically as well as socially. It contributes to a more cohesive society by building trust and reciprocity among citizens." we may read in the Annual Report 2007 of United Nations Volunteers

The voluntary associations play an important role in modern society. They act as a mobilizing mechanism through different methods "they broaden individual sheers of interests and concerns, making public insures and political concerns more relevant; they bring individuals into new social networks that immerse them in new activities, including politics; they provide training in social influence and leadership skills, which are conducive to political activity; they provide multiple channel straight which individuals can exercise political influence" (Berger, 1991).

Volunteers are engaged in a diverse range of activities, such as the provision of education and services, mutual aid or 'self-help', advocacy, campaigning, management, community and

environmental action. They play an important role in social inclusion and integration, finding solutions to societal issues, improving quantity and quality of services and creatively developing new services. Volunteering may help to create innovative partnerships between businesses, public authorities and voluntary sector organizations.

Volunteering provides informal and non-formal learning opportunities and is therefore an essential instrument in life-long learning. Through volunteering, people gain knowledge, exercise skills and extend their social networks, which can often lead to new or better employment opportunities, as well as personal and social. For all these reasons, volunteering is an important component of the strategic objective of the European Union of becoming "... the most competitive and dynamic, knowledge-based economy in the world..." as adopted by Member States at the European Council in Lisbon in March 2000.

The crisis of the family structure raised new needs which, as a societal demand, had to be satisfied. The increasing life time expectancy and the necessity to have a better quality of life, created new areas of social intervention for social policies makers. Through the association based on volunteer activities supported by public and private financing it is possible to increase the response of societies to those needs in a more efficient way.

Voluntary activity is perceived as an increasingly important economic activity as it gains more and more weight in western countries. The characteristics attributed to this activity are considered to be very important components on a stable economy (Badelt, 1985). Volunteering gains much importance in view of the European imperfect public welfare system (Roy and Ziemek, 2000). As a consequence, measuring the total value of the voluntary activity in the economy becomes an important issue. Some studies (Roy and Ziemek, 2000) tried to do this evaluation. They found that the number of voluntary work in modern countries is very high.

The weight of volunteering considering its contribution to GDP is shown in Figure 2.2. The value added by nonprofit institution including volunteers accounts for an average of 5 percent of Gross Domestic Product in the eight countries for which the data is available. This varies from a high of 7.3 percent in Canada to a low of 1.3 percent in the Czech Republic (Salamon *et al* , 2007). The volunteering activity contributes an estimated 1% to the GDP of studied national economies and many voluntary sector organizations depend heavily on the work of volunteers to carry out their activities. This value is consistent with Archambault and Prouteau (2008) findings that the contribution of volunteer work to the French GDP in 2005 was between 1%

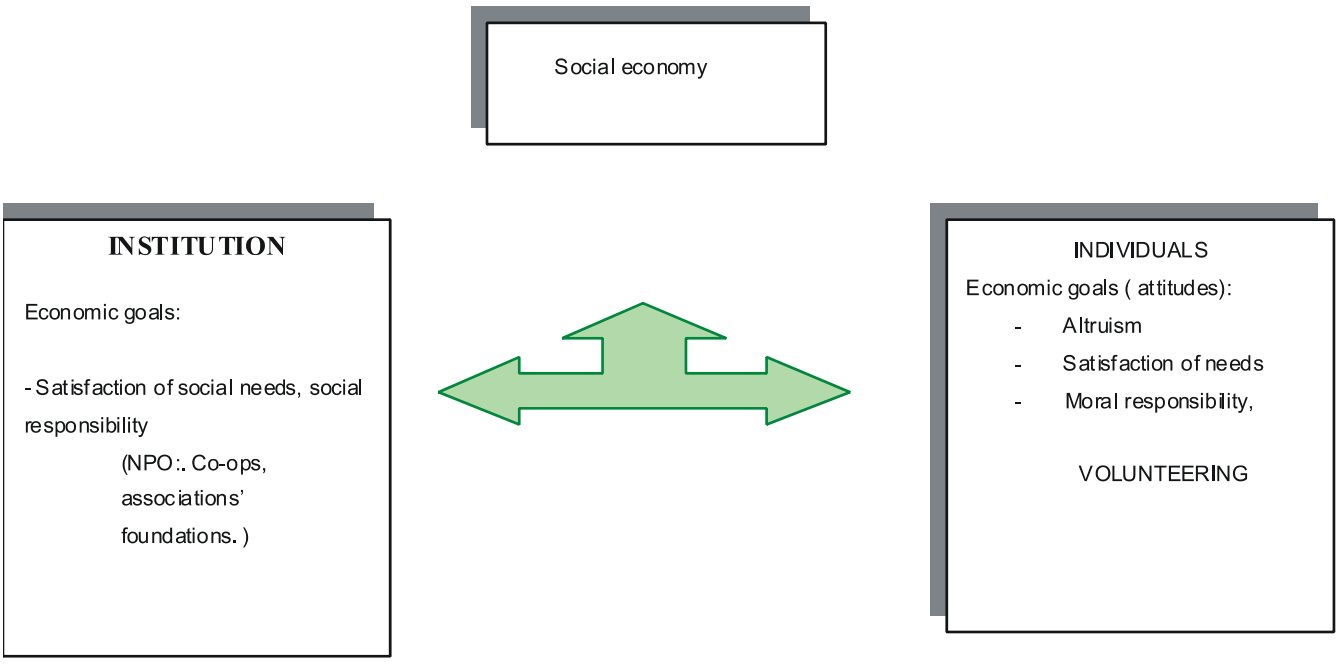

Figure 2.1: Volunteering in social economy

and 2%. These two last researchers recommend some precautions regarding the evaluation of the volunteering work due to the difficulties in estimating the proper amount of volunteer work and its right value.

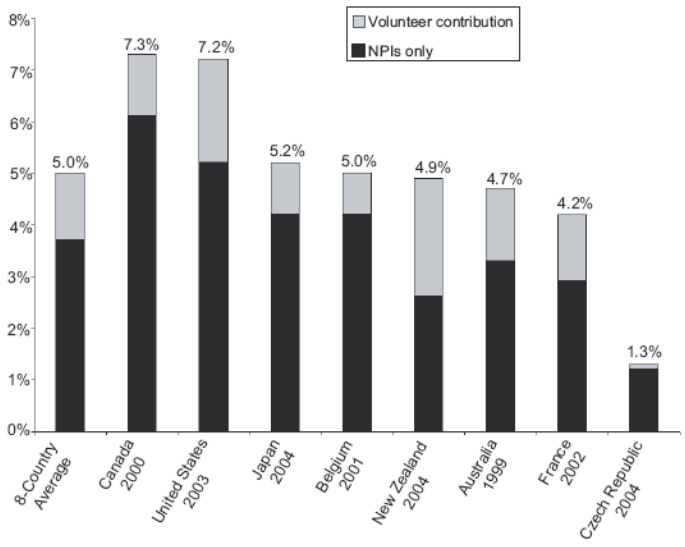

Figure 2.2: Volunteers contribution to GDP by Country and 8-Country Average.

In the USA about 61.8 million people, or 26.4 percent of the population, volunteered through or for an organization at least once between September 2007 and September 2008 (data from the Bureau of Labor Statistics of the U.S. Department of Labor based on Population Survey (CPS)). The volunteering rates of men, 23.2 percent, and women, 29.4 percent, were about the same in the year ending September 2008 as in the prior year. Volunteers of both sexes spent a median of 52 hours on volunteer activities during the period from September 2007 to September 2008. The Independent Sector estimated that the volume of volunteer work in USA in 2006 was more then 295 billions of dollars.

In Canada almost 12.5 million Canadians or 46% of the population aged 15 and over volunteered during in that year (2007).

The volunteering data collected by surveys frequently presents a lot of questions considering the quality of this data. There are many issues which may influence this quality. First of all there is a problem of survey methods. The choice of one method instead of another creates limitations related to the types of questions that can be asked (v.g., multiple choice question by telephone). Another problem concerns the questionnaire design which to help respondents

have maximized the ability to recall past giving and volunteering behaviors. Hall (2001) on his research presented some important questions considering that problem. The first one is that the "inability of respondents to accurately recall past behaviors introduces both random errors and probable downward biases to estimates of giving and volunteering". Another question is related to the understanding of the inquiry. In volunteering questionnaires the lack of commonly understood terms is frequent, which may origin in different interpretations of the questions by the respondents.[7]

Hall (2001) has also mentioned some technical problems. "Some respondents who participated in the pilot test complained of being pressured to feel guilty that they are not doing enough giving and volunteering".

2.3 Volunteering across Europe

Although Europe is a rather small continent, it has been influenced over the centuries by many overlapping cultures. Whether it is a question of West as opposed to East, Christianism as opposed to Islamism, many have claimed to identify cultural fault lines across the continent. There are many cultural innovations and movements, often at odds with each other, such as Christian proselytism or Humanism. Thus the question of "common culture" or "common values" is far more complex than it seems to be. It is also important to consider the historical context, including both the recent past as well as more far away historical times. This differences which are the European wealth also influence the volunteering attitudes in its societies.

Taking into consideration the actual European situation, we may recognize that in Europe we have post-socialist countries with many sociopolitical changes during recent years, the Sandinavian countries with proper tradition of welfare state, the Western countries with stable democratic institutions and the Mediterranean countries with more recent democratic traditions.

2.3.1 Former socialist countries

Following Salomon and Anheier (1999), in the former socialist countries of Central and Eastern Europe "the concept of volunteering became obsolete, contaminated by decades of state and

[7] For instance, in the WVS\EVS there is a question considering the reasons for volunteering. One of the listed reasons is "for social reasons", which in our opinion may have many interpretations.

party requirements to contribute time and efforts freely for some common social, cultural, or political cause". The participation rate in volunteering, considering data from 4th wave of the EVS, presents the following values for these countries: 7.4% in Russian Federation, 12.1% in Ukraine, 12.2% in Poland, 13.6% in Lithuania, 14.4% in Romania, 14.4% in Hungary and 18% in Belarus. The European average for this indicator is 25%.

After 1989, countries in the region set out to modernize their social service and health care systems. In doing so, the governments paid very little attention to the role and potential contributions volunteers could make to improving state-run institutions, many of which were under-funded and short-staged. In Poland and other ex-socialistic countries that present significant negative attitudes regarding all types of volunteering, and following Gocko (2006), there are three main reasons for the lack of participation on volunteering: The first reason is related with a lack of tradition transmitted from generation to generation (break related with functioning of socialistic countries), the second is related to the relative poverty, which conducts that more energy has to be taken to satisfy the basic needs first, and the last one is related with the relatively low social sensibility related with social acting.

A number of countries have begun to recognize that their laws are not conducive to volunteering, and, among other issues, have identified the following:

- Lack of legal definition of volunteering – The absence of a legal definition of volunteering may result in the treatment of volunteers as paid employees. Consequently, any payment may be considered compensation, and NGOs may be treated as running afoul of the labour law and the requirements to pay minimum wage. For example, in Latvia, NGOs were not able to reimburse volunteers expenses, as that would have required signing a labour contract, which in turn would have subjected the volunteers to employment laws and minimum wage rules. In Croatia and Macedonia, state inspectorship could, prior to this year, temporarily prohibit work if employment was not commenced in compliance with the law (e.g., the parties did not sign an employment agreement).

- Loss of unemployment rights and benefits – In a related problem, unemployed individuals who are treated as employees on account of their volunteer service may lose the unemployment and health benefits to which they are entitled under national law. In Czech Republic, labour officers have eliminated unemployment benefits to unemployed individuals acting

as volunteers, because these efforts have been deemed illegal work, although the volunteers receive no payments or in-kind benefits. During the drafting of the law on volunteering, a Croatian ministry opined that if unemployed individuals want to volunteer, then the unemployment benefits should be suspended for the time of their volunteer engagement.

- Taxation of reimbursed volunteering expenses – Taxation of reimbursement of reasonable expenses incurred in the course of volunteering poses serious obstacles to recruiting and mobilizing volunteers. For example, in Estonia, if a NGO wishes to cover the volunteer's costs, it must do so through a labour contract or some civil contract, and all payments are subject to taxation. In Macedonia prior to recent reforms, as well as Montenegro, reimbursement of expenses to volunteers were taxed; only reimbursement to employees was exempted. Treatment of voluntary labor as taxable can also hinder volunteering; this year's report from Latvia suggests that some government authorities have sought under the Labor Law to tax voluntary work.

- Liability – Volunteers may not be aware of liability rules that apply if a volunteer harms a third party or was harmed during the course of service.

- International volunteering – Visa and other immigration rules may limit foreigners from volunteering in another country and thus discourage cross-country volunteering.

2.3.2 The Mediterranean countries

The Mediterranean Countries present relatively low levels of social and volunteering participation. Considering the EVS 4th wave data the participation rate in 1999 was 14.2% in Portugal, 16% in Spain 16%, 22.7% in France 22.7% and 25.1% in Italy.

The 20th century dictatorships in Iberian countries, which limited all social organization except the ones which were controlled by the state, and social and political crisis in the last century in Italy might be an explanation for small associative activity and those low levels of participation. the other explanation might be related with higher importance of informal volunteering in theses countries, with higher role of family relations.

The Spanish social sector is still very young. Almost every association was created after 1977, the fall of Franco's dictatorship. Spain is one of the European countries with lowest associative tradition. The late 80's and early 90's represented therefore the volunteering "boom"

in Spain, with a significant increase of the associative movement (not-for-profit and voluntary organizations) referring to the social, cultural, sports and educational fields. The biggest participation levels are from males except social action activity in which females participation is bigger (Garcia, Delgado, 2004; data from 2001). The number of volunteers in Spain is increasing every year.

In Portugal volunteering was influenced by Christian values and had as objective to create the family support structures. The first organizations were created in XIII century with charity and social support objectives. In the 20th century, only after the fall of dictatorship, new kinds of volunteering organizations promoting human rights, environmental issues, cooperation for development, local development, culture and sport appeared. Comparing with other European countries Portugal still has a small participation in volunteer activities. Only 14.2% of population are enrolled in this activity. The situation of volunteering in Portugal will be discussed in greater detail in the next section.

In Italy, the amount of changes in the political and social structures (extremists activities of 70th, social crisis of 90th) and the lack of clear definition about the positioning of volunteering in the social sector, influenced the lower level of "social participation" of Italians. However there are many stakeholder volunteers, involved in the social economy enterprise sector especially in the cooperative sector. The National Institute of Statistics, carried out a two-year study (2004/2005): The survey's results identified a few characteristics of voluntary organizations (VOs) in Italy, such as: a stronger presence of VOs in the northern regions, even if in the last few years VOs increased at a bit quicker rate in the centre and south of Italy; VOs have mainly a small organizational dimension both as regards the number of active volunteers and the amount of economic available resources; volunteers are mainly men; aged between 30 and 54; graduated (high school), and are employed; VOs are still especially actives in the field of health care and social assistance. Health care and social assistance are, and have always been, the sectors in which the majority of voluntary organizations operate.

The volunteer activity in France is 27.6% of the population above 15 years old (Prouteau and Wolff, 2004). The regular volunteering was estimated in 12.1 % and irregular in 18.6%. The average time donated was almost 100 hours a year. The most popular activities which received volunteering labor were cultural, leisure and sports activities (about 33% and 26 %, respectively) and rights defence volunteering with a little above 18% of participation. French volunteers

usually participate in one kind of volunteer organization (75.3%) but about 19.5% participate in two and 5.2% even in more organizations. Considering the characteristics of volunteering in France, more man volunteer then women, with rather higher than lower educational level and higher income. They usually have regular religious attendance, and live in smaller towns. Considering the region, there is a higher probability to volunteer if one lives in the East/West of France than in the center, Paris or Mediterranean regions.

2.3.3 The Scandinavian countries

The Scandinavian model of social economy places expectations of voluntary social work in non-profit organizations, church and church associations. According the 4th wave of the EVS, these countries have the highest participation rates with 33.2% in Denmark, 36.1% in Finland; 53.6% in Sweden . Sweden presents the highest rate of participation in volunteering in the 4th wave EVS data.

According to the studies of Karjalainen (2000), in Finland the large part of the work dealing with social problems of the citizens is covered with voluntary associations and activities. In the Nordic countries, the expressive function of the nonprofit sector are far more prominent then the service one as a consequence of the heritage of social based civil movements and citizens engagement in advocacy, sports and related expressive fields.

Christian voluntaryism plays a role both in supporting the Finnish welfare system and promoting active citizenship and participation that are elements of a vital civil society. Clearly the most popular field is sports (30%). The second most popular field is health care and social work (25%), and the third most popular is education of children and youth (22%). On average, Finns give rather much of their time to voluntary work: nearly 18 hours per month (Yeung, 2002).

Sweden is considered to be a social-democratic welfare state regime, with big impact on popular movements, membership and volunteering. While the sectors in most of the other countries in this study are dominated by nonprofit active in the core domains of the welfare state - social services, education, health care - the major Swedish nonprofit agents are to be found in the field of culture and recreation, and in interest mobilization.

The development of Danish democracy and the Danish welfare state is based upon a interaction between Volunteer Denmark organizations and the public sector. Volunteer Denmark is a network of volunteer social organizations, sports associations, cultural and ecclesiastical orga-

nizations, adult education associations, youth groups, associations for persons with disabilities, patients associations, residents associations, grass-roots organizations, international NGOs and many more. Volunteer Denmark is diverse, ranging from informal networking organizations to what is often called Associations Denmark, i.e., organizations and associations with formal political decision-making procedures. A fundamental condition for Volunteer Denmark is their autonomy on organizational matters.[8]

"Norway belongs to the family of Nordic welfare countries, long governed by social democratic regimes with a strong emphasis on collective and egalitarian values, on state responsibilities towards poor and marginal groups and high degree of state intervention in the welfare field. The ideas about the "voluntary" efforts have traditionally been associated with religious, temperance, labor class and philanthropic activities" (Lorentzen and Dugstad, 2008). The basic vision of social democrats governments was, for a long time, to replace philanthropy with state-financed and professionalized welfare services. Three out of four Norwegians hold a membership in a non-governmental organization (NGO), and half of these are members of two or more organizations. In terms of volunteers share of civil society workforce organization the Norway is number 4 within 35 countries. Voluntary activities play an important role in providing services that are complimentary to those provided by the welfare state. A high percentage of volunteers are active in sports cultural, hobby music and youth associations.

2.3.4 The Western European countries

In Western European countries, especially the Anglo-Saxon part, the notion of voluntaryism has its roots in the Lockeian concept of self organizing societies, outside the confines of the state and it is strongly associated with democratic concepts. The volunteering participation rate in these countries (Germany, Austria, Ireland and Northern Ireland) presents some differences. Considering the EVS 4th wave data 27.9% of Austrian population, 30.3% of Irish and 17.3% of the German population claimed to participate in volunteer activities.

The estimation of Badelt and Hollerweger (2001), considering formal and informal volunteering indicated that almost 51% of the population in Austria worked as a volunteer activities. In principle the total volume of volunteer work is diminishing, in particular concerning informal

[8] From: "Charter for interaction between Volunteer Denmark/Associations Denmark and the public sector"; December 2001.

support in the community. Volunteer work in formal organizations has slightly increased, above all volunteering in a religious context. Whereas many Austrians volunteer in associations and organizations, many people from ethnic minorities (about 7% of population in 2001) are more active informally in the framework of large social and family networks.

The "Austrian National Committee" presented their work in the "Volunteer Manifesto" 2001[9] which includes the following demands: better legal regulation of volunteer work, improving the sustainability of volunteering, by improving efforts to motivate all segments of the population (especially young and old people) to volunteer, improving the quality of volunteering through educational programs, recognizing the relevance of qualifications earned in volunteering for employment, enabling more research in the area of volunteering.

Due to the division of Germany and the diverging political systems voluntary commitment developed differently over four decades. In the former German Democratic Republic (GDR) volunteering was mostly closely related to "mass social organizations" (gesellschaftliche Massenorganisationen). Although the GDR constitution guaranteed its citizens the freedom to associate, all organizations, such as political parties, trade unions or voluntary organizations, had to accept the supreme authority of the Socialist Unity Party (Sozialistische Einheitspartei Deutschlands, SED). [10] Within the framework of volunteering, voluntary service programmes have a long tradition in Germany. After several campaigns headed by the Catholic and Lutheran Churches in the 1950s the precursors to the voluntary service programmes were translated into policies in 1964 in the FRG (Federal Republic of Germany). The so-called Voluntary Year of Social Services (Freiwilliges Soziales Jahr, FSJ) has been hosted by social welfare organizations and offered young people the possibility to volunteer full-time for 12 months in social and health care.

According to the latest German government survey on volunteering in 2004, 36 percent of Germans claim to be a volunteer, up from 34 percent five years earlier, but that high number includes such volunteer jobs as taking an active role in a sports club or cultural institute. The figure for "social" volunteering such as leading a youth group was at 5.5 percent in 2004, up from 4 percent in 1999. In Germany, this volunteering growth has a more "political" character, with volunteers and governments forming a sort of bridge to get things done. According to Werner

[9] Available in :www.worldvolunteerweb.org/.../030305AUT_manifest_en.ppt.

[10] From: "Voluntary Action in Germany: Facts and Figures", European Voluntary Centre.

Lindwehr from the Agency for Self-Help and Volunteering,[11] in the state of Lower Saxony, people are becoming increasingly active in local citizens initiatives.

Historically in Ireland, voluntary activity in sports associations and in rural agriculture-based communities has also helped carve out an identity for Ireland of social solidarity and strength in community. The second half of the 20th century saw the birth and growth, due to increasing political and financial support, of a community development movement that concentrated on social issues in urban areas and, in time, rural areas too. Based on the 2006 census figures, 37.1% of the total population participated in volunteering.[12]

In the UK, the Helping Out study report, carried out in 2006-07, suggested a great overlap in people's donated estimated time and money. The voluntary sector is estimated to be worth £40 billion a year to the economy, so a 5% increase in the number of volunteers would cover the cost of an extra bank holiday. Millions of adults are involved in formal volunteering each year and 90 million hours of formal voluntary work take place each week.

Over half (58 per cent) of respondents gave both time and money. Just one per cent of respondents had given time (volunteered) but not given money. A majority of volunteers (59 per cent) had given money to an organization that they had also given time to within the 12 months before interview. Of those, 34 per cent had only given money to the organization that they volunteered for, while the remaining 66 per cent had given money to other organizations as well. The same report refers that the amount of time spent volunteering and the minimum hourly wage is very difficult to quantify in economic terms. Six out of ten volunteers say volunteering gives them an opportunity to learn new skills and half of all volunteers get involved because they were asked to help.

2.4 Volunteering in Portugal

Just like it is possible to verify in the general context of other countries, Portugal also has a hard time separating volunteering development from social development.

Culture and social factors were determinate by historic periods and influenced the volunteers adhesion. The most important which influenced the volunteering participation were:

[11] Avaliable in :http://www.dw-world.de/dw/article/0,,2447153,00.html.
[12] Data from: http://www.volunteer.ie/.

- Late democracy, after 48 years of authoritarian regime, during which, associative participation out of state control was forbidden.
- Very incipient civic culture which means low associative participation, crescent levels of electoral abstention; political indifference and low levels of participation on non-conventional political actions;
- Reduced number of individuals who belong to medium and medium high social class, which in international comparisons have a bigger participation on volunteer activities;
- Not inclusive but exigent labour market, considering the extra time of work. Lack of part time work and frequent situation of multi employment;
- Practice of citizenship and volunteering in enterprises is a very recent phenomena which conducts to difficulties of company participation in voluntary actions;
- The State action without the necessary recognition of the importance of volunteering.

In Portugal volunteering was linked in the beginning to familiar assistance structures which were influenced by Christian values. Since the beginning, social actions and church charity were the principal expression of volunteering. In Portugal this kind of volunteering has at least 500 years linked essentially to "Santa Casa de Misericórdia" (Saint Mercy Houses). Also the first fire brigades appeared several centuries ago. During the 19th century a strong social and political movement emerged, which allowed the organizations voluntary work to survive and grow. These institutions made the volunteering action more "professional". This situation created an idea of opposition, which is still present today, between volunteers and professionals generating difficulties in the organization between those two types of work.

In the 20th century new kinds of volunteering organizations promoting human rights, environmental issues, cooperation for development, local development, culture and sport appeared but only after the establishment of the democracy in Portugal. After the fall of the "Estado Novo" dictatorship on the 25th of April, 1974 the first NGOD (Non Governmental Organizations for Development) started to arise. These were concerned about the effects of the colonial war on the Portuguese African territories during the dictatorship period. In March 2003, there were 88 NGODs registered at the Ministry of the Foreign Affairs and 45 of them were members of the Social Platform for NGODs.

Table 2.3: Volunteer participation rate in Portugal by source.

Source	Participation Rate	Year
CESOP	12.7%	2001
IOT	15.5%	1999
EVS	14.2%	1999
Source: Pereira (2007) and EVS 4th wave		

In 24th of May 1994 the Portuguese State recognized the statute of NGODs defining their principles, ways of action and organization.

In September 1998 it was established the law that finally recognized the importance of volunteering and set up the bases of legal framework through the law n^o 71/98, 3rd of November 1998. Volunteer work was defined as "*The actions of social and civic interest carried trough non-paid persons who offer their time to nonprofit organizations.*" Another classification of volunteering, presented by the National Council for Volunteer Promotion refers to an activity done of one's free will for the benefit of other.

As a consequence of the International Year of Volunteering promoted by UN in 2001, the Portuguese Government constituted the National Commission for the International Year of Volunteering, which conducted several studies about volunteering in Portugal. In the following years the National Commission for the International Year of Volunteering was renamed to "National Council for Volunteer Promotion" and since 2003 it has been creating several local volunteer centres all over the country.

Regarding the Portuguese participation rate in volunteer activity we found different sources of data . Following Pereira (2007)[13] we used three sources of information: the inquiry promoted by the Study Survey Centre of Catholic University (CESOP); the Inquiry about Time Occupation (OIT) and data from European Value Survey (EVS). Table 2.3 presents the different participation rates considering these three sources.

Pereira (2007) tries to explain the differences between the data presented in Table 2.3. CESOP collected data which referred to regular as well as non-regular volunteer participation during the last year before the inquiry. This inquiry is only dedicated to volunteering activity. The other two inquiries (IOT and EVS) included many other questions. The sample of CESOP

[13]Pereira, Gabriela (2007) "Caracterização do voluntariado em Portugal " (unpublished manuscript).

and the type of volunteer activities in the inquiry was very reduced. It did not consider some types of volunteering activity such as political volunteering, professional association volunteering and part of the religious volunteering.

The OIT data considers the volunteering participation during the last 4 week before the inquiry. The data was collected on a daily basis. Individuals would have to write about all activities they did during the inquiry period. The differences between the EVS and IOT participation rate may be related with occasional or informal volunteering. The EVS inquiry is the only inquiry that is possible to compare with other volunteer participation rates in European countries. This inquiry was used in many European countries. Concerning the volunteering participation rate, Portugal presents one of the lowest values among European countries. The lowest participation rate was held by the Russian Federation with 7.4% followed by Ukraine (12.1%), Poland (12.2%) and Lithuania (13.6%).

Regarding the characteristics of the Portuguese volunteers we have some information from the CESOP inquiry. This study had as an objective to analyze the volunteers' socioeconomic contribution to the social dimension. To analyze this issue, an inquiry was prepared, consisting on the individuals' participation in different types of volunteer organizations, the time donated to those organizations, the roles played in those organizations etc. Based on this inquiry and analyzing the volunteering institution, the percentage of male participants was 55%. In Portugal there are some differences considering the regular and occasional volunteers. Regular volunteering counts with higher male participation: 62.5% of all volunteers. However, in occasional volunteering there are more women than men: 56.3% of all volunteers. The biggest percentage of men volunteers were in administration of volunteering institutions (about 74% men to 26% women). Most volunteers were between 25 to 64 years old (57.5%), the second highest group was of 24 years old and less (30.4%) and only 12.1% were more than 65 years old. Portuguese regular volunteers gave a lot of their time to volunteering activities. They volunteered an average of 210 hours per year, the highest number of hours belonging to the remaining volunteers (about 328 hours), and youth institutions (scouts) (about 233 hours per year). Occasional volunteers in Portugal worked about 17.6 hours per year. Around 18.1% of volunteers had a high level of education (the corresponding figure for the whole population).

From EVS survey we may conclude something about the types of volunteering organizations in which the Portuguese were more engaged. Almost 35.5% of volunteers were engaged in sports

and leisure activities. The second most important type of volunteering was religious volunteering with 26 % of the volunteers involved, and educational and cultural with 19% of the volunteers.

Considering the actual situation of volunteering activity in Portugal the national Centre for volunteering points out some challenges for the future actions such as :

- The reinforcement of local intervention and citizen participation via local volunteer centers;
- The development of a network between volunteer centers and volunteer involving organizations and NGOs throughout Portugal;
- An auto-sustainability for all organizations;
- A new approach relating to human resources specially giving more support to volunteers and strength contractual tie with paid staff;
- A more favorable legal framework for volunteering;
- Promoting a discussion platform between all organizations and the Portuguese State;
- A more pro-active recognition by the state of the important role volunteering plays in society and its promotion with Portuguese citizens.

2.5 Conclusion

In this chapter we discussed the positioning of the social economy and of volunteering in modern economies and presented a brief description of volunteering in Europe.

We started with some definitions of volunteering and concluded that the common denominator in all definitions is that volunteering involves working without receiving the monetary value of the work. Then we discussed the term «Social Economy» and other related terms used in Europe such as «Third Sector» and «Non Profit Sector». All these terms are related and are used to define the areas in the economy between public and private sectors of activity. However the level of acceptance/recognition of the various terms is not the same in all the countries. In our study we decided to use, following the Portuguese tradition, the «Social Economy» term. Next the chapter discusses the role of the social economy and of volunteering in the economy. In particular, we discussed the importance of volunteering as a mobilizing mechanism between

individual spheres of interests and concerns and public issues. We also presented the economic contribution of the nonprofit sector and voluntary activity in the market, presenting the value added by these activities and its contribution in terms of employment in some countries. At the end of this section we discussed the problem of inquiries used on volunteer research and of the correct evaluation on these activates.

In the next section of this chapter we described the situation of volunteering and volunteer activities in European countries. We identified some differences between the Northern, Western European, Mediterranean and Post Socialist countries in Europe. Within groups there are many similarities concerning the volunteering activity.

The last section of this chapter was dedicated to discussing the volunteer activity in Portugal based on different sources. We found that in Portugal there does not exist any study of volunteering considering the different types of volunteering and including also the motivations to do volunteering work.

Chapter 3

Volunteer work, donations and motivations – a literature survey

3.1 Introduction

The aim of this chapter is to review several models that have been proposed to explain the volunteering activity and to summarize the results of empirical studies regarding volunteering and donations.

The motivations behind volunteering are important to understand the models that have been proposed in the literature. Thus the chapter starts by discussing the issue of why do people volunteer and what are their motivations. After discussing motivations, the chapter presents the main traditional economic models that explain the volunteering decision. However the volunteering decision is quite complex and traditional economics alone is far from providing a complete picture on the volunteering decision. In order to give a more complete picture of volunteering we present some alternative approaches to volunteering that incorporate sociological and psychological factors. The last part of the chapter summarizes the results of empirical studies on volunteering and donations and highlights some of the issues that have been discussed in this literature.

3.2 Why do people volunteer?

At the first sight it may seem that working without being paid is not a rational behavior. However, this view does not take into account the fact that volunteering may provide other kinds of rewards. In Economics, the only rational explanation for doing a certain activity is that this activity brings more benefits than costs, opportunity cost included. As a consequence, if volunteering is a rational decision there must exist expected benefits from volunteering.

The benefits from volunteering most definitely will depend on what the individuals expect when they volunteer, in other words, they depend on their motivations.

If the individual who decides to volunteer expects to get personal satisfaction from the act of helping others then, from an economic point of view, we may say that volunteering increases his utility through the consumption of the good "personal satisfaction", this fact may explain his decision to volunteer.

If the individual expects that the volunteer activity may provide him network connection, knowledge, or skills which might be useful in the future, then an economist may explain his decision considering the effect that volunteering will have in his future utility.

It can also happen that an individual has a lot of free time and feels worthless by doing nothing. The volunteering activity may provide him the rewarding sensation of being useful and needed by somebody and in this way increase his utility.

Finally, for many people, to participate in some volunteering activity may give them a feeling of importance, public exposition which also makes them feel better, thus increasing their utility.

In conclusion, it may seem that volunteering is working for nothing but, in the reality, this activity may provide many benefits, therefore increasing the utility of the volunteer and making him feel better and happier.

As we will see in the next section, the economic models which try to explain the volunteering decision are usually linked to the different motivations for volunteering. Motivation is the reason or reasons for engaging in a particular behavior, especially human behavior as studied in psychology and neurophysiology. These reasons may include basic needs such as food or a desired object, hobbies, state of mind, or ideal. The motivation for a behavior may also be attributed to less-apparent reasons such as altruism or morality. According to Geen (1994), motivation refers to the initiation, direction, intensity and persistence of human behavior.

Motivation is said to be intrinsic or extrinsic. Intrinsic motivation comes from rewards inherent to a task or activity itself and extrinsic motivation comes from outside of the performer. The most obvious example of extrinsic motivation is money.

Frey (1992) concluded that "one is said to be intrinsically motivated when one receives no apparent reward except the activity itself. In this case, behavior is based on the moral and ethical considerations which forms part of people preferences". Intrinsic motivation is defined in opposition to extrinsic motivation: an extrinsically motivated individual *(homo economicus)* requires explicit compensation to modify his behavior.

Volunteering can positively affect individuals' well-being due to various motivational reasons. Maier and Stutzer(2004) also suggest intrinsic motivation and extrinsic motivation for explaining the decision to be a volunteer, but contrary to Frey (1992), they consider the possibility of non-monetary rewards on both types of motivations.

Maier and Stutzer (2004) consider these types of motivations and their respective rewards for volunteering:

- *Intrinsic motivation* – Volunteers receive an internal reward as a direct result of their activity and/or from the outcome of the volunteer work they do. In the intrinsic motivation one can distinguish three intrinsic rewards:
  - Volunteers benefit from intrinsic *work enjoyment* (e.g. Deci, 1975; Frey, 1997). Independently of the outcome, people enjoy doing the required task per se. Deci and Ryan (2000) findings show that "[...] intrinsic motivation involves people freely engaging in activities that they find interesting, that provide novelty and optimal challenge".
  - People care about the *recipient's utility.* Due to pro-social preferences, people's utility increases either if other people are better off as a result, or if inequality between people diminishes; 67 percent of the interviewed volunteers stated that an important source of satisfaction was seeing the results of their work (Argyle, 1999: 365).
  - The act of *helping others gives enjoyment per se.* People receive a 'warm glow' (Andreoni, 1990) from contributing time to the provision of public goods.
- *Extrinsic reasons.* People may also feel useful by helping others because volunteering is extrinsically rewarding. People volunteer because they see volunteering as an investment

and expect external benefits or payoffs:

- Volunteering can be undertaken as an investment in *human capital*. Through volunteering activities, individuals may raise future earnings in the labor market (Menchik and Weisbrod, 1987).
- People can volunteer in order to *invest in their social network.* Through volunteer work, they have an opportunity of social contact which can be valuable in establishing business contacts or for getting employment
- The volunteering history may be a positive signal in terms of the market value of the individuals.*Signaling effect* (Ziemek 2003)

3.3 Traditional economic models of volunteering

The decision to be a volunteer can be formalized using microeconomic models. These microecomic models aim to explain why do individuals volunteer and allow us to derive some theoretical predictions about the behaviour of volunteers.

At a very general level, the decision to volunteer is related to the decision on how to allocate a scarce resource: time. The scarcity of resources is the most important issue in economics. The individual has only 24 hours per day but many alternatives to use this time. Usually when one wants to analyze the allocation of this resource one can find three alternative uses for time: paid work, leisure and non paid work. Considering the first two alternatives the explanations are simple: paid work allows individuals the acquisition of consumption goods whereas leisure is related to the necessity to rest and the pleasure that the individual derives from these activities. Sometimes there is a possibility for the individual to maintain certain consumption levels through income sources not related with paid work such as propriety income, pensions, although even in this situation many individuals maintain some paid work. The necessity of leisure is related to the physiological question of the necessity of resting and recuperating both physical and intellectual capacity.

Based on the economic principle that the individual takes his decision in order to maximize his utility (pleasure/happiness) it is possible to conclude that when he chooses to be a volunteer it is because that will increase his utility level.

In the economics literature there are two types of models that have been used to explain the volunteer decision and which are related with the two types of motivations that we identified in the previous section: (i) the consumption models which are more related with the intrinsic motivations and the (ii) investment model which is related with the extrinsic motivations. We describe next these two types of models.

3.3.1 Consumption models

One of the best known consumption models, which explains voluntary donations but which can be adapted to explain volunteering work, was presented by James Andreoni in 1990.

Andreoni (1990) proposed an utility function that considers the individual attitude regarding voluntary contributions for the production of public goods. The utility function of individual i is given by:

$$U_i(x_i, G, g_i)$$

where x_i is the consumption of goods by individual i, g_i is the contribution for public goods by individual i and $G = \sum_{i=1}^{n} g_i$ is the available amount of public goods in the economy (the sum of all individual contributions). The individual chooses x_i and g_i so as to maximize his utility subject to the following constraints:

$$\begin{aligned} x_i + g_i &= m_i \\ G &= G_{-i} + g_i \end{aligned}$$

where m_i is the income of individual i and G_{-i} is the sum of the contributions of all individuals except i.

As previously mentioned, the Andreoni model can be adjusted to explain the volunteering decision. In this case, the individual's decision problem is to choose the consumption of the private good, x_i, leisure time, t_{l_i}, and volunteering time, t_{v_i}, in order to maximize his utility:

$$U_i(x_i, V, t_{v_i}, t_{l_i})$$

subject to the constraints:

$$\begin{aligned} x_i &= w\left(T - t_{l_i} - t_{v_i}\right) + y_i \\ V &= t_{v_i} + V_{-i} \end{aligned}$$

where $V = \sum_{i=1}^{n} t_{v_i}$ is the available amount of volunteering in the economy (the sum of all individual time contributions) and y_i is the extra-labour income. Based on this general utility function one can develop the model of public goods (when the individual only cares about the consumption of private goods, x_i, and the total amount of public goods, V) and the private goods model (when the individual only cares about x_i and about his own voluntary contribution, t_{v_i}). When both V and t_{v_i} are important for the individual we get the mixed model.

It is also possible to develop models where both monetary and time contributions are important and where money and time may be interpreted as two inputs for the production of public goods. Once again these models may be divided into private goods models, public goods models or mixed models.

In the next subsections we describe in greater details the public goods model, the private goods model and the mixed models. For the most part, our presentation follows the model of voluntary donations proposed by Andreoni (1990), however one should keep in mind that the concepts can be easily adapted to the case of voluntary work or to the case where both time and monetary donations are present.

Public goods model

The public goods model explains volunteer motivation in order to increase the supply of public goods. A public good is, by definition, non-rival and non-excludable. An increase in the supply of these goods benefits everybody. The public goods model is based on the fact that individuals are altruistically motivated.

Following Andreoni (1989) "the preferences of the altruistic volunteers depend on the private consumption and the aggregate supply of the public goods". As a consequence, the preferences of the altruistic individual are therefore not only defined by his consumption level but also by the other people's consumption and utility levels (Badelt 1999: cross Ziemek 2003). We may say, based on Maier and Stutzer (2004), that altruistic individuals in the public goods model

are intrinsically motivated and receive the recipients utility as intrinsic reward.

When the individual is a pure altruist his problem is given by:

$$\max_{x_i, g_i} U_i(x_i, G)$$

subject to

$$\begin{aligned} x_i + g_i &= m_i \\ G &= G_{-i} + g_i \end{aligned}$$

In this model the important item is the total amount of available public goods. Higher quantity of available public goods, means an higher utility for the individual. Notice that the n individuals decisions are interdependent and, as a consequence, one should consider the $n-$person game and compute the corresponding Nash equilibrium. Each individual maximizes his utility considering the contribution of other individuals as given. In the Nash equilibrium of this game there is underprovision of the public due to the free-riders problem. When an individual chooses his contribution he does not take into account the fact that by increasing g_i and therefore G the utility of the remaining individuals also increases. The failure to take into account this externality leads to underprovision of the public good relatively to what would be socially optimal.

Another consequence of the public goods model is the so called crowding-out effect. If the government increases the expenses for the production of public goods, this will lead to a decrease of the individual's contribution as he is only concerned with the total amount of public good.

The empirical studies concerning the public and private contribution for available public goods will be discussed in section 3.5.3 of this chapter.

There are some cases where the terms «public goods model» or «altruistic model» are questionable. For instance, when an individual participates in the provision of public goods through volunteering but he also benefits with the available amount of these goods it is not accurate to call that individual a pure altruist. Another case concerns the characteristic of non excludability of public goods. In some cases, the good provided through volunteering may be an excludable good. For instance, the number of places in a local sport club may be limited or

may be available only for the locals.

Private consumption model

Contrary to the public goods model, this model assumes that the individual increases his utility directly from his attitude of giving. As Andreoni (1998:1448) defends "people have a taste for giving: perhaps they receive status or acclaim, or they simply experience a 'warm glow' from having done their bit".

Andreoni argues that individual donations should be treated as a normal utility-bearing good, the amount volunteered varies directly with the wealth of an individual" Considering the individual's motivations we may say that the private consumption models are related fundamentally with the intrinsic motivations of "*work enjoyment* and *helping others gives enjoyment per se*" (Maier and Stutzer, 2004). Those are two types of rewards which volunteers receive when they are intrinsically motivated.

Following Andreoni, when the individual is a pure egoist his utility function is given by:

$$U_i(x_i, g_i)$$

This means that the individual does not increase his utility due the existence of a certain amount of public goods, G. Only his contribution, g_i, is important. It should be highlighted that in this case the optimal decision of individual i does not depend on the contributions of the remaining individuals.

Menchik and Weisbrod (1987) used another model of private consumption to introduce the volunteering decision. In their research they consider both monetary donations as well as voluntary work whereas Andreoni considered only monetary contributions. The individual utility is given by:

$$U(t_l, t_v, g, x)$$

where t_l is the leisure time, t_v is the volunteering time. As before x denotes the consumption of goods and g the individual monetary donation. It should be noted that the individual does not worry about the total amount of public goods. Thus, this model is a private consumption

model. The novelty is that it takes into account both money and time volunteering donations, g and t_v. The individual faces the following constraint:

$$g + x = w\left(T - t_l - t_v\right) + y$$

where w is the wage, T is the total available time and y is extra labour income.

The Lagrangian function is given by:

$$L(t_l, t_v, g, x, \lambda) = U(t_l, t_v, g, x) + \lambda\left[w\left(T - t_l - t_v\right) + y - g - x\right]$$

The first conditions are:

$$\begin{cases} \frac{\partial L}{\partial t_l} = \frac{\partial U}{\partial t_l} - \lambda w = 0 \\ \frac{\partial L}{\partial t_v} = \frac{\partial U}{\partial t_v} - \lambda w = 0 \\ \frac{\partial L}{\partial g} = \frac{\partial U}{\partial g} - \lambda = 0 \\ \frac{\partial L}{\partial x} = \frac{\partial U}{\partial x} - \lambda = 0 \\ \frac{\partial L}{\partial \lambda} = w\left(T - t_l - t_v\right) + y - g - x = 0 \end{cases}$$

Considering the second and third conditions, one concludes that the marginal rate of substitution between volunteering work and donations is equal to the wage, w. Menchik and Weisbrod (1987) conclude that for individuals, it is comparable for their utility to contribute with money or time for the voluntary sector.

Mixed model

The mixed model is the more general model that we have presented before. Andreoni (1990) argued that individuals are not pure egoist or pure altruist but their utility function contains these two behaviors. Each individual maximizes his utility function:

$$\max_{x_i, g_i} U_i\left(x_i, G, g_i\right)$$

subject to

$$\begin{aligned} x_i + g_i &= m_i \\ G_{-i} + g_i &= G \end{aligned}$$

Substituting these restrictions in U we get:

$$U_i \left(w_i + G_{-i} - G, G, G - G_{-i} \right)$$

Differencing the function with respect to G, equalling zero and solving the function in order to G, Andreoni concluded that it is possible to split the function into two different parts: the egoist and altruistic components.

The function is:

$$\begin{aligned} G &= f_i \left(w_i + G_{-i}, G_{-i} \right) \\ g_i &= f_i \left(w_i + G_{-i}, G_{-i} \right) - G_{-i} \end{aligned}$$

The first derivative of f_i with respect to the first argument of this function is the marginal propensity to altruistic behaviors and it is denoted by f_{ia}, where $0 < f_{ia} < 1$. Similarly, the derivative of f_i with respect to the second argument is the marginal propensity for the egoistic behavior and it is denoted by f_{ie}, $0 < f_{ie} < 1$.

Andreoni (1990) defined the altruism indicator, α, as follows:

$$\alpha = \frac{f_{ia}}{f_{ia} + f_{ie}}$$

If the marginal propensity for the egoistic behavior is $f_{ie} = 0$ then $\alpha = 1$, the individual is purely altruistic. On the contrary, if the individual has purely egoistic behavior $f_{ia} = 0$, thus $\alpha = 0$.

It should be noted that in a mixed model, as in the public goods model, each individual has to take into account the contributions of the other individuals. Thus in a mixed model one should always analyze the Nash equilibrium of the game among the n individuals.

Andreoni (1990) argued that: "The framework, which is based on the assumption that the

utility people get from altruistic activities depends both on giving and on the value to the recipient of what is given, yields comparative static predictions that are confirmed in the data. When we augment our model with three additional conditions, the strongest of which is that people have no intrinsic preference for giving time or money, the theory provides clear predictions for the patterns giving and volunteering that we expect to see in the descriptive data."

3.3.2 Investment model

The investment model is another approach which intends to explain the voluntary decision. The general idea is that individuals volunteer today because they expect to receive in the future some dividends of that present investment.

In the investment model it is assumed that when individuals volunteer they do not obtain direct utility but have expectations to gain something with volunteering, something like a better opportunity for the future, the same type of reward obtained when somebody invest in education or in a professional qualification.

In the investment model the volunteers' motivations are strictly related to what they might obtain through volunteer work. Following Stutzer and Maier (2004) this is a case on extrinsic motivation in which individuals expected some rewards: they expected to increase the quality of their *human capital* and they *invest in their social network.*

They may receive training and acquire new skills, and they may have an opportunity to get new social contacts, which may provide them a better job in future. The volunteer motivations are treated here as an investment in human skills, so that "the individual will be motivated to supply volunteer labour when the expected value of future income gained though volunteer experience, the opportunity cost of volunteering, will be positive" (Roy, Ziemek, 2000). The individual retains the good bargaining position in terms of his labour market value comparatively to other individuals. Individuals with experience on this area have more opportunities to work in the same social fields where are higher levels of government spending (ex.: health or education).

The investment model was presented by Menchik and Weisbrod (1987). The main idea of this model is to analyze if volunteering provides some future advantages and the possibility to get a bigger income due the contacts and experience that the volunteer gains when he works in a voluntary sector.

The researchers presented the following model of wage valorization:

$$W(E) = \sum_{i=0}^{N} \frac{E_i}{(1+r)^i} = \sum_{i=0}^{N} \frac{HW_i}{(1+r)^i} = H \sum_{i=0}^{N} \frac{W_i}{(1+r)^i}$$

where E_i is the individual income during period i, with $i = 0, 1, \cdots, N$. W_i is the hourly income per period, and H is the number of hours of paid work, which is assumed to be constant for all periods, and r is the interest rate.

Menchik and Weisbrod (1987) argued that individuals can increase their potential gain by joining the voluntary sector in the beginning of their carrier. The present value of the wages in this case is given by:

$$W(E') = \sum_{i=0}^{N} \frac{E'_i}{(1+r)^i} = (H - t_v) W_0 + H \sum_{i=1}^{N} \frac{W'_i}{(1+r)^i}$$

where E'_i is the increased earning stream, t_v is the number of hours of voluntary work in the initial period ($i = 0$) and W'_i is the salary in period i when the individual worked as volunteer in the initial period. The individual gains by volunteering as long as $W(E')$ exceed $W(E)$.

The investment model predicts a decrease of volunteering time with age since the period over which the investment could generate returns decreases.

Ziemiek (2005), analyzing the decision making process of the investment motivated volunteer, argues that two possible effects are possible:

Signaling effect – the volunteering history may be a positive signal in terms of the market value of the individuals. In some sectors such as nonprofit sector the volunteer activity might be a latent requirement." Following Ziemek (2003)" While others means of signaling or accumulation human capital, such as education, surely exist, these are less options for those individuals who e.g. have little work experience, in the process of returning to the job-market, or rely on contacts to advance in an existing job".

Job-opportunity effect – high level of government spending in a specific field may lead to an expansion of job opportunities and labor demand on that sector. "In an environment characterized by high public spending levels, area specific skills and contacts are therefore of a greater value as compared to an environment where job-opportunities are limited since the payoff from volunteering, measured by the probability of raising one's earnings by finding a new job or by

advancing in an existing job, is higher. Accordingly, investment motivated volunteers increase their voluntary engagement with increases in government contributions"(Ziemek, 2003).

Figure 3.1 summarizes the various traditional microeconomic models and presents some papers related with each model.

3.4 Other approaches to volunteering

In this section we will discuss some questions considering other areas of investigation and their approaches to volunteering.

Volunteering is an object of study in many social sciences. The psychologists, sociologists and psychophysiologists have some different but very interesting approaches to the question of volunteering. Those areas of study want to explain the decision to volunteer considering other non-economic factors. Volunteering is part of a cluster of helping behaviors, entailing more commitment than spontaneous assistance but narrower in scope than the care provided to family and friends. It is a part of social activism.

3.4.1 Sociological approach

In sociology when we discuss volunteering we usually find the notion of pro-social behaviors as a synonym of volunteering and donation. The classical sociological approach to pro-social behavior has been made by Emile Dukkheim. In his theory Emile Durkheim (1897) (crossfer Bekkers, 2007) proposed the explanation to the individual contribution to the collective goods through the «norm conformity theory».

Brekke *et al.* (2004) indicated two interpretations of this theory:

- The first interpretation considers that "social norms reside outside the individual, and become visible through the actions of other persons in the intermediary group and social networks that individual is part of". This interpretation is sometimes named the «structural interpretation».

- The second interpretation considers that "social norms reside inside the individual, in his belief and internalized value system". The second interpretation is also known as «cultural interpretation».

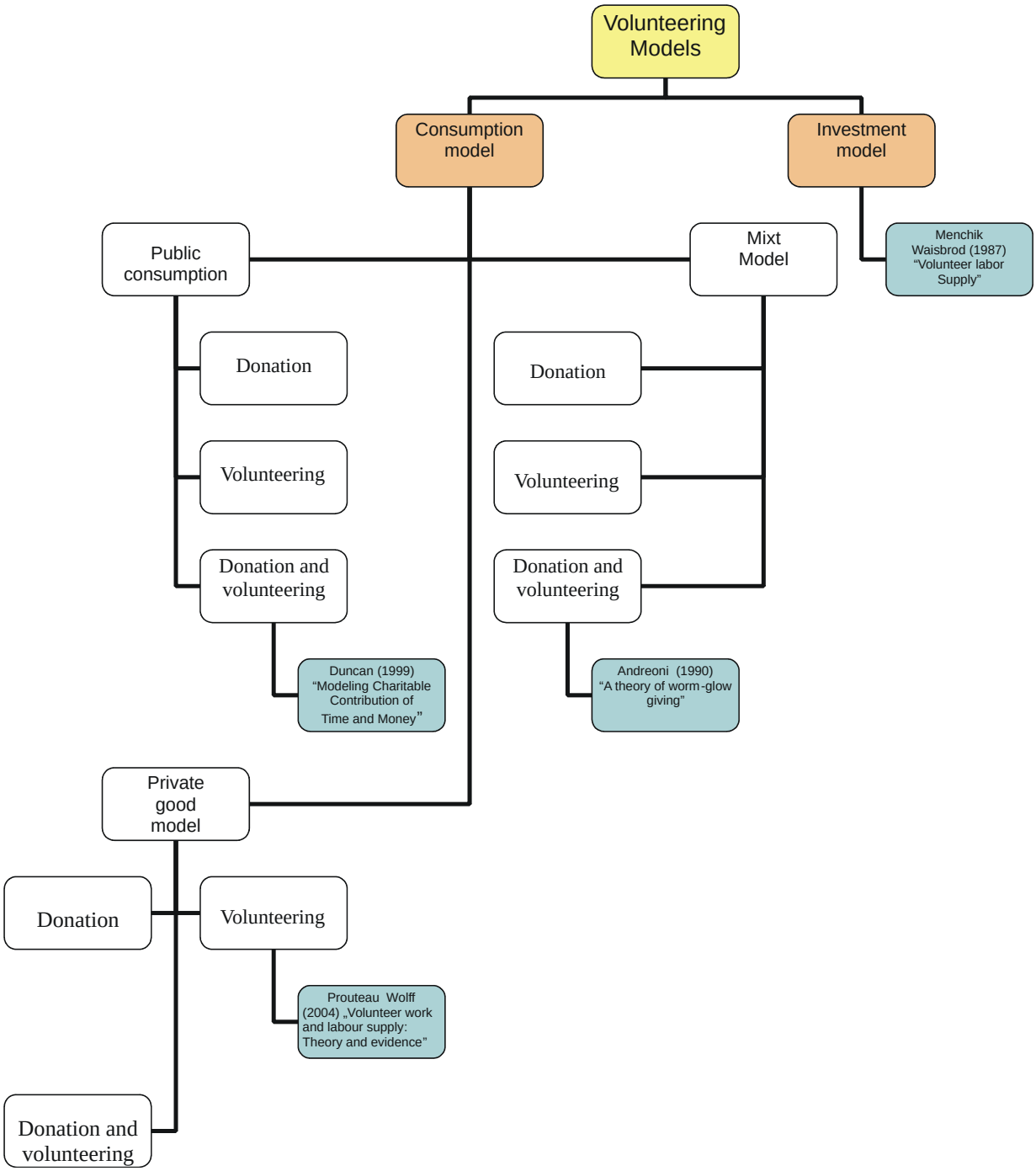

Figure 3.1: Economic models for volunteering

Bekkers (2007) identified some factors related to the norm conformity theory, which has a crucial influence to the decision of contributing to collective goods such as: *group size; directs reciprocity; generalized reciprocity; social incentives; exposure to requests; internalized values and socialization.*

Group size and the contribution of individuals is a case of a social dilemma. The contribution increases as groups become smaller, which means that the private benefits is higher in smaller groups.

In smaller groups the individual's exposition may avoid a free rider problem but in a larger group, this exposition is smaller and the free rider problem happens more often.

Direct reciprocity Reciprocity is a way of defining people's informal exchange of goods and labour; that is, people's informal economic systems. This idea is based on Axelrod's experience[1] of the repeated prisoner's dilemma game where he identifies the most successful strategy. This strategy was called "tit for tat" and it is a rule of reciprocity. That means that the individual has to cooperate and it requires some investment in short term in order to obtain benefits in the long term. The "shadow of the future, the expectation of repeated interaction, can account for pro-social behavior towards family members, neighbors, and even business partners". Axelrod (1984) (crossfer Bekker, 2007) concludes that "even egoistic rational actors may achieve optimal outcomes when the probability of repeated interactions in future is high enough".

Generalized reciprocity occurs when one member of the community which helps someone is compensated by another member, not necessarily the same that has been helped.

The *social incentives* are related with the fact that people do not only care about their own monetary payoffs in future games, but also about their reputation and social status in the group. The pro-social behavior may produce social approval specially if that behavior is a visible one. The research by Camerer (2003) has shown that the visibility of pro-social behavior increases altruistic behavior. Using the dictator game people decide about the donation to charitable causes. The dictators do not keep all money for themselves. Some part of it is allocated in others.[2]

Exposure to request means that individuals which are involved in social networks help more

[1] The results of Axelrod finding are contained in his book "The Evolution of Cooperation" published in 1984.

[2] In the dictator game, the first player, "the proposer", determines an allocation (split) of some endowment (such as a cash prize). The second player, "the responder", simply receives the remainder of the endowment left by the proposer. The responder's role is entirely passive (the responder has no strategic input into the outcome of the game).

when the social network demands for help.

The *internalized values* following Bakkers (2007) are related with some «internal forces», norms of fairness which influence "choice behavior in one shot dilemmas even when participants do not know each other, cannot observe the other's choice and do not expect repeated interactions in the future".

In the *socialization* period individuals internalize some societal norms and these norms define the pro-social behavior of the individuals. In other words, that issue discusses the importance of what the individuals learn at home at an early childhood. Many times the researchers indicate the importance of parents volunteering for increasing of children veneering and generosity (Janoski and Wilson, 1995).

Bekkers (2007) realizes that volunteers do not receive a reward in terms of money or goods of equal value to their volunteer work and discusses the following question: "If not for personal gain, then why do people contribute for collective goods? This question becomes even more pressing when we consider contribution to organizations working for same abstract ideal such as world peace, human rights, biodiversity, or charities seeking to relieve the needs of others in distant parts of the world. Selective incentives provided by the voluntary association itself generally do not outweighed the costs of contributing to the collective good for an individual actor." Bekkers (2007) suggests that there are other things which are important for the individuals when they decide to contribute. Those two other things than can make the individual contribute to collective goods are social incentives and psychological characteristics of decision makers.

The social incentives are related with the social conditions in which the individual lives. There are many social groups which evaluate in very positive ways the participation on volunteering activities. Sometimes the simple fact of belonging to some social organization creates the "obligation to contribute in some way for social causes. Some individuals are more likely to be asked to participate on voluntary associations, to donate money or to volunteer." Prouteau and Wolf (2006) studied the influence of the relational motive which vary according to the characteristics of volunteers and the type of the associations. The relational benefit appears as one of the most important motives for volunteering.

The social implications of volunteering are as vast as they are positive. Prouteau and Wolff (2004) and Cappellari *et al.* (2007) have written about the importance of the *relational motivation* for volunteering. Certain groups who have, traditionally, been subjected to social isolation

may particularly benefit from the 'relationship building' aspect of volunteering. These include: young carers, disabled people, retired people, ethnic communities, new and single parents, long-term unemployees, refugees, asylum seekers, people with mental health issues, young people, ex-offenders.

By providing services to socially excluded groups, by challenging stereotypes, and by bringing people from different backgrounds together in this way volunteering has a wider impact on the symptoms and causes of social exclusion. Volunteering is a brilliant way for people who are in need of a bit of contact with the rest of the world to meet new people and make friends, as well as contributing to their community. People also volunteer because of friendship, either to acknowledge the commitment to an existing friendship or to create new ones. Many people join an organization and work as volunteers because they were recruited by a friend. The advantage of having a recruiting team is that the synergy of brainstorming increases because we have just increased our sphere of influence. Two people only have so many contacts; however, a recruiting team of ten people can produce hundreds of potential volunteers.

Sometimes people volunteer to have fun. Creating a new relation changes their routine and making friends is also a possibility for a little fun. Many organizations, specially for young volunteers but not only, recruit volunteers using the «fun» idea.[3] Many people work all week long without having a good time and volunteering may be an opportunity to have some fun.

Another motivation for volunteering might be to get *social approval.* The engagement increases their social standing within their reference group. Not only might this increase their expected future (material) rewards, but social approval and prestige can be valuable alone. Empirical evidences for charitable giving supports the notion that prestige considerations partly motivate people to behave pro-socially (Harbaugh, 1998).

Gocko (2007) refers five motivations for volunteering such as: altruistic motivation; egoistic motivation, task volunteering, filiations volunteering and ideological volunteering.

The altruistic volunteering is related with a necessity to fill individual lives with other values which individuals feel they need, besides professional and familiar work.

The task volunteering is related with experience and sense of duty, and deals with insufficiencies. When individuals volunteer because they want to feel themselves grow in prestige or

[3]See, for instance, www.do-it.org.uk; www.charityguide.org/index.htm; www.volunteering.org.uk; www.csv.org.uk.htm.

to get new skills they act on egoistic motivations. The filiation volunteering is understood as a necessity to look for contacts with other peoples.

Some authors are dubious about the use of reasons reported by individuals. For instance, Smith (1981) considers that these responses comply with sociocultural accepted norms and consequently, tell us almost nothing about the real underlying motives. Pearce (1993) also notes that motives indicated by volunteers are not reliable because of social-desirability bias which encourages the respondents to report the socially approved altruistic motives. Although they use similar information, Okun *et al.* (1998) acknowledge that these responses may be ex post justifications and not the real motivations. Conversely, Gillespie and King (1985) emphasize that "to ignore the reasons individuals give for volunteering places too little weight on an individual's conscious motive for doing something". In addition, we can suppose that the social-desirability bias leads respondents to overstate their altruistic inclination to the detriment of their self-oriented motives (Rubin and Thorelli, 1984).

3.4.2 Psychosociological approach

The psychosociological approach is an interdisciplinary approach; it is the study of subjects, issues, and problems common to psychology and sociology.

The psychological approach explains through cognitive and emotional reason the individuals decision to contribute to collective goods. There are some different studies which have contributed to knowledge of condition for cooperation and contribution to collective goods:

- *Efficacy* – The individual perceives that his contributions are crucial for collective welfare and the higher returns to the public goods (Blackwell, McKee 2003; Goeree, Holt Laury 2002.;- crossfer. Bekkers 2007) The most efficient organization are more likely to receive the individuals contribution (Bekkers 2003c; Scheufele, Shah 2000 - crossfer. Bekker 2004)

- *Time length* – The longer time length between a contribution and its effect the less likely the individual will contribute (Brechner 1977. crossref. Bekkers 2007).

- *Similarity: identifications empathy* – People are more likely to provide help to people when they feel more similar to them and identify with their needs. People also feel empathy with the people who they are more likely to meet in future (Cialdini *et al.* 1997; Schroeder *et al.* 1995 - crossfer. Bekkers 2007).

In the psychosociological area there are three research traditions on volunteering (Matsuba *et al.* 2007):

- social structural approach;
- personality approach;
- identity approach.

"The social structural approach aims to specify the combination of social roles and social class attributes that are associated with volunteering, concluded that there is considerable evidence showing that the age, gender, educational attainment, household income, and the breadth on an individual's social networks are predictors of volunteering," (Matsuba *et al.* 2007). This traditional approach uses all the referred factors in order to explain the volunteering decision.

The personality research maintain focus "on the motives and traits that lead individuals to volunteer, and persist on their volunteering" (Matsuba *et al.* 2007). Based on past works, the researches found out three conclusions regarding the connections between personality and volunteering:

- First – individuals are motivated to be volunteers for different reasons; the longevity of service depends on those reasons. For instance, Omoto and Snyder (1995) identified that the «primary motivations» for volunteers who are working with AIDS are:
  - their values such as humanitarian obligation, they enjoy helping; they consider themselves as caring persons, it is fundamental to do something about the important issues, personal convictions and beliefs;
  - understanding: to learn more about the disease, learn how to help, deal with personal fears, learn how to prevent the disease;
  - personal development: to know other persons, gain experience, challenge and test skills, meet people and make new friends, to learn about themselves;
  - community concern: sense of obligation to certain communities, concern about certain communities, to know individuals in certain communities, to help members of certain communities;

– esteem enhancement: to make life more stable; to escape pressures, stress; to feel less lonely; to feel needed; to feel better about themselves.

These two researchers, using the methods of the psychological sciences, paid their attention to the «life cycle» of the volunteers, "focusing on several critical elements: the decision to became a volunteer, the selection of volunteers task or assignment, and the eventual choice to continue or to end one's volunteer services" (Omoto and Snyder, 1993) One of the important conclusions of Omoto and Snyder (1993) considering longevity of volunteering is that "it appears that longer-term volunteers in the investigation were distinguished from short-term volunteers by their more 'selfish' desire for esteem and personal growth. One potential alternative explanation for those findings is that volunteers motivated by relatively selfish reasons chose less stressful and less demanding volunteer roles, that might be conducive to longer service."

- Second – there are some personality traits like positive emotions, social skillfulness sympathy emotion regulations, that are more prominent in volunteers then non-volunteers (Davis *et al.* 1999, Omoto and Snyder 1995);

- Third – the research of Penner (2002) indicates that "one relatively specific personality trait is unlikely to be related to wide range of helping behavior". Atkins, Hart and Donnelly (2005) discovered "that school-age children characterized by a trait profile suggesting resiliance-complaint socially skillful and with positive emotional tone were more likely to be a volunteer as adolescents than were the children whose profiles suggested either an overcontrol or under-controlled personality type." Matsuba *et al.* (2007)

The identity researchers (Grube and Piliavin, 2000; Piliavin and Callero, 1991), analyzed "the transformation on the sense of self that is affected by, and that in turn sustains, volunteering." Using the national representative survey of blood donors Pilavin and Call (1999) found out that the individuals who identified themselves more as blood donors judged the likelihood of future donations to be higher than those for whom donor identities are less salient.

There are some consensus and disagreements across the three traditions. The consensus refers the importance of the ethical and civic values for the volunteering motivation. The main divergence is to identify the relative importance of various factors which may influence the

volunteering and how these factors may interact.

Matsuba *et al.* (2007) proposed an integrative model of factors influencing volunteering which is illustrated in Figure 3.2.

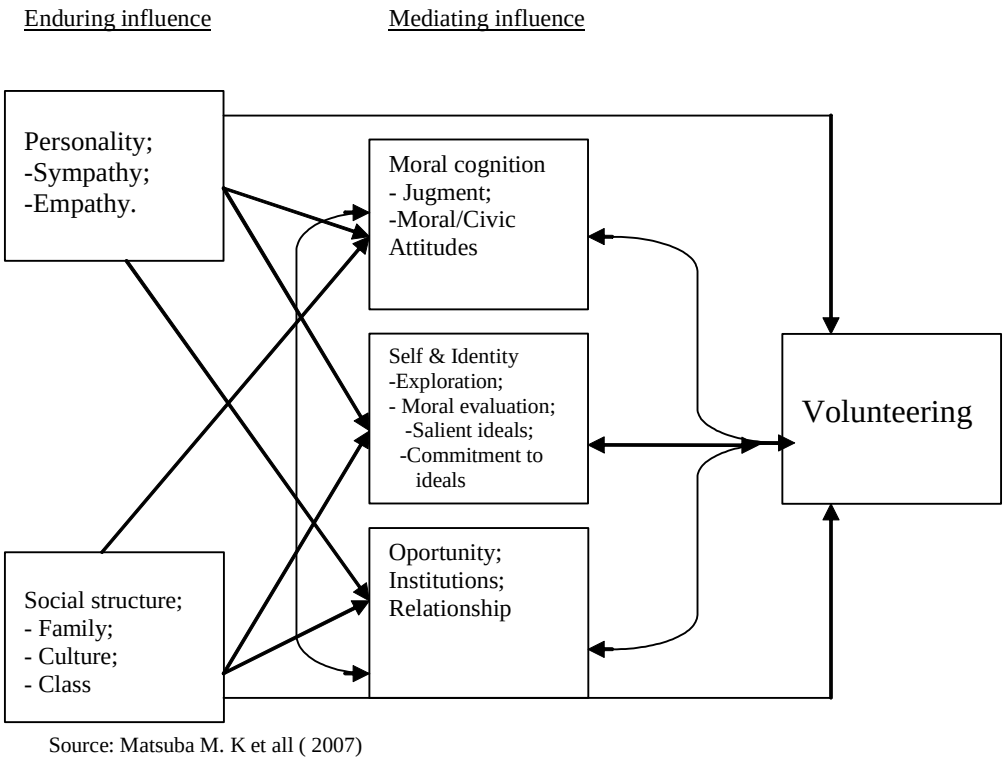

Figure 3.2: Matsuba *et al.* model for volunteering

In this model the researchers proposed two types of influences (enduring and mediating) which might have an important influence in the decision to be a volunteer.

Enduring influences represent relatively stable characteristics of individuals and appear early on life. Matsuba *et al.* proposed for the enduring influences the personality characteristics and the social structure characteristics joining in once the personality and social structure tradition. Personality types are configurations of personality traits and "the underlining assumption of personality type research is that there are relatively few combinations of traits that allow stable adjustment to life" Matsuba *et al.* (2007).

Recent researches (Pervin, and John, 1998; Omoto and Snyder) identify three personality

types which have influence on the decision to be a volunteer:

- Resilient type – sympathetic, extroverted and with positive emotions - characteristics associated with pro-socially motivated volunteering.
- Over-controlled type – characterized by high level negative affect and by social withdrawal-individuals with inconsistent participation in volunteer activities.
- Under-controlled personality type – unsympathetic, aggressive, lack of emotional control and low conscientiousness - characteristics of individuals which are not engage in any kind of volunteering.

The socioeconomic demographic and cultural characteristics compose the second class of enduring characteristics in the Matsuba *et al.* model.

The mediating influences are composed by moral cognition, moral identity and social opportunity items. Matsuba *et al.* (2007) argue that "individuals with greater sense of moral and civic obligation are more likely to volunteer than individuals who feel less obliged to take moral or civic action" and "central moral identity is the salience of one's pro-social traits and actions in awareness, the belief that the self is committed to pro-social action into future, and the sense of personal efficacy." Finally, Matsuba *et al.* consider the importance of social network through the opportunity block. There, they consider the family and friends influence to be a volunteer, social affiliation situations belongings to clubs and/or religious groups.

The differences in the opportunities and social incentives did not explain all contributions towards collective goods. People differ not only on their exposition to requests for contribution but also in the individual preferences they have for the well being of others. There are a lot of questions about which psychological characteristics make people have an altruistic personality, between sociologists and psychologists. The role of parents (sociologists) and personality characteristics (psychologists) that people acquire early in life and carry from one situation to another, have been pointed out to explain the decision to contribute to common goods.

3.5 Some empirical results

This section reviews some empirical studies that test the models that we presented before. There are several important issues that have been discussed in the empirical literature. One important

issue is related with the impact of wages on the supply of volunteering work. Other important issues are: the availability of public goods and its effect on the private contribution of money and time; the relation between the donations of money and time; the future benefits of the volunteering experience and skills acquisition in the investment model and finally the studies that identify other determinants of volunteering.

3.5.1 Wage and opportunity costs of volunteering

Although volunteering is an activity without an explicit pay, in economics any decision made by economic agents has an opportunity cost. In the volunteering models that we presented before, the opportunity cost of volunteering is equal to the wage. By volunteering one additional hour the individual is giving up the salary that he would receive if he worked one more hour in a paid work. It should be noted that this conclusion is based on the assumptions that the individual is free to choose the number of hours of paid work, a flexibility which does not hold in reality. As a consequence, the opportunity cost of volunteering may not be equal to the wage.

Regardless of whether the wage is or not the true opportunity cost of volunteering, one interesting empirical question is the impact of the wage in the supply of volunteering. Supply of volunteering depend on the decision of volunteering or not and the decision about the number of hours to volunteer.

Another related question is whether volunteering supply can be increased by giving some reward to the volunteer. Individuals are assumed to respond systematically to relative prices. When the wage increases, the opportunity cost of volunteering increases and less voluntary work is expected to be offered.

Wage and decision to volunteer

The opportunity costs might have a great impact in the voluntary labour supply. Frey and Götte (1999) argued that the opportunity cost of time has a negative impact on volunteering. Brown and Lankford (1992) argue that there is a negative effect of wages in the available time for volunteering, especially for men. In their work (1992) the researchers discussed the problem that the opportunity cost for volunteering is not always equal to paid work especially when the time of paid work is limited.

Freeman (1997) found that "individuals with characteristics associated with higher value of time – better educated, the employed, those with higher incomes, and so on – are more likely to be asked to volunteer than others. [..] We might expect individuals with higher valuation of time to reject the request to volunteer, but in fact the opposite is true: those with greater education, family income, and so on, are more likely to accede to requests to volunteer activity".

Wage and number of volunteering hours.

Menchik and Weisbrod (1987) indicate a strong negative effect on the number of hours volunteered when the net wage increases. In their study they conclude that "at the means on the data a one dollar increase in the after tax wage rate ...will on average reduce the time one engages in volunteer work by 4.8 hours annually, which is about 20 percent of the mean hours volunteered".

However the previous result does not hold in other volunteering studies. Segal (1993) through the analysis of the National Longitudinal Surveys of Labour Market Mature Experience (only women) finds that there is a positive but relatively low value for volunteering wage elasticities. Banks and Tanner (1998) conclude that the high wage individuals in the United Kingdom are more likely to volunteer for few hours. Authors pointed out that using only the observed wages value may lead to biased results because there exist others heterogeneous effects which influenced wage and voluntary activities. Prouteau and Wolff (2004) using French data found that "hours volunteered are an increasing function of the hourly wage rate". They conclude that "the fact that wages have a positive impact on hours volunteered is consistent with the fact that volunteer workers are more educated and have a higher social status, these individuals being more efficient when they performing their professional tasks."

Compensation for volunteers and volunteering supply

When voluntary work is rewarded financially, an increase in this reward raises the number of voluntary hours offered. This relationship has been well supported empirically (see, for instance, Brown and Lankford, l992).

However, empirical findings by Frey (1992) showed a rather different situation. He showed that a direct monetary compensation reduces voluntary labour supply because it affects intrinsically motivations, even if the direct reward reduces the opportunity costs of volunteering.

Banks and Tanner (1998) studied the volunteer labour supply and analyzed the impact of monetary incentives. They argued that the reward for volunteers "could reduce the time dedicated to more intrinsically rewarding activities and increase the time devoted to alternative tasks". The monetary incentive seems to «crowd-out» intrinsic motivations. Testing their model on the UK General Household Survey 1992 they found "no relation between individual wages and the number of hours they volunteer in contradiction of the previous empirical model". The «motivation crowding-out» theory gains field in their studies.

Frey and Goette (1999) concluded that "the incidence of rewards reduces volunteering. While the size of the rewards induces individuals to provide more volunteer work, the mere fact that they receive a payment significantly reduces their work efforts by approximately four hours. The magnitude of these effects is considerable. Evaluated at the median reward paid, volunteers work indeed less. These results are immune to possible simultaneity bias or differences in reward policies between types of organizations. The results are in line with experimental evidence indicating that financial rewards can reduce intrinsic motivation and provide another real-life application of crowding theory".

3.5.2 The wage effect in the investment model

Following the investment model, Day and Devlin (1998) investigated in which way volunteering contributed to the increase of volunteer's future income. After analyzing 25.224 cases they concluded that there was a positive correlation between the increased income of individuals and their previous volunteering experiences. The researchers also concluded that volunteers gained some important things like useful contacts and skills to do better work. Facing this fact, the idea that volunteering work generates a better future income makes sense. This wage premium seems consistent with an investment model, but the analysis is restricted to households with only one wage earner.

The previous results were criticized by Prouteau and Wolff (2006) who questioned the representativeness and restrictiveness of the sample, and methodological and technical treatment of the data. Prouteau and Wolff (2006) argue that "These authors pool the two groups of workers and include in a wage equation a dummy variable which is equal to one when the respondent is a volunteer worker. Unfortunately, measuring a wage differential using the pooling method is likely to be misleading for at least two reasons: Firstly, there may exist different wage profiles

for volunteers and non-volunteers, which precludes pooling. Two wage equations should be estimated to account for specific returns for both types of workers. Secondly, there is a problem of self-selection into volunteer work, so that biased estimates for the wage equation are expected without adequate selectivity control. But the pooling approach poses an even more serious problem. Indeed, when testing the relevance of the investment motive, one has to determine (i) whether there exists an economic return for volunteer work and (ii) whether the wage differential really influences the volunteer decision. Clearly, if we cannot observe any economic payoff for volunteer work, it follows that rational workers have no incentive to participate in such activities. However, if one observes a volunteer premium, it may still be misleading to conclude that the investment motive applies. It would be the case if decisions to participate in volunteering do not depend on the wage premium."

Prouteau and Wolff (2004) also focused on the importance of the relational motivations as an important issue in investment strategy. "Although formal volunteering takes places in collective environments, the relational dimension for such activities is rarely evoked by economists, and this omission is highly questionable with respect to the motives for volunteer work. For instance, according to the investment hypothesis, contacts with others persons should provide additional information about the existence and characteristics of jobs. However, personal relations are only considered in this case as means to achieve individual's aims which are extrinsic to these relations.....It is therefore our belief that this interpersonal aspect of volunteer involvement, and generally of associational participation, deserves a more sustained attention."

Segal (1993) suggested that the increasing of productivity across paid labour volunteering cannot be interpreted in favor of an investment model. He argued that "the ambiguity of the wage effect remains because the price of leisure and the price of volunteering both vary with the wage. Although the prices are not longer identical they are constrained to be proportional."

3.5.3 Public versus private contributions

The welfare state and all facilities which this state provides to the individual is considered as a public good because of the availability to access it. The social economy organization also provides some services which influence all the available welfare service. Many social economy organizations receive a lot of funding and time donation from individual and private sectors. There are many discussions concerning the public financing and private donation of time and

money to welfare services. One of the most interesting discussions concerns the influence of government spending on private contributions. The results are not conclusive.

Considering the Ziemiek (2005) findings related with the level of public sending and amount of labor volunteered there are three kinds of relations (see Figure 3.3):

- Substitutability or crowding-out for the public goods model;
- Complementarity or crowding – in for the investment model;
- Neutrality for the private consumption model.

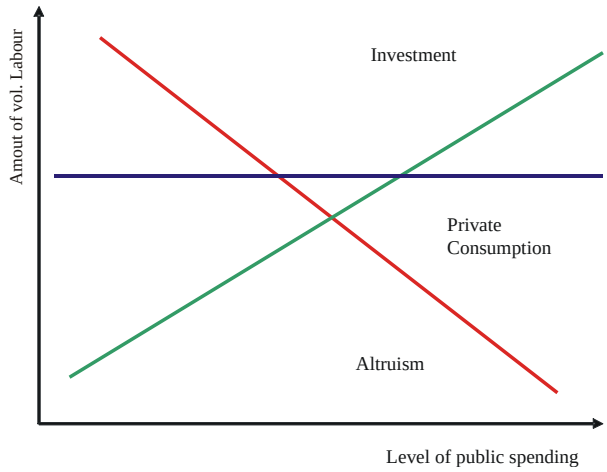

Figure 3.3: Motivation for volunteering - Ziemek Model

Considering the investment motivations linked with the investment model, it makes sense that with the increasing of public spending, the amount of volunteered time increases. Individuals will look for more opportunities to increase their human capital and to create the social network connection, which is the most important effect of the investment strategy for volunteering.

With regard to the private consumption model, it is understandable that the public spending has no effect on volunteering since in this case volunteers give time in order to obtain intrinsic satisfaction. Public spending has no clear reasons to significantly affect the private consumption motivated individuals.

Considering the altruistic motivation linked to the public consumption model, the evidence shows (Schiff,1985; Ackerman, 1986; Menchik and Weisbrod, 1987; Duncan, 1999), that there

is no perfect substitution between public and private contributions, so maybe this assumption, which is on the basis of this model, is too strong.

Shiff (1990) discussed the problem of government spending considering the individuals behavior. Government spending may affect individual contributions to charitable organizations in four different ways:

- by increasing the output of a good that is a substitute or complement of services and goods provided by charitable organizations;
- by affections giving of others donors;
- by changing the satisfaction level of the individual with the supply of collective goods;
- by changing needs for public revenues with resulting modifications of tax schedules, affecting after tax income and donations.

Following the above idea, Shiff (1990), discusses the condition under which crowding out might occur and under which, such crowd out might be large or small. This effect depends on the level of the individual's satisfaction.

He argues that, "An oversatisfied consumer's well being increases with a cut in government spending, tending to raise contributions. This reinforces the substitution effect – as donor attempts to replace lost government output with charity. Others donors will also respond to government cut-back by increasing their giving and as long as own and others' giving are substitutes, this will reduce own giving. That is, increases free riding. On the other hand, if giving by others and government spending are each substitutes for one's own giving, but individual is undersatisfied, a reduction in governments spending may increase or decrease contribution; negative crowding out effect, or «crowding in» may occur. Here the income and substitution effects work in opposite direction; the donor will want to replace the lost government output with charity, but the cut in government spending makes him or her worse off, tending to reduce giving."

Ackerman (1986) studied the government grants and their effect on private contribution. On her work, she demonstrated "that government grants for charities need not reduce private donation and may lead to increased private giving. Matching grants stimulate giving by lowering

the effective price of donations. Fix-sum grants, however can also increase giving especially if they are accompanied by regulatory polices to rise the marginal benefits of private contribution."

Duncan (1999) and his empirical studies indicate that public expenses and private contributions are imperfect substitutes because individuals increase their utility function just by contributing. Increasing the public expenses may influence individuals due the income and substitution effect.

The income effect is related to the fact that an increase of expenses on public goods may affect the individual through the tax rate. The substitution effect is related to the fact that public contribution and charitable gifts can be substitutes or complements.

The individual's problem is:

$$\max_{(x_i,l_i,G)} U\left[x_i, l_i, Z^u\left(G\right), G - G_{-i}\right]$$

subject to

$$\begin{aligned} \left(1-r_i\right)\left[wT+y_i\right]+G_{-i} &= x_i + w\left(1-r_i\right)l_i + \left(1-r_i\right)G \\ G &\geq G_{-i} \end{aligned}$$

where T is the available of time; w is the wage; y_i is non wage income; l_i is leisure; $Z^u\left(G\right)$ is the supply function of public goods; G is available public goods; and $r_i \in [0,1]$ represent individual i income tax rate.

The left hand side of the function presents the individual's social income. The right hand side indicates that the price of the contributions for charity is equal to the salary rate minus tax. It seems to indicate the increase of taxes have neutral effect to the consumer utility because the diminishing of available income is compensated by the increase of available public goods.

This theory indicates that the increase of public expenses for financing public goods conduct to the crowding-out effect over the voluntary contribution. Some investigators, quoted by Duncan (1999) estimated this effect: Abrams and Schitz as 28%, Schiff (1985) as 30-60%, Kingma (1989) as 14%, and Steinberg as 0.5% (1990) depending on the type of governament expenditures.

Menchick and Weisbrod (1987) found positive effects of governmental spending on aggregate

volunteering. Similar results were obtained by Schiff (1990). He concluded that "A cut in cash transfers represent reduction in government output only, with no change in the level of government support for charities. Such spending cut will, as long as charity substitutes for cash transfers and the results for money donation suggest that it does increase demand for money charitable output. As this demand increases, donors appear to switch from volunteering to money donation. Money donation are more productive then volunteering in terms of producing output, but volunteering can provide other collective benefits, such as influence and certain private gains. When demand for charitable output is high, the advantages of giving money are dominant, and the mix of contribution shifts away from time and toward money. On the other hand as government support for charities, the scope for volunteer influence and the need for information gathering both rise, and donors switch from giving money to volunteering."

Berger (1991) suggested that another contextual variable is important, specially to local spending for charity. This is socioeconomic level of community. Higher status of region or community tend to have higher participation on volunteer organization.

By interpreting the empirical studies, it is possible to conclude that contributions for volunteering and public expenses are imperfect substitutes. This is consistent with the mixed consumption model, because the act to contribute also influences positively the utility function of the consumer.

Hochman and Rodgers (1989) focused on a situation regarding some political issues about various types of welfare services and also on the problem of efficiency related with administrative cost linked the public transfer of money. They argue that "For at least some government-provided goods volunteer organizations compete with government in providing certain services as viable institutional alternative or supplement to public services. For some services, like religious services, volunteer activities are even more important because it is difficult to imagine the public provision of this kind of services because of the political problems concerning the separation between the church and state. The other situations related with revealed preferences. If the public preferences are uncertain or flutuant the donation activity helps to reveal those preferences. People donate money and time to those activities or organizations, which have been recognized as more useful in some determined places. This transfers of resources is direct and doesn't involve any administrative costs".

3.5.4 Donation of money or time?

Another very interesting discussion in the literature on volunteering is concerned with the relationship between the donation of time and of money. There are a lot of different results regarding this issue.

Using the data of National Study of Philanthropy of 1974, Duncan (1999) tested the public goods model in order to identify the relationship between donations and volunteering. The researcher shows that the public goods model implies that in equilibrium there is perfect substitution of contributions of time and donations and concluded that the supply of time for volunteering suffers a bigger crowding-out effect than money donation supply. He also confirmed that the individual increases his utility from the act of contribution to volunteer (warm-glow effect).

Freeman (1997) found out other interesting motivation for voluntary work. Considering an utility function that depends on the consumption of goods, x, leisure, t_l, and charity, C:

$$U\left(x, t_l, C\right)$$

and where the charity is a function of volunteer time, t_v and donations, g:

$$C = C\left(g, t_v\right)$$

The individual maximizes his utility considering the charity production function and the income restriction:

$$x + g = w(T - t_v - t_l) + y$$

Freeman considered two alternative specifications for the charity/volunteering production function. The first one $C = C\left(g, t_v\right)$, assumes that the productivity of voluntary work is equal for everybody. In such setup we may expect that higher income individuals, who have a much higher opportunity cost, will have a tendency to substitute voluntary work for donations. The second specification, $C = C\left(g, wt_v\right)$ assumes that the productivity depends on the quality of human resources. One case where this specification would apply is fund-raising campaigns. When public figures participate in the campaigns, their presence guarantees higher levels of contributions. In this specification higher wage individuals may end up volunteering more as

they are more productive. This effect may overwhelm the impact of their higher opportunity cost.

Solving the individual problem one can derive the time for volunteering. Freeman concluded that the supply function of volunteering is:

$$t_v = a + bw + cy + v$$

Where b depends on the positive income effect and negative substitution effect, c is a income effect of charitable activity and v indicate the taste of the individual for voluntary work. This last effect is positive due the fact that the individual increases his utility doing voluntary work.

In conclusion, Freeman(1997) found that "persons with considerable human capital/opportunity cost on time volunteer more than others. It was uncovered some evidence for labour supply substitution effect in hour volunteer relative charitable donation and in the perceived marginal product of volunteering relative to the opportunity cost of time."

Berger (1991) studied the effect of philanthropic giving on volunteering. He determined that "for social welfare organizations and non-social welfare organizations, the results indicate that there is a consistently positive causal relationship operating between giving and volunteering within organizational domains: giving to social welfare organizations leads to volunteering for these organizations, as well as giving to non-social welfare organization leads to volunteering for these organizations." He even concluded that the number of hours may be explained considering the amount of donations for those two type of organizations.

Shift (1990) concluded that "contributions of money and time may be substitute, complements or unrelated, depending on the reason or reasons that people give them. The «collective goods» model of volunteering assumes that money and time are donated by the same reasons; thus they are perfect substitutes. The other models are less clear in their predictions. If influence provides an important reason for volunteering, then money and time donations may be complements, since the closer a charity's output type is to an individual's preferred type, the more output he or she will demand from that organization. If time donated provides information about firm quality, there may also be reason to expect that increased volunteering will encourage increased money donations."

To summarize, one can conclude that the voluntary work and donations influence each other

but it is very difficult to estimate the exact value of that influence.

3.5.5 Other determinant of volunteering

There are other factors which influence the volunteering decision. Menchik and Weisboard (1987) consider the following factors:

- The individual's age – it seems that volunteer work follows a life-cycle pattern, increasing till a certain age and decreasing thereafter. The fact that, after a certain age, volunteering is decreasing with age is consistent with the investment model, since the older is the volunteer the shorter is the period over which the investment can be recouped;

- Income and volunteering – the authors found that the individuals with higher income volunteer more. This result has been confirmed by other authors (Banks and Tanner, 1998; Prouteau and Wolf, 2006). The perceived value of volunteering seems to crowd out labours hours to some extent for the individual who has sufficient income to cover basic expenses.

- Demographic information – to have children makes the individuals volunteer more in school activities, community safety programmes etc.

- Education, religiosity – those characteristics may help to differentiate potential volunteers. Through education some individuals may believe that helping on nonprofit causes is important.

- Municipality demographics – residing in small town presumably engenders a different level of personal involvement in local volunteers' activities.

Testing his own theory with empirical data Freeman (1997) defined a profile of the volunteer: individual rather from small town than big cities; individual with higher valorization of time; individuals with higher family income; individuals with higher school level; married and with children.

The author also suggests that: "People value the particular charitable activity a «conscience good» a kind of public good for which people are willing to contribute time, even if they would prefer free ride on the provision of that good". In addition, Freeman discusses the importance

of requests. "The request carries some social pressure with it: you are more likely to accede to personal requests then to telephone or written requests; to requests from somebody you know rather than strangers."

Another issue which may influence the volunteer decision is the legal responsibility of volunteers. Some of them assume risky roles like medical staff, managers lawyers etc. Some researchers, such as Wittman (1996), found out that it is an important issue to analyze the liability exposure of volunteers. Wittman found that the offer of volunteer work may be negatively affected by lawsuit or a volunteer liability index which depends on:

- An index of real legal exposure to volunteers;
- An index of public consumer information about legal exposure for volunteers;
- An index of state litigiousness in general.

Because of this lawsuit risk it may be necessary to compensate volunteers by some special kind of protection.

The results of the study done by Judd (1998) on the liability question in volunteering suggested that "potential volunteers that focus on general liability climate rather than a specific law to volunteer, may not realize that they are more protected as volunteers and the federal law may have little effect in increasing volunteering".

Gaskin *et al.* (2005) in their work referred "Risk is not only 'a part of life' but an essential element of volunteering organizations. It is by taking risks that breakthroughs in social care and innovations in social policy have been achieved by the sector, and risk is a vital aspect of sports, adventure and play."

They identified three areas of potential risk:

- The legal status of volunteers – whether unpaid workers have the same rights as employees in unfair dismissal or discrimination cases
- Negligence – 'at fault' liability when 'duty of care' is not fulfilled
- Vicarious liability – 'no fault' liability or 'indirect legal responsibility' when an organization is deemed responsible for the actions of its agents if it has, or should have, control of those agents

Some of them may be solved by doing some kind of insurance considering the volunteers rights and risks associated with volunteer activity.

Some kinds of risks, even if involving guarantees, make so that there are less candidates for doing some kind of volunteer activity. Risk management is a particular challenge in voluntary organizations because of the enormous range of activities they provide and manage, and the limited resources and staffing of the majority of organizations. Few can afford to employ a professional risk manager, as public and private sector bodies often do.

3.6 Conclusion

This chapter provided an overview of the economic literature on volunteering and donations, presenting theoretical models as well as results of empirical studies in this area of research.

The chapter started by discussing the issue of why do people volunteer. The literature suggests the existence of both *intrinsic motivations* (work enjoyment, caring with recipient's utility, warm glow) as well as well as *extrinsic motivations* (human capital increase, social network investment) for volunteering. The next section of this chapter presented the main traditional economic models: the public goods consumption model, the private goods consumption model, the mixed consumption model and the investment model. The first three models are consumption models and are based on the problem of choosing the time dedicated to volunteering so as to maximize the individual's utility. The time dedicated to volunteering enters in the individual's time constraint and in the utility function. The three model differ in the way individual volunteering enters in the utility function. In the public goods model the individual cares about the total amount of the public good available but does not care about his own contribution, in the private goods models the reverse happens and, finally, in the mixed consumption model both the total amount of the public good as well as the private contribution are important for the individual well-being. The next section presented approaches based on other social sciences, such as the sociological and the psychosociological approaches. In particular, we gave emphasis to the Matsuba *et al.* (2007) model which includes both *enduring* and *mediating* factors influencing volunteering.

The last section of this chapter was dedicated to some empirical results regarding volunteering. First we discussed the issue of the opportunity cost of volunteering and the influence of this

opportunity cost for the amount of donated time. Another issue discussed was the problem of public contributions versus private contributions. We demonstrated that the empirical results are also inconclusive on this point and that the effect of an increasing of public spending on private donation depends effectively on the volunteers motivation to donate time and money. The subsequent question we analyzed was the relationship between time and money donations. The researches do not agree about the complementary or substitution effect between these two types of donations. The evidence seemed to point that the effect between the donation of time and money might depend on the type of institution in which individuals donate. In the last part of this section we pointed some other volunteering determinants and highlighted the liability exposure of volunteers. Considering that, much of the time, volunteers take responsibilities which might involve risks, this is one of the most burning issues which have to be discussed, in our opinion, in volunteering.

Considering all empirical results we found out that there are still many issues to be clarified and discussed in volunteering.

Chapter 4

Data and descriptive statistics

4.1 Introduction

The aim of this chapter is to describe the data used in the analysis. Before using any statistical software the very first step should be to analyze the data itself. In this work, most of the variables we use are qualitative variables. The analysis of qualitative data is not simple since it is difficult to handle the usually large amounts of data in a thorough, systematic and relevant manner.

Following Marshall and Rossman (1990): "Data analysis is the process of bringing order, structure and meaning to the mass of collected data. It is a messy, ambiguous, time-consuming, creative, and fascinating process. It does not proceed in a linear fashion; it is not neat. Qualitative data analysis is a search for general statements about relationships among categories of data." Hitchcock and Hughes (1995) confirmed that "... the ways in which the researcher moves from a description of what is the case to an explanation of why what is the case is the case."

Since most variables are qualitative we followed the next four basic steps for analyzing qualitative data (based on Hawe *et al.*, 1990): (*i*) Organize the data; (*ii*) shape the data into information; (*iii*) interpret and summarize the information; and (*iv*) explain the information.

The objective of data organization is to have an overall picture of the complete set of data. In this case, it was necessary to identify the pertinent variables, to analyze the type of information and the type of variable and eventually to look at the questionnaire and find out the type of question and additional explanation which was given to the respondents.

Shaping data into information has the objective of becoming more familiar with the data and to think about the relationships between the groups. For instance, it may be possible to reduce the number of categories or define new variables.

The interpretation and summarization step is the first part of data analysis. In that part of the analysis, essentially descriptive statistic analysis such as frequencies, crosstabs and graph analysis are used. This part is developed using statistical packages. In our descriptive statistics analysis, we used SPSS (Statistical Package for Social Sciences). The last step is the explanation of information.

The chapter begins with a brief description of the data set used: the integrated data of the European Value Survey and the World Value Survey. Next the chapter presents a descriptive statistics analysis, separately for 4th and 2nd waves, which gives a first picture of the behavior of the variables under study.

4.2 European and World Values Surveys

Our data belongs to the integrated data of the European Values Survey (EVS) and the World Values Survey (WVS). "These surveys provide valuable information about a crucial component of social change: the values, beliefs and motivations of ordinary citizens. This new source of evidence has demonstrated that people's beliefs play a key role in economic development, the emergence and flourishing of democratic institutions, the rise of gender equality, and the extent to which societies have effective government. The WVS network is analyzing the impact of global cultural change on economic development, creativity, quality of life and democracy."[1]

The first time that the European Values Systems Study Group passed the EVS surveys in several Western European countries was in 1981. Considering the enormous interest generated all over the world by the original EVS, the World Values Surveys started. It was replicated in 14 additional countries.

There are some differences regarding the data collection of these surveys. WVS data are usually collected with face-to-face interviews. However, in 1990, the Finnish material was collected via Gallup Channel, i.e. by using Internet terminals installed in respondents' homes. WVS/EVS is available on the Values Survey Database web site.

[1] In the brochure that presents the World Values Survey.

European Values Study group is nowadays responsible for the EVS data collection. The planning of the WVS, and the coordination and documentation of both study series are carried out by the World Values Survey network, under the direction of Professor Ronald Inglehart. The international surveys of the World Values Survey (WVS) series looks a lot like the Eurobarometers and the ISSP surveys. Citizen activities, attitudes, and basic values in different countries are studied with integrated and structured surveys.

The EVS surveys have been carried out in four waves: 1981, 1990, 1997/1998 and 1999/2000. WVS data have been collected in five waves: 1981-1984, 1990-1993, 1995-1997, 1999-2001, and 2005-2006. The results are available in the internet.

4.3 Organizing and analyzing the data

In this step we used the SPSS (Statistical Package for Social Sciences). Through frequencies charts and cross tabulations we identified some general characteristics of the sample and the variables.

In the original data set there are 976 variables and 90564 cases. We looked for variables which were somewhat related with unpaid work. We found out variables related with unpaid work and variables related with reasons to do unpaid work. We were also interested in variables which might characterize the individuals who were engaged in voluntary activities.

In the available data we identified 15 variables which consider unpaid work. These variables are binary variables in which the value "0" means that the individual does not do unpaid work and the value "1" means that he does. In each of these variables the question was: "And for which, if any, are you currently doing unpaid voluntary work" (kinds of unpaid work). The different types of unpaid work considered in the survey are:

- Unpaid work social welfare service for elderly, handicapped or deprived people
- Unpaid work religious or church organization
- Unpaid work education, arts, music or cultural activities
- Unpaid work labour unions
- Unpaid work political parties or groups

- Unpaid work local political action groups
- Unpaid work human rights
- Unpaid work environment, conservation, animal rights
- Unpaid work professional associations
- Unpaid work youth work
- Unpaid work sports or recreation
- Unpaid work women's group
- Unpaid work peace movement
- Unpaid work organization concerned with health
- Unpaid work other groups

It should be noted that the "Unpaid work animal rights activities" variable is an autonomous part of "Unpaid work environment, conservation, animal rights". However in our analysis we did not consider that variable as an autonomous variable.

Considering the answers to at least one of these 15 questions, the total number of valid observations was reduced to 44925. Using this information we created one variable which aggregates all kinds of unpaid work. This variable takes the value "0" if the individual did not perform any kind of unpaid work and takes the value "1" if the individual performed at least one type of unpaid work. In the sample there are 17459 individuals who do some kind of volunteering work and 27476 cases of non volunteers. We also verified that we have valid answers only for the 2nd and the 4th waves of the collected data. The second wave had 19002 valid observation and the fourth wave 25876. The relative distribution between volunteers and non volunteers is shown in Figure 4.1.

We can verify that in the 4th wave there are relatively more volunteers than in the 2nd wave (the participation rates are 44% and 32%, respectively). In our analysis we use these two waves separately. In chapter 5 and 6 we use the 4th wave whereas in chapter 7 we use the data from the 2nd wave. Chapters 5 and 6 estimate models that explain the volunteering decision. One of

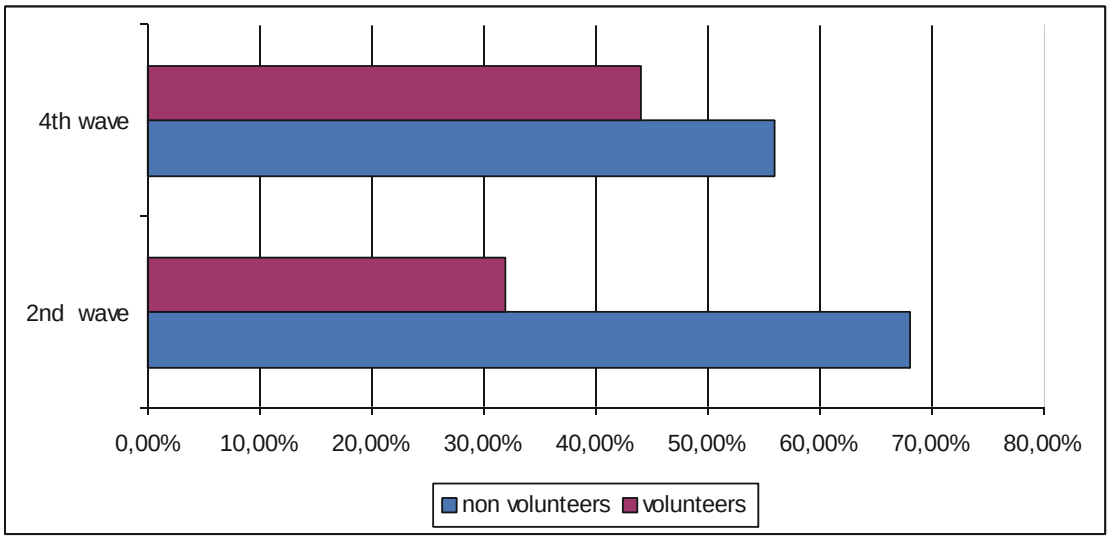

Figure 4.1: Relative distribution between volunteers and non volunteers in wave 2 and wave 4 of WVS/EVS.

the important explanatory variables is the individual's country. Since the valid observations in the 4th wave belong all to the EVS data we have a data set with greater homogeneity than if non European countries were also included (as it happens in the 2nd wave). Moreover the 4th wave has a much larger number of observations. Thus, in Chapters 5 and 6, the choice of the 4th wave seems to be the most appropriate one. On the other hand, our chapter 7 is dedicated to the study of the motivation for volunteering. However, only the 2nd wave of WVS/EVS possesses valid data related with reasons for volunteering. Thus, in Chapter 7, we had to use the 2nd wave, in spite of being a more limited data set in some other aspects.

4.3.1 Characterization of the 4th wave data

Analyzing the valid cases we verify that there are many individuals who are engaged in more than one type of volunteer work. Figure 4.2 shows the distribution of the number of unpaid works performed by the volunteers. We verify that the majority of individuals performed only one type of unpaid work. However there are many individuals who were engaged in more than one type of unpaid work. There were even 57 individuals who were engaged in more than 10 types of unpaid work.

It is also interesting to analyze the frequency of volunteering for the different kinds of unpaid work. Figure 4.3 shows the results of this analysis.

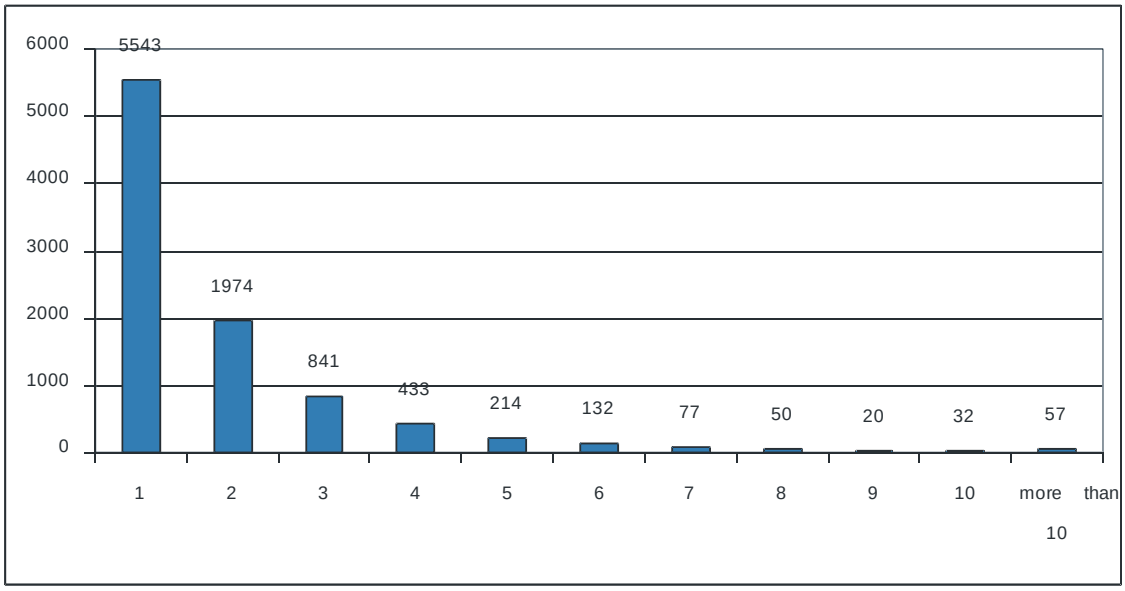

Figure 4.2: Volunteers by number of unpaid works.

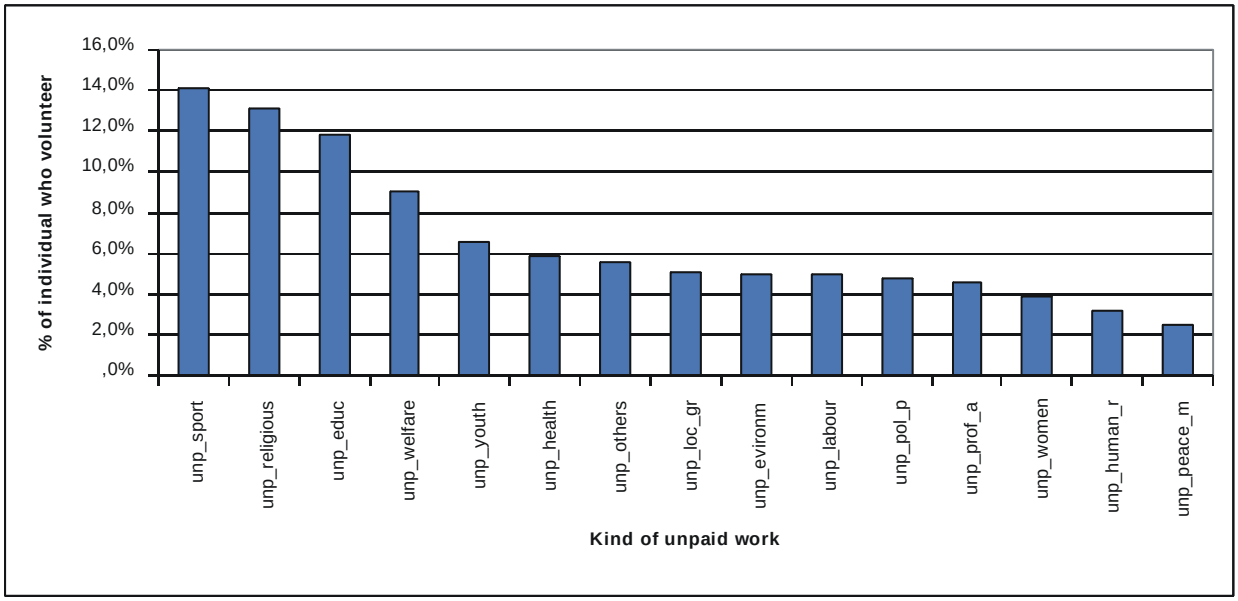

Figure 4.3: Percentage of volunteers by type of unpaid work.

As we may see the most popular types of volunteering are: unpaid work in sport and recreation activities; unpaid work in organization related to the religion; unpaid work in education and cultural activities and unpaid work in welfare services. Conversely, the lower engagement occurs in unpaid work related with peace movements activities, human right activities and unpaid work linked to women's groups.

The next step was to identify the volunteer participation rates in different European countries. Figure 4.4 shows the participation rate in unpaid activities by country.

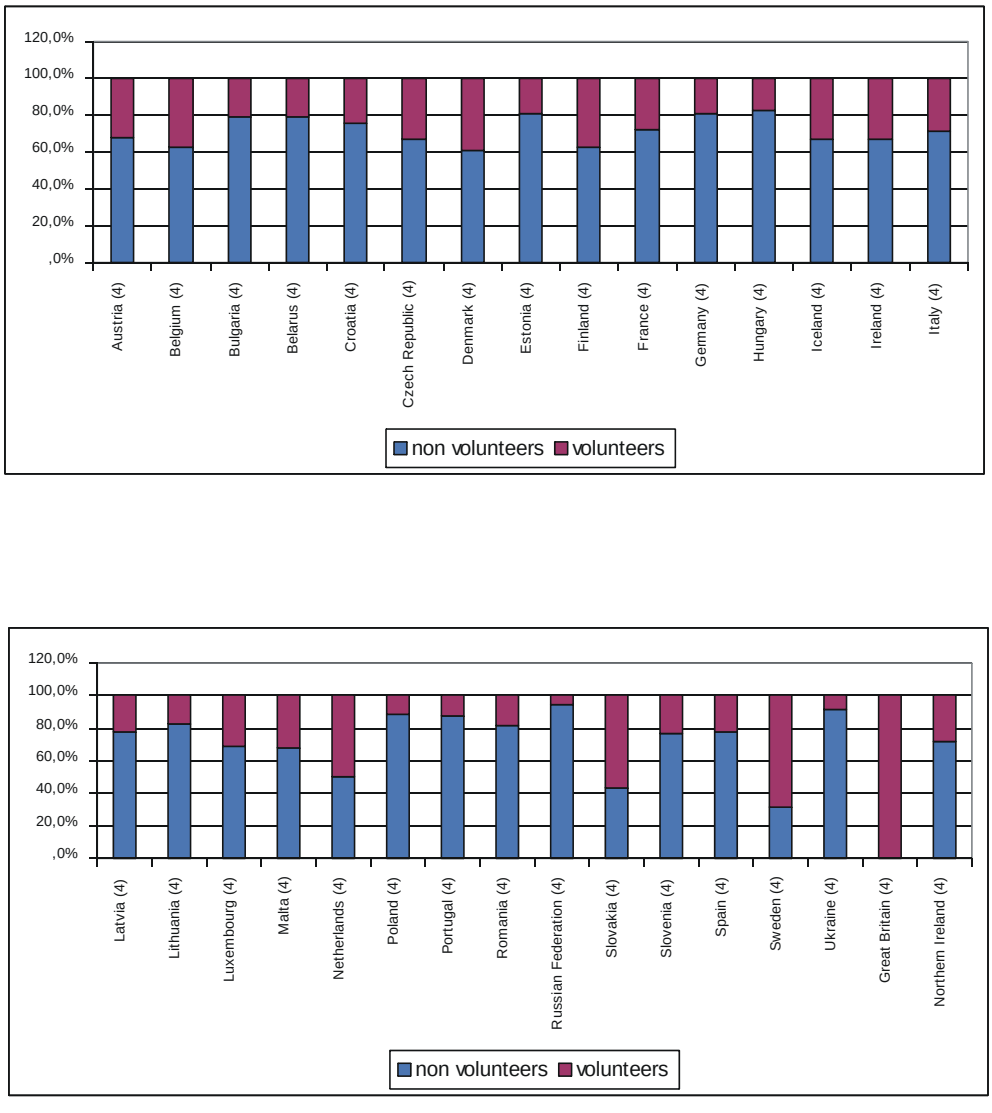

Figure 4.4: Volunteer participation rates in European countries 4^{th} wave.

On average, in the 31 European countries included in the data set, around 43% of the

individuals performed some type of unpaid work. However there are wide differences in the participation rate across countries. In general, Eastern and Mediterranean countries have a below average percentage of volunteers, except in Czech Republic and Slovakia. On the contrary, Western and Northern countries have volunteering participation rates which are above average. Considering the available data we verify that there is one problem related to the data from Great Britain – among the 58 observations, all individuals did some kind of unpaid work. This suggests that the Great Britain sample may be biased and restrains us from using it in the analysis of the determinants of the volunteering decision (an observation being from Great Britain would be a perfect predictor that the individual is a volunteer).

Besides the variables related with unpaid work we also need variables to characterize the individuals included the sample. Based on our literature review, we considered three groups of variables: socioeconomic variables, demographic variables and attitudinal variables. As socioeconomic variables we decided to use: educational level; employment situation; and income level. Regarding the demographic characteristics we chose the following variables: gender; age; place of living; existence of children in the household; and marital status. Finally, we considered the following variables related with the individual's attitudes: satisfaction with life; level of choice and control; and perception about the importance of religion. We present a descriptive analysis of these variables next.

The educational level variable is a qualitative variable with 3 categories: lower, middle and upper educational level. This variable was recoded from the original variable "Highest educational level attained". The original variable was constituted by 8 categories in which the first two considered the elementary education formal and non formal, the third category referred to the incomplete secondary, or vocational and compulsory elementary education, and the 4th, 5th and 6th categories were all related with secondary education. The last two categories (7th and 8th) referred to a higher education. The recoded variable considered as lower education the categories 1, 2 and 3 of the original variable, as middles education categories 4, 5 and 6 of the original variable and as a upper education categories 7 and 8 of the original variable. Figure 4.5 shows the distribution of the education level in the sample and the participation rate in each of the education levels.

The middle education level is the most frequent in the sample (43.3%) whereas the upper education level is the least frequent (23.2%). Regarding the participation rate, it is very clear

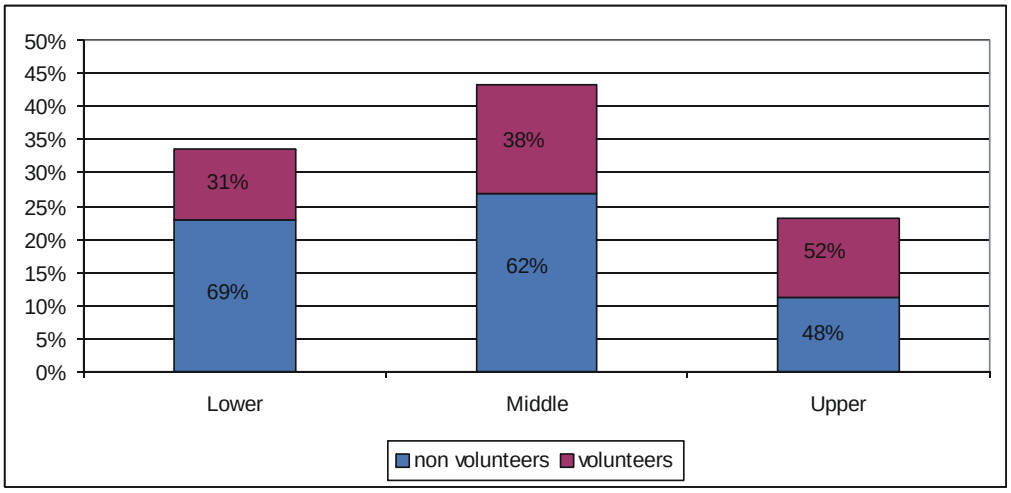

Figure 4.5: Volunteers by educational level.

that it increases with the education level. In fact, the percentage of individuals who volunteer is 31% among respondents with lower education level, 38% among people with a middle education level and 52% among people with upper education level.

The income level is also a qualitative variable with 3 categories: small, middle and high income level. This variable is a result of recodification of the initial variable. It was asked to the individuals to indicate the interval where their income household falls into (before taxes and other deduction) considering wages salaries, pensions and other incomes. This variable was recoded considering the different categories of income specifics in all countries. Ten, or sometimes less, categories were specified for every country (for Portugal there were only 6 different income classes). Those ten categories were then recoded considering the 4 last categories as high income, the first 2 or 3 initial categories as low income[2] and the remaining categories as medium income. This recoded variable is available on the original data.

Figure 4.6 shows the distribution of the income level and the percentage of volunteers in each income level.

The participation rate is increasing with the income level, going from 33% in the lower income group, to 40% in the middle income group and 44% in the high income group

The employment status variable considered the type of occupation of the respondent. In

[2]Whether we considered the first 2 or the first 3 categories as low income, depended on the country. For instance, in Belgium the 3 first categories were considered whereas Bulgaria only the first 2 categories were considered.

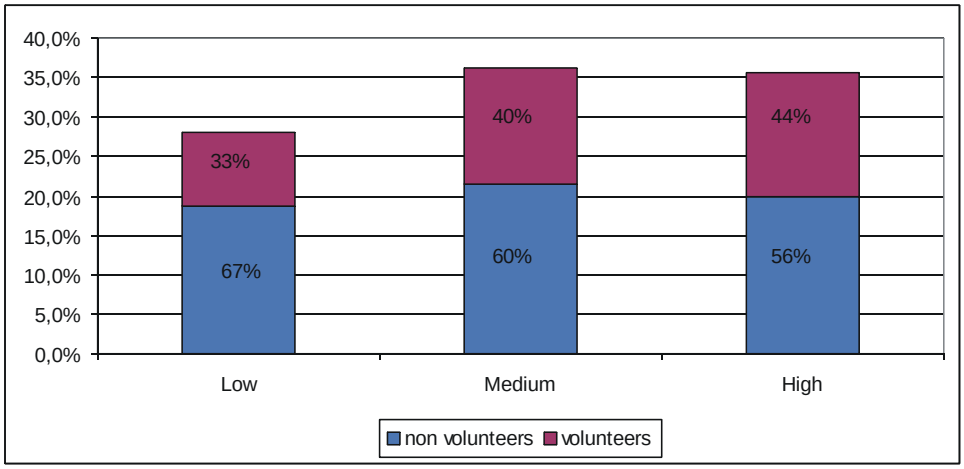

Figure 4.6: Volunteers by income level.

the sample, the full time workers are the major group followed by a big group of retired people. Housewives, part-time workers, students and unemployed have similar percentage of respondents. Figure 4.7 shows the participation rate by type of occupation.

The self employed, part-time workers, students and housewives are the categories with higher participation rates (all above 40%). On the contrary, the participation rate is lowest among the unemployed and retired.

Let us now describe the demographic variables. In the sample there are 10606 males (46.6%) and 12133 females (53.4%) (see Figure 4.8). Considering the volunteer participation rate, males in our sample have a slightly higher participation rate (41%) than females (38%).

The average age of the respondents is 43.41 years old and the standard deviation is 16.5. All respondents have an age between 15 years and 101 years. Figure 4.9 shows the rates of volunteering participation by age categories.

In our sample we observe the highest rate of volunteer participation among individuals between 35 to 54 year old and among the youngest group. The relatively higher rate of volunteer participation among young individuals is related with the relatively big rate of students participation (see Figure 4.7) in volunteer activities.

The majority of individuals who responded to the questionnaires live in a medium small town (31.1%) or in a large town (29.8%). Figure 4.10 shows the participation rate by place of living. The differences among the four categories of living places are relatively small with a percentage of volunteers of almost 40%.

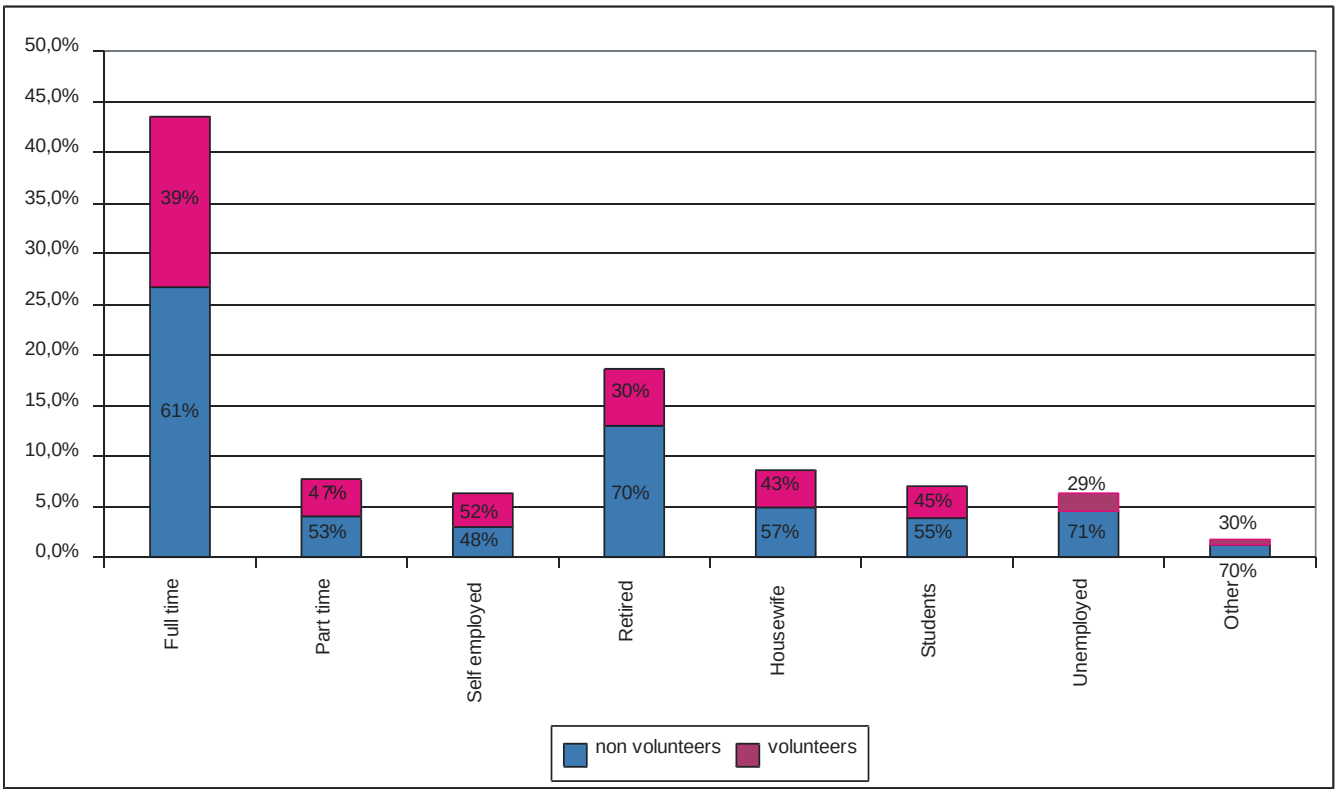

Figure 4.7: Volunteers by employment status.

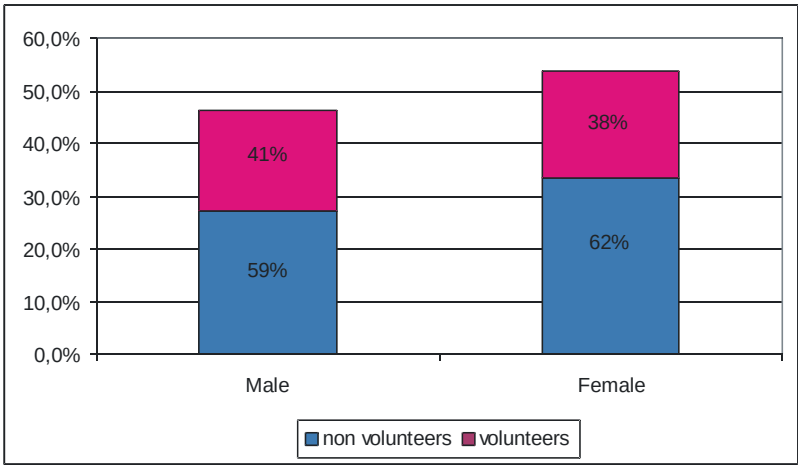

Figure 4.8: Volunteering by gender.

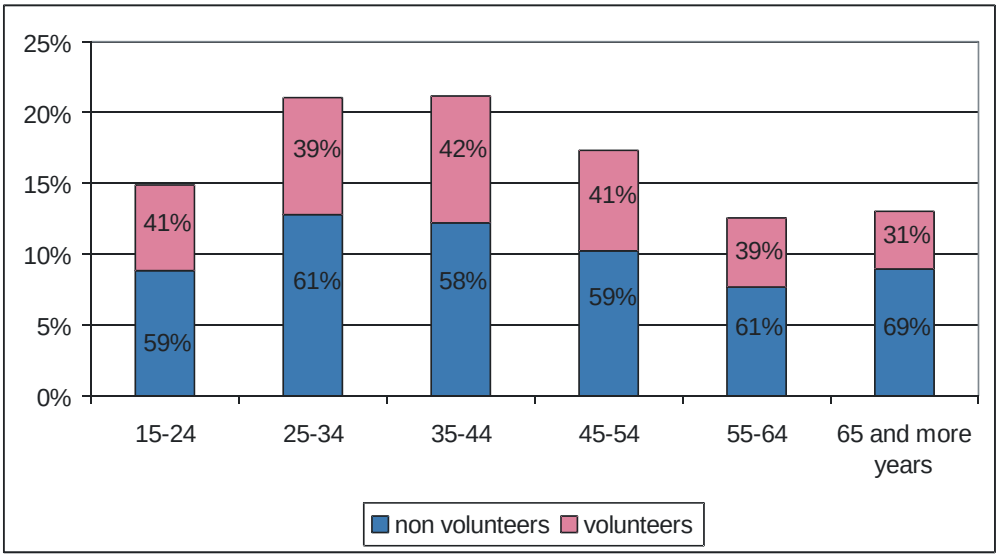

Figure 4.9: Volunteering by age category.

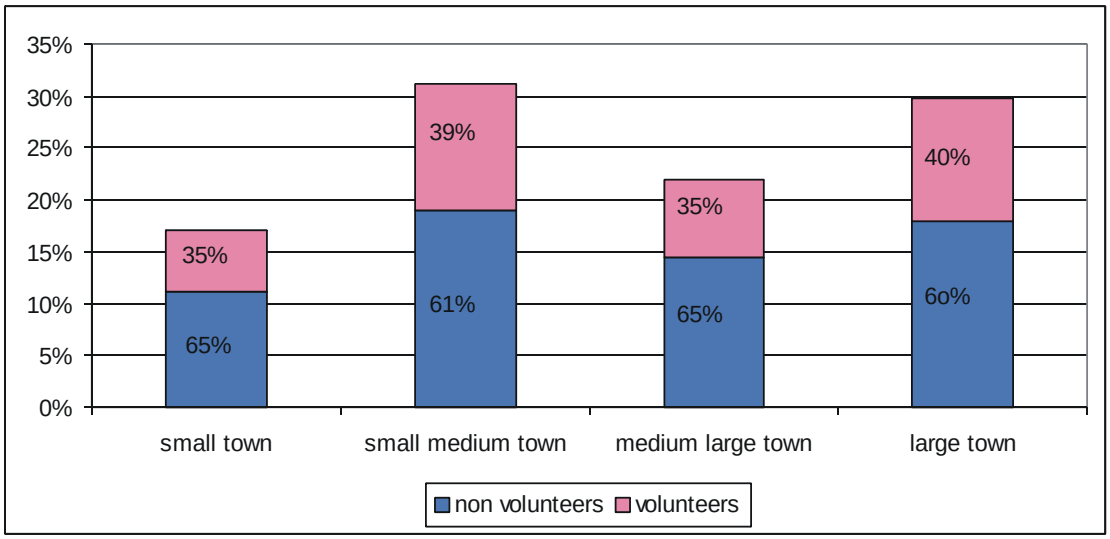

Figure 4.10: Volunteering by place of living

However in the small town and medium big town the percentage of volunteers is a little bit lower than in small medium towns and large towns.

The group of variables "Number of people aged..." were considered as continuous variables. In our sample the most frequent result is 2 people in a household over 18 years old with usually no children. The descriptive statistics for these set of variables is presented in Table 4.1.

Table 4.1: Number of people living in household

Number of people living in household	Mean	Mode	Std. Deviation
Number of people in household of 18+	2.34	2	1.047
Number of people in household aged 13-17	0.24	0	0.545
Number of people in household aged 5-12	0.29	0	0.65
Number of people in household under age of 5	0.17	0	0.491

Analyzing the frequencies we verify that we have households in average with very few children. Moreover, there are more children from age 5 to 12 than teenagers (ages 12-17). Children under 5 are the least common.

Relatively to the marital status, the majority of the individuals is married (56.6%) while the second major category is the singles group (25.8%). Figure 4.11 shows the participation rate by marital status. Analyzing the marital status and volunteering we verify that the widowed are less engaged in volunteering followed by divorced individuals. The individuals who volunteer the most lived together as married (their participation rate is above 50%). A very curious fact is that married and separated individuals have almost the same volunteer participation (around 40%).

As we mentioned before we also chose variables related with the following individual attitudes: satisfaction with life; level of choice and control; and perception about the importance of religion.

The variable "level of choice and control" was recoded from the original variable "*How much of freedom of choice and control".* To answer to this question the inquiry had the following explanation "Some people feel they have completely free choice and control over their lives, while other people feel that what they do has no real effect on what happened to them. Please use the scale where 1 means "none at all" and 10 means "a great deal" to indicate how much

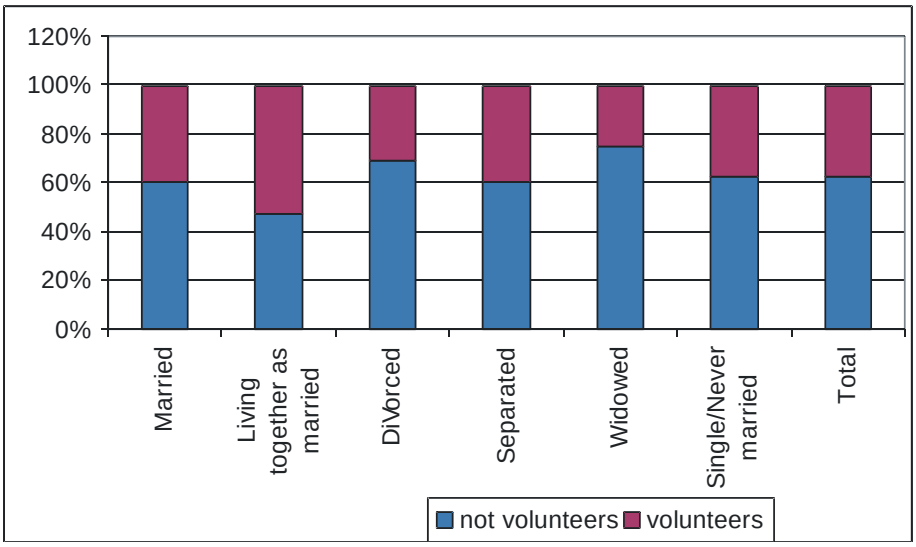

Figure 4.11: Volunteer by marital status.

freedom of choice and control you feel you have over your own life". The original variable was recoded into 3 categories: the categories 1, 2 and 3 of the original variable were recoded to low level of choice and control; the original categories 4, 5, 6, and 7 were considered medium level of choice and control and the original categories 8, 9 and 10 were considered high level of choice and control.

Figure 4.12 presents the frequency distribution of the variable level of choice and control and the participation rate in each category of this variable. One observes that most individual consider themselves as having a medium level of choice and control and that relatively few claim to have a low level of choice and control. In addition, it is quite evident that individuals who feel that they have a higher level of choice and control are also more engaged in volunteer activity than those who do not feel it. Regarding the relationship between the variables level of choice and control and volunteering there is difficulty in identifying the direction of causality. There is always a question of whether the individuals feel higher control on their lives and thus they decide to volunteer or if volunteering provides them a feeling of an high level of choice and control. We will discuss this better in chapter 5.

The variable "*Satisfaction with your life*" was collected considering the following question: "All things considered, how satisfied are you with your life these days?". The initial variable had 10 categories starting with 1 which corresponded to "*dissatisfied*" up till 10 which corresponded

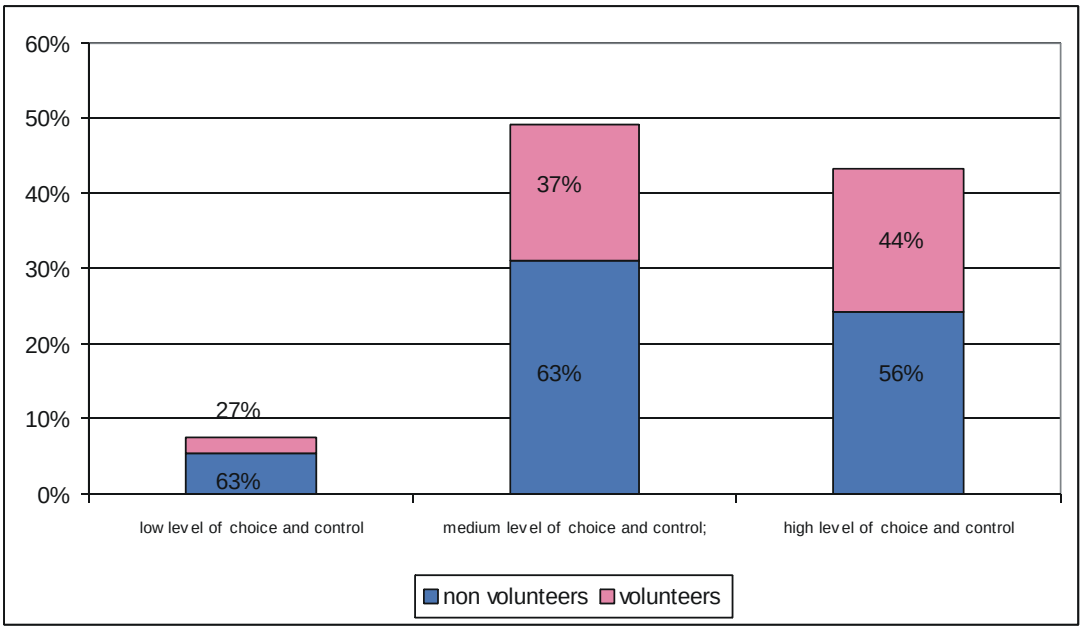

Figure 4.12: Level de choice and control and volunteeering.

to "*satisfied*". The variable was recoded into 3 categories. The first 3 original categories were considered dissatisfied; the 4th, 5th, 6th, and 7th were considered medium satisfied and the remaining categories were considered satisfied.

Figure 4.13 summarizes the results regarding the distribution of the variable "*Satisfaction with your life"* and the engagement in volunteering activities in each category of this variable. The most part of individuals consider to be satisfied with their life. Moreover, the results of cross-tabulation with volunteer activity show that individuals more satisfied with their lives are also more engaged on volunteering activities. The relationship of this variable with volunteering raises the same type of question than the level of choice and control variable. There are many studies which prove that volunteering engagement gives people more satisfaction. Through the analysis of this variable it is also very difficult to identify the cause-effect relationship.[3]

The variable "Religion importance in life" is a categorical variable and during the inquiry it was asked: " Please say, for each of the following, how important it is in your life – Religion" Figure 4.14 shows the results in the sample.

This figure shows that the engagement in volunteering activities is clearly increasing with

[3]To test the eventual endogeneity we perform the IV Wald test for exogeneity after the probit estimation. We used as instrumental variable "job satisfaction" The results confirm exogeneity with : life satisfaction: chi(2) = 0.68 >prob chi2 = 0.4084 and level of choice and control :chi(2) = 0.69 >chi2 =0,4074

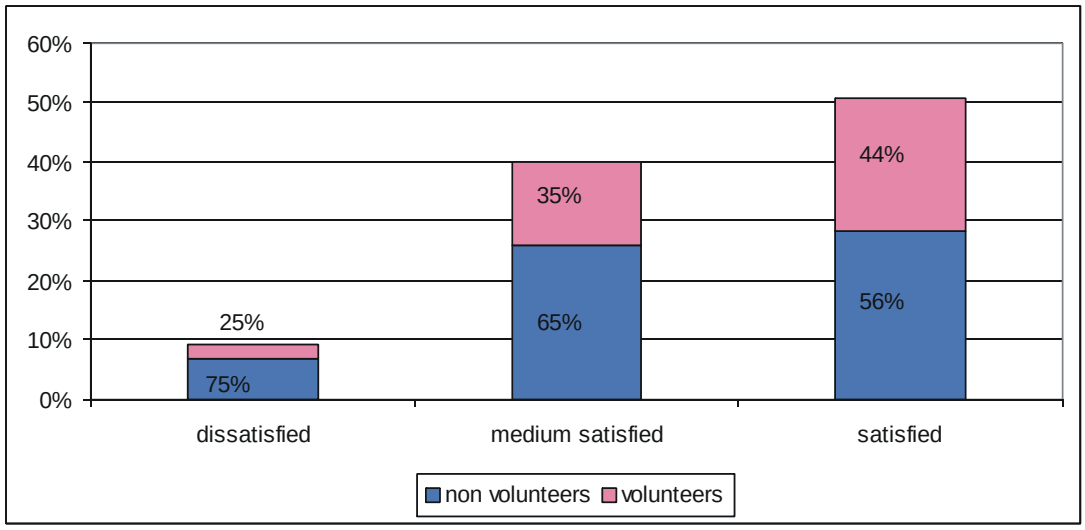

Figure 4.13: Level of satisfaction with life and volunteering.

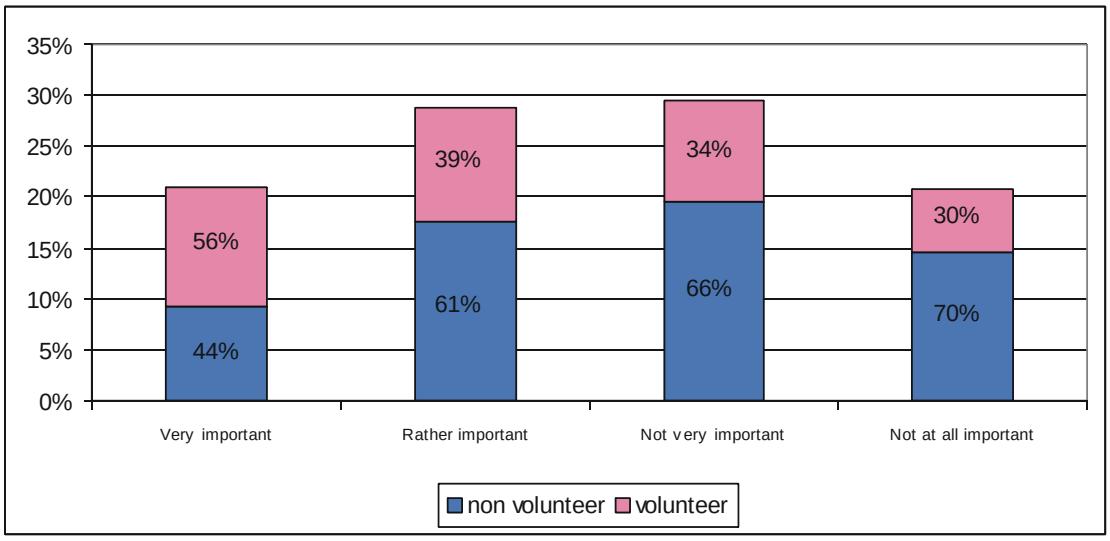

Figure 4.14: Volunteers considering the importance of religion.

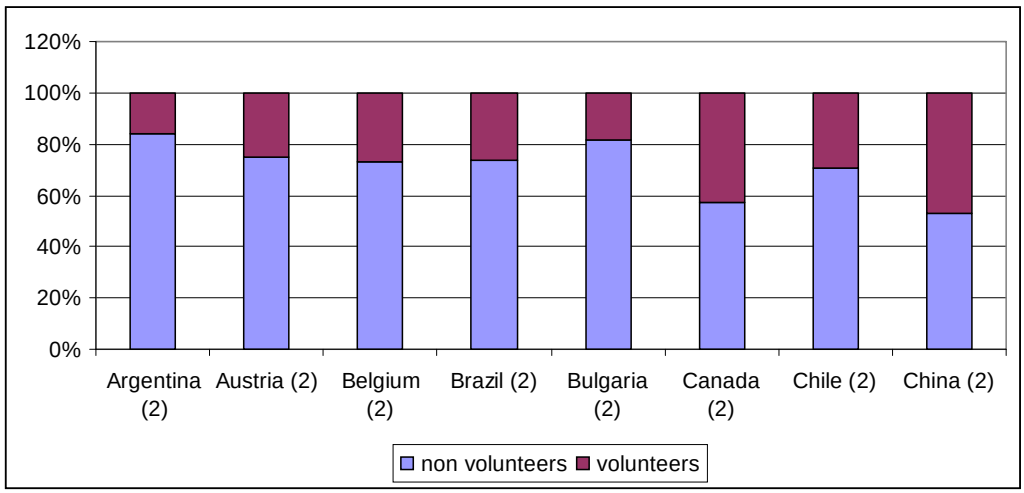

Figure 4.15: Volunteering participation rates by country in the 2nd wave.

the level of importance that the individuals give to religion. The differences in the participation level are quite large. Individuals who believe that religion is very important volunteer almost twice as much as individuals who believe that religion is not important at all.

4.3.2 Characterization of the 2nd wave data

As it was mentioned in the beginning of this chapter we use the 2nd wave data in chapter 7. The second wave data contained the valid cases from European, Asiatic, and American countries. The participation rates in these countries are shown in Figure 4.15.

As we can see the highest participation rate in the second wave occur in China (47%) and Canada (41%). The smallest rate belongs to Argentina with 16% of volunteers and Bulgaria with 18% of volunteers.

Next we characterize the individuals in the 2nd wave and compare their participation rates with the individuals in the 4th wave considering the same socioeconomic variables, demographic variables and attitudinal variables.

As it was mentioned in the literature review, the educational level is the most consistent predictor of volunteer activity. Comparing the educational levels of the 2nd wave and the 4th wave individuals we verify that the participation rate in every educational level is lower in the 2nd wave than in the 4th wave. However, the pattern of increasing rates on volunteering participation as the education level increases is similar in the two waves. The volunteer participation rate in

the 2nd wave considering the educational level is present in Figure 4.16.

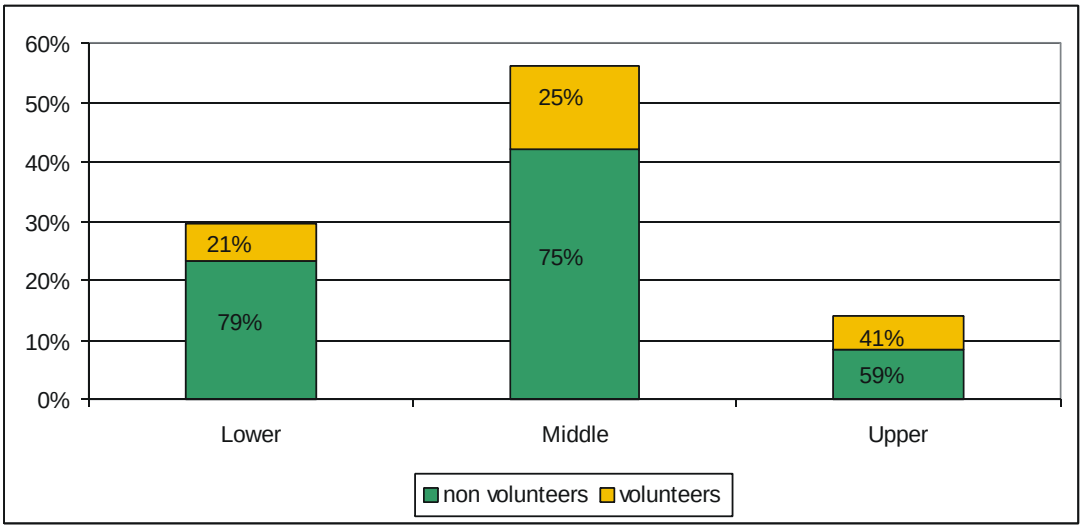

Figure 4.16: Educational level and volunteering in the 2nd wave.

The employment status in the 2nd wave and the associated participation rates on volunteer activities is shown in Figure 4.17.

Regarding the participation rate by employment status there are some interesting differences between the 2nd and the 4th wave, particularly in categories like part-time employed, self employed , housewife and students. In the 4th wave, part-time employed had a participation rate of 47%, 20% more than in the 2nd wave. In the 4th wave, self employed had a 52% participation rate, almost the double than in the 2nd wave. The participation rate of housewives is 43% in the 4th wave while in the 2nd wave is just 26%. Finally, the participation rates of students were 45% in 4th wave and 29% in the 2nd wave.

The volunteering participation rates of 2nd wave individuals considering the income level are shown in Figure 4.18. The volunteering participation rate increases with the income level, following the same pattern than in the 4th wave. However participation rates are lower than in the 4th wave, for every level of income.

Let us now analyze the demographic variables in the 2nd wave. The participation rate by gender is represented in Figure 4.19. Like in the 4th wave the male volunteering participation rate is higher than the female one.

The rates of volunteering participation considering the age of individuals are shown in Figure 4.20.

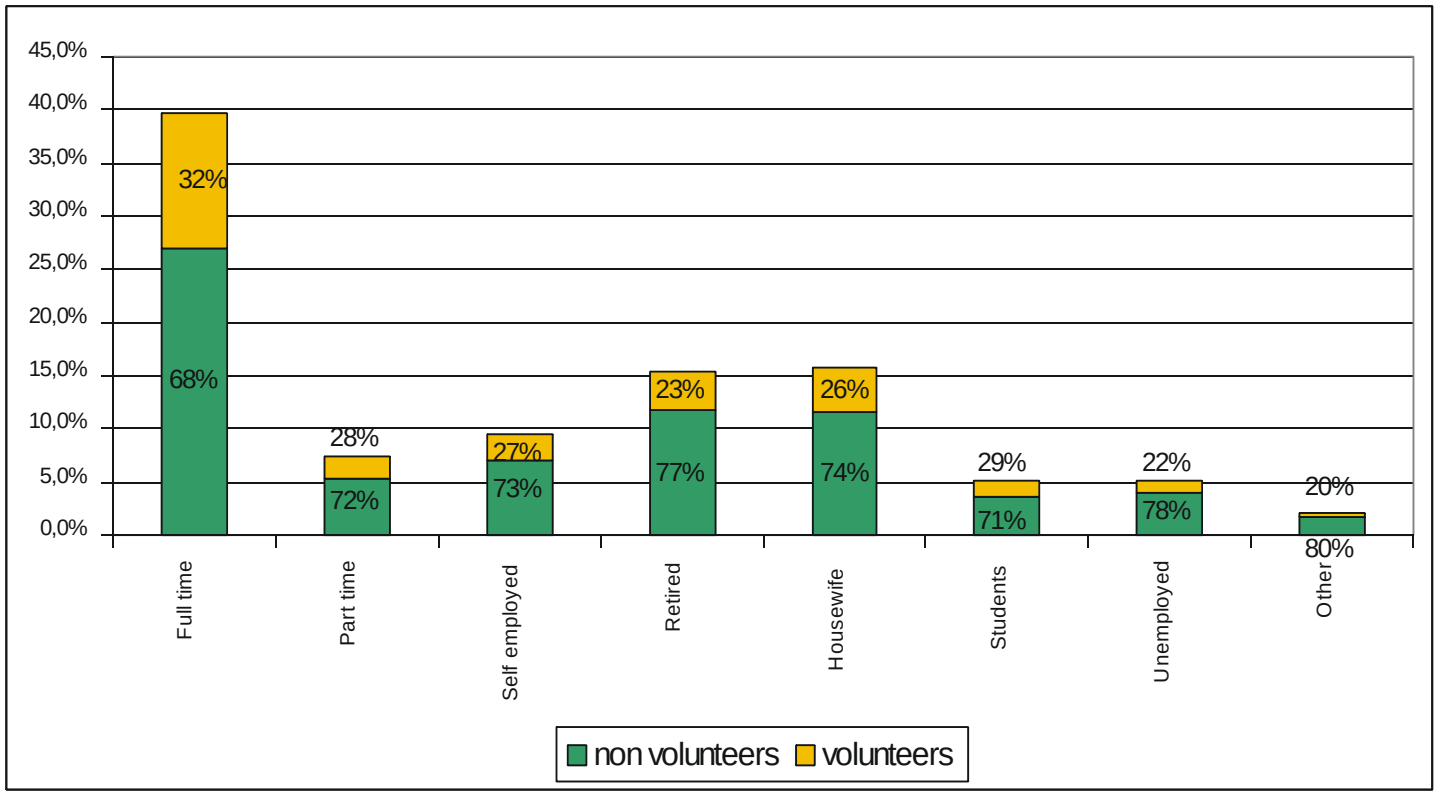

Figure 4.17: Employment status and volunteering - 2 wave

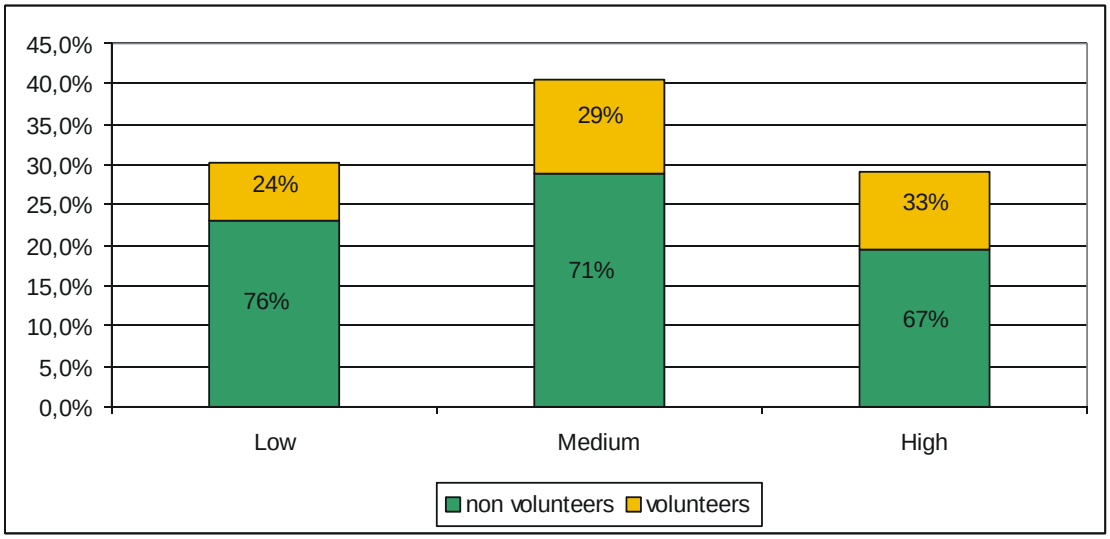

Figure 4.18: Income and volunteering participation in the 2nd wave

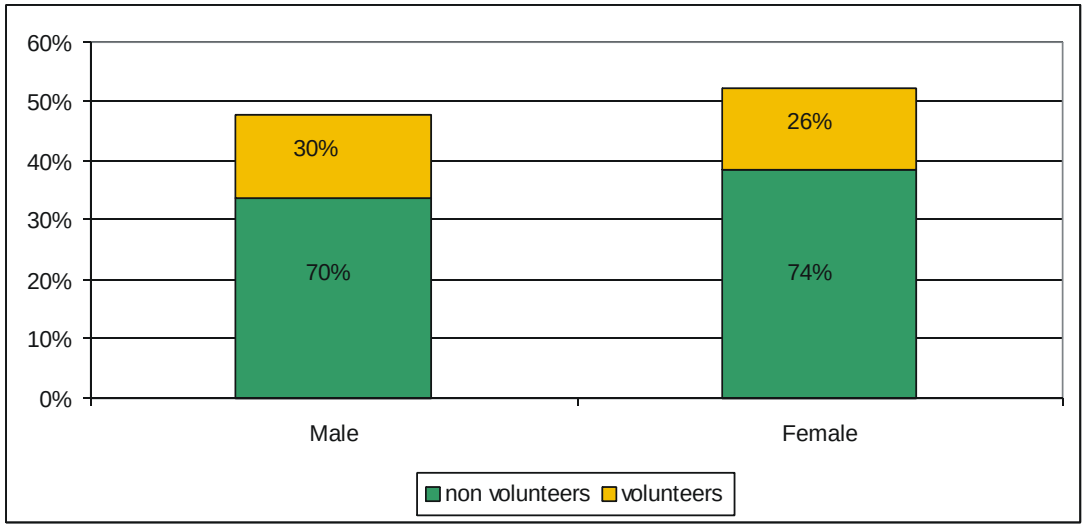

Figure 4.19: Volunteering participation rate and gender: 2nd wave.

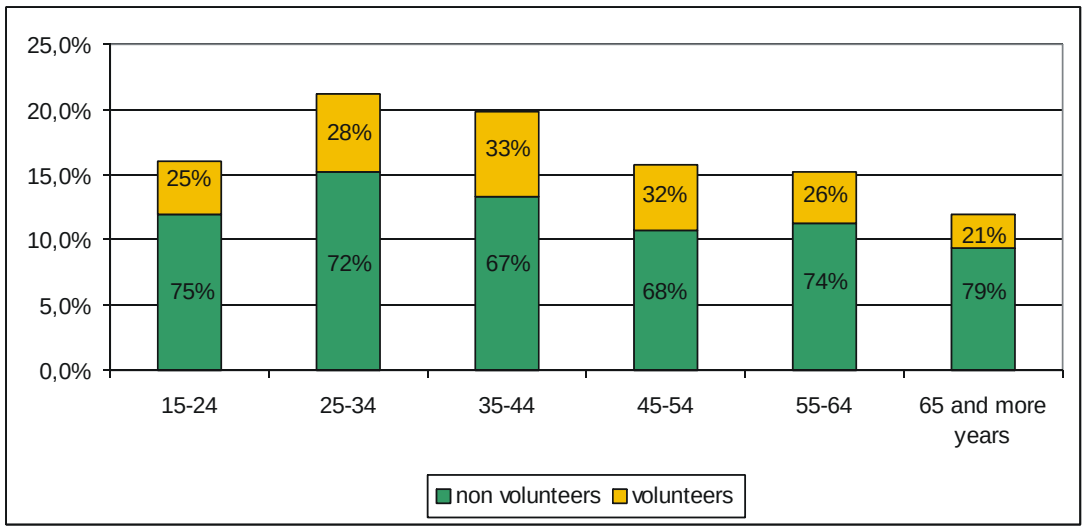

Figure 4.20: Age and volunteering participation rate in the 2nd wave.

Analyzing the volunteers participation rates by age categories we observe a pattern similar to the one observed in the 4th wave, but with lower participation rates in every age category. Regarding the pattern across ages the main difference is the relatively lower participation for individuals between 15-24 years old which is consistent with smaller participation of students in volunteer activity.

The volunteer activity rate considering the place of living for individuals who belonged to the 2nd wave is shown in Figure 4.21. Considering the place of living, the volunteering participation rate in 2nd wave does not differ much from the 4th wave. The largest difference in the participation rate occurs in the large town (in the 4th wave the participation rate was 40%, in the 2nd wave 32%). Moreover, it should be noted that the 2nd wave sample has a larger proportion of individual from large towns.

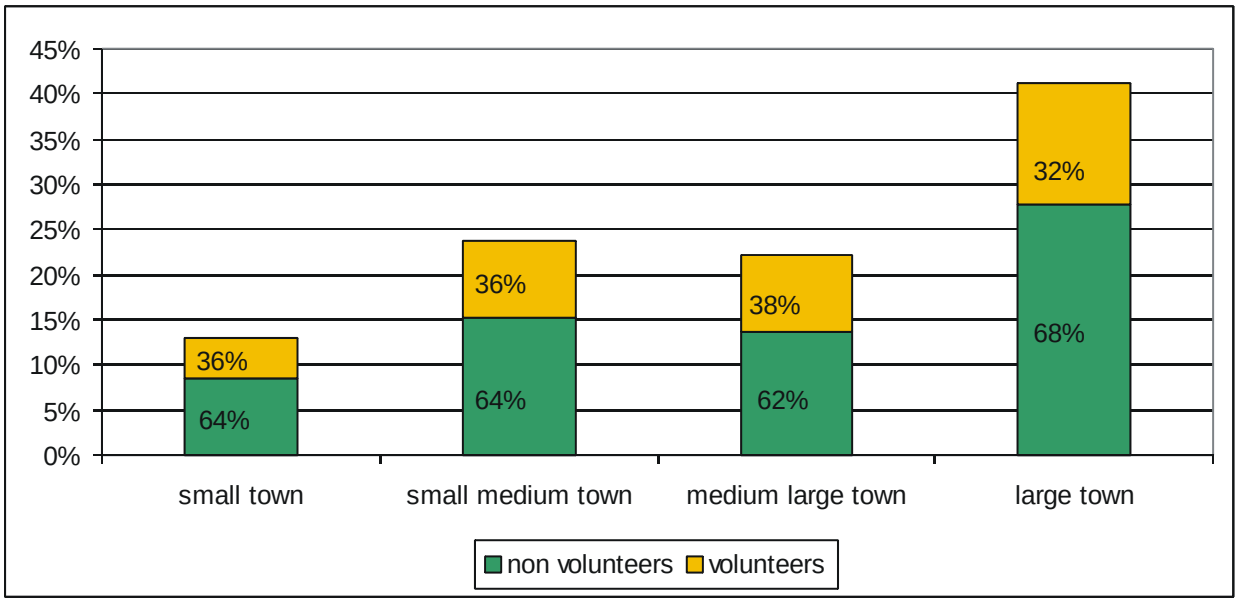

Figure 4.21: Place of living and volunteering participation rate in the 2nd wave.

The marital status and volunteering participation of individuals who belong to 2nd wave sample is shown in Figure 4.22.

Analyzing the marital status of 2nd wave individuals and their volunteering participation we identify one significant difference with respect to the 4th wave. In the category "Living together as a married" in 4th wave there was 55% of volunteers (32% more than in 2nd wave). For the remaining categories the differences are much smaller, although with a smaller participation

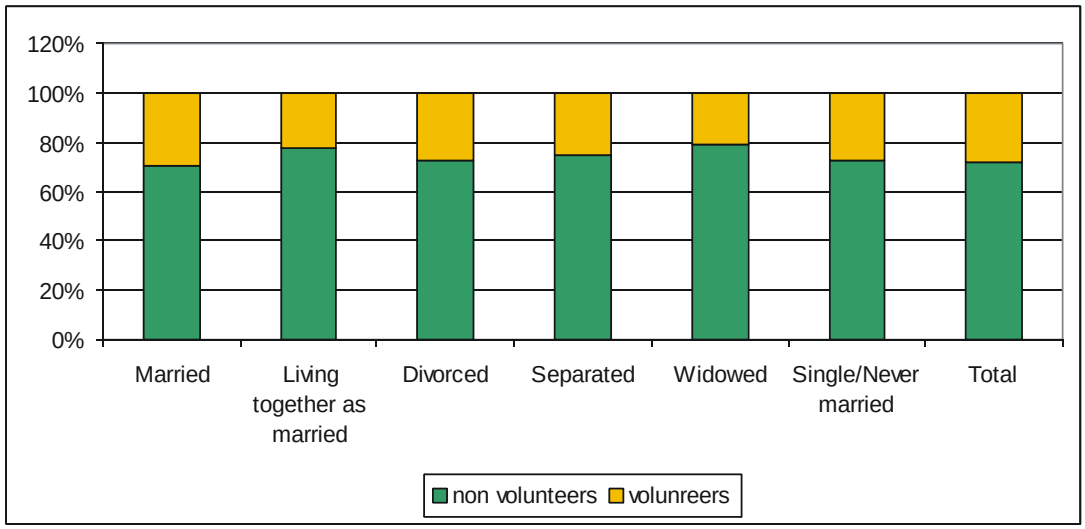

Figure 4.22: Marital status and volunteering participation rate in the 2nd wave.

rate in the 2nd wave.

The volunteer participation rate for each level of satisfaction with life is represented in Figure 4.23. Analyzing the results of the crosstabulation between the rates of volunteering participation and the level of life satisfaction we do not observe significant differences in the participation pattern between the two waves.

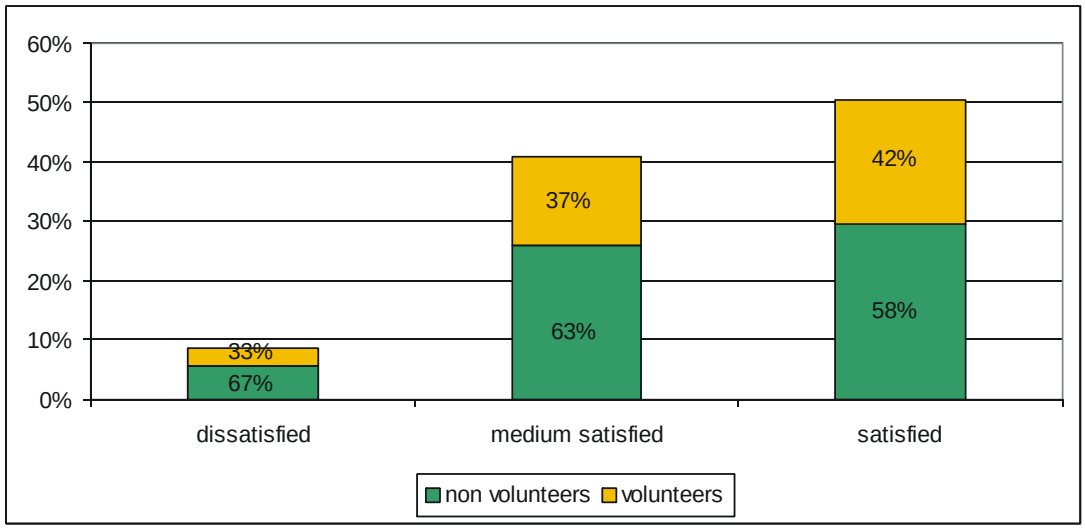

Figure 4.23: Volunteering participation rate and level of satisfaction with life in the 2nd wave.

The results of volunteering participation rates considering the of level of choice and control

are represented in the Figure 4.24. The participation rate is increasing with the perception of level of choice and control, a pattern which is similar to the one observed in the 4th wave (although with lower participation rate values than in the 4th wave).

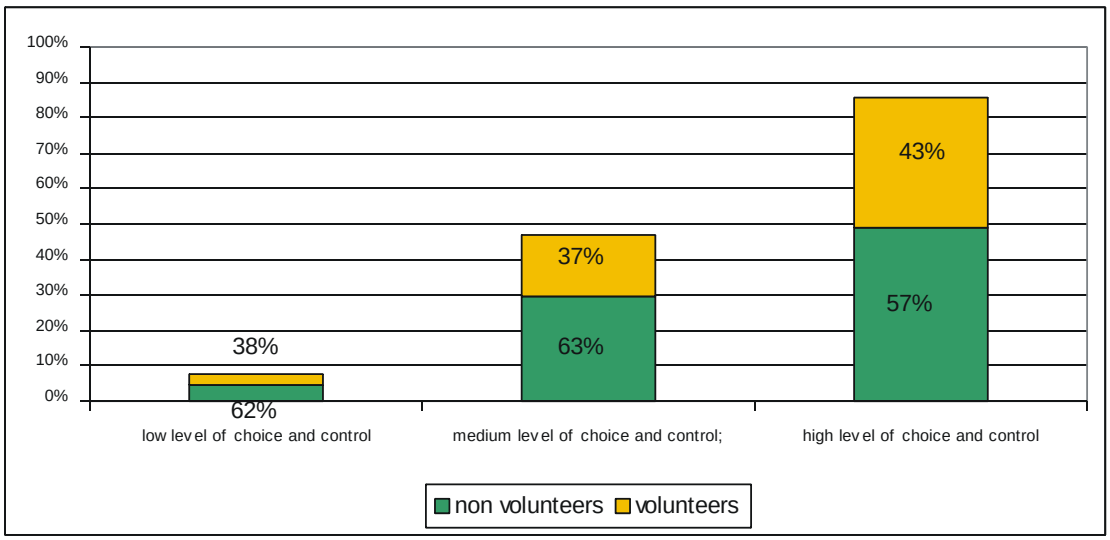

Figure 4.24: Volunteering participation rate and level of choice and control in the 2nd wave.

The relation between the perception about the importance of religion and the volunteering participation rates is shown in Figure 4.25.

Individuals who attribute bigger importance to the religion have higher rates of volunteer participation, thus we have a tendency similar to the one observed in the 4th wave. Considering that the average participation rate is around 12% lower in the 2nd wave, the category where the participation rate is now relatively lower is "very important" (the participation rate is lower by 21%). In addition, it should be noted that in the 2nd wave sample, the proportion of individual who consider the religion either very important or rather important is much larger in the 4th wave.

4.4 Conclusion

In this chapter we analyzed the data used in the following chapters. This analysis allowed us to have a first picture of our data set. The data set includes binary variables related to 15 types of unpaid work and we created a new variable to identify whether the individual was engaged in some type of unpaid activity. Moreover we chose several variables to characterize

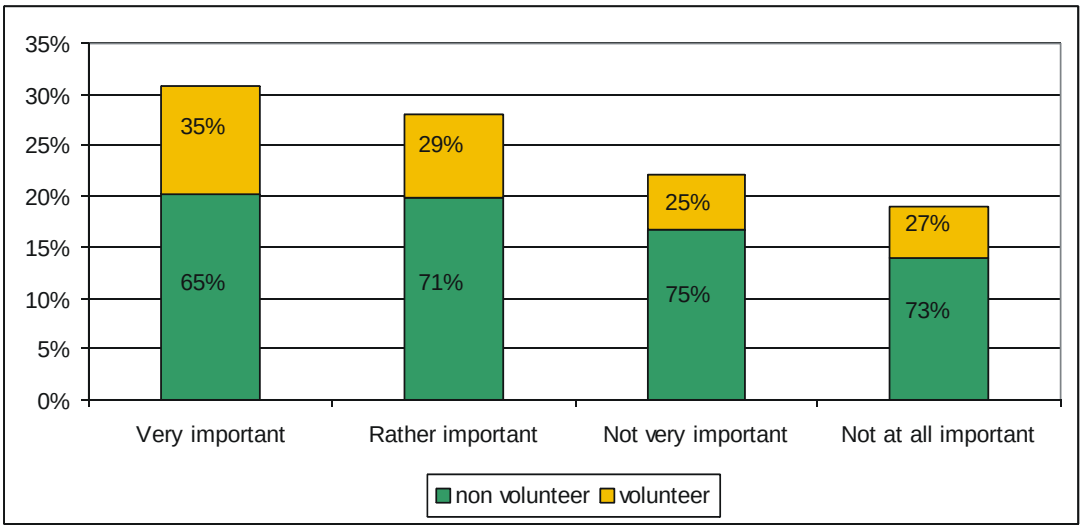

Figure 4.25: Volunteering participation rates and the perception of the religion importance in the 2nd wave.

the individuals in the sample. These variables can be divided into three groups: socioeconomic variables, demographic variables and attitudinal variables. Next we presented a descriptive analysis of these variables for 4th and 2nd wave samples separately. We used cross tabulations to get a first idea on the relationship between the selected variables and volunteering. The results showed that, in our two samples, the participation in volunteering activities is increasing with education, income, level of choice and control, satisfaction with life and importance given to religion. In addition, self employed, part-time workers, students and housewives have higher participation rates than individuals with other occupations in the 4th wave whereas in the 2nd wave sample the full employed individuals volunteer relatively more than others.

Chapter 5

The determinants of the volunteering decision

5.1 Introduction

The aim of this chapter is to understand the factors that influence the decision to participate in volunteering activities. To achieve this objective we ran several logistic regressions where the explained variable is a dummy variable indicating whether the individual participated or not in volunteering activities. In a first regression we analyze the factors that influence volunteering in general. Latter on, we aggregate the volunteering activities in four major types of volunteering and ran separate regressions for each one of the volunteering types. Our empirical study uses data from the 4th wave of the European Values Survey covering 31 European countries.

Our literature survey led us to choose as potential determinants of volunteering three groups of variables: socioeconomic variables (income, education, employment status), demographic variables (age, square of age, gender, size of town, number of children in household, marital status) and attitudinal variables (level of satisfaction with life, level of choice and control, importance of religion). In addition, we introduce country dummy variables to control for the influence of country specific factors.

The major contributions of this chapter to the literature are the inclusion of attitudinal variables, the comparison among European countries and the study and comparison of the determinants for the various types of volunteering activities.

The chapter is organized as follows. In the next section we present our explanatory variables and their expected impact on volunteering. In Section 5.3 we describe our data set. Section 5.4 presents the logistic regression for explaining the probability of participating in volunteering in general whereas Section 5.5 presents the regressions for the various types of volunteering activities.

5.2 The determinants of volunteering

In this section we describe the variables that we use as explanatory variables and that previous studies have shown to influence the decision of doing unpaid work. There are many studies which identify some attributes related with socioeconomic characteristics, personality, and identity of individuals who participate in volunteering actions. Wilson (2000) concluded that there is considerable evidence showing that age, gender, educational attainment, household income, and the breadth of an individual's social network are predictors of volunteering.

In the former studies, the level of education is the most consistent predictor of volunteering (McPherson and Rotolo, 1996; Sundeen and Raskoff, 1994). "Education boosts volunteering because it heightens awareness of problems, increases empathy, and builds self-confidence" (Brady *et al.,* 1995; Rosenthal *et al.,* 1998). Considering this issue Bandura (1997) developed a cognitive theory of personality that centers around the idea of self-efficacy. Self-efficacy is a belief that we are capable of executing and attaining certain goals, whether or not we have the skills to do so. People high in self-efficacy would believe that they are able to succeed in whatever they put their minds to. They are more willing to take on challenges that may provide them with an opportunity to develop new skills, and they spend a great deal of energy, time, and persistence in completing their goals. The type of education might be a determinant to increase this self-efficacy. Educated people have the opportunity to belong to more organizations where they develop more civic skills, for instance, how to run the meetings (Herzog and Morgan, 1993). In addition, they are also more likely to be asked to volunteer (Brady *et al.*, 1999).

Regarding the employment status one expects that the investment motive for volunteering to be relatively more important for students as they are in the process of "accumulation of labor market qualifications" (Ziemek, 2003). On the contrary, retired individuals ought to be less investment motive oriented but more altruistic and private consumption motivated. For

instance, the German volunteer survey found that retired volunteers are predominately engaged in the volunteering activities related to recreation, church, leisure, culture and music.

Another important determinant of volunteering is the income level. Here one can identify many different findings which depend on whether one is analyzing the impact on the participation decision or the impact on the number of hours of voluntary work. Wolff *et al.* (1993) assume that, through the opportunity costs, volunteer hours are inversely related to wages. Menchik and Weisbrod (1987) indicate that volunteer work is positively related to income. Clary *et al.* (1996) argue that individuals with higher levels of income have different motivations to be volunteers and that they are not so driven by the investment motivate. Prouteau and Wolf (2006) found that the volunteers have higher rather than smaller household income. Schady (2001) finds a positive correlation between income and volunteering. He defends that there is a connection between income and the probability of being asked to do voluntary work. Schady (2001) showed that rich people are addressed to volunteer more frequently since they are expected to be more productive than people with lower income.

Considering the marital status, married people are more likely to volunteer than single people, although single people without children volunteer more hours (Sundeen, 1990; Freeman, 1997). In addition, Freeman (1997) showed that if one spouse volunteers, the chances are the other does also.

Having children in the household is both a constraint and an opportunity when it comes to volunteering. On the one hand, taking care and educating children is a demanding and time consuming activity, thus leaving less time for other activities such as volunteering. On the other hand, children are likely to be involved in sports and youth activities that are frequently associated with nonprofit organizations, increasing the probability of parents getting involved in related volunteering activities. The existent empirical evidence suggest that the effect of having children on volunteering is generally positive but it depends on the children's ages. The results obtained by Wuthnow (1998) show that parents are more likely to volunteer if they have children at home, but parents with young children volunteer fewer hours than parents with older children (Damico *et al.,* 1998; Menchik and Weisbrod, 1987; Schlozman *et al.,* 1994). The distinction between school-aged children and younger children is very important for volunteering. School-aged children forge social links to schools, sports organizations, and other youth-oriented nonprofit organizations. It is also likely that when children enter school, parents have more free

time (Gora and Nemerowicz, 1985). Some studies conclude that women with children below 6 years of age often have constrains to be volunteers. The German volunteer survey studied by Zierau (2000) (quoted by Ziemek 2003), concludes that women with children below 3 years of age show the lowest representation in volunteer engagement. Individuals with school aged children have higher probability of being engaged with school-related activities and community oriented groups (Smith, 1994; Janoski and Wilson, 1995; Woodard, 1991).

The age of the individual is also a very important variable in the volunteering decision. People of different ages and generations have different perspectives on life, which may change their attitude towards volunteering. Most studies show that there exists an invert U relationship between age and volunteering. Volunteering rises to its peak in middle age (Herzog *et al.,* 1989; Menchik and Weisbrod, 1987) as people move from young adulthood to middle age, they move out of self- and career-oriented activism into more community-oriented work (Janoski and Wilson, 1995).

Gender also influences the volunteering decision as well as the type of volunteering activities chosen. In Europe, there is no overall gender differences in the participation level: females volunteer less than males in some countries and more than males in others (Gaskin and Smith 1997; Hodgkinson and Weitzman, 1996; Hall *et al.,* 1998). Male volunteers prefer the recreational, job-related and political engagement volunteering activities while female volunteers prefer social services (Badelt and Hollerweger, 2001). Male prefer to volunteer in leadership positions of high public spending while women volunteer in small informal organizations (Ziemek 2003; Gaskin and Smith, 1997).

With respect to the place of living, rural environments are usually characterized by lack of public services and higher indices of poverty. Thus it is quite likely that there is higher need for volunteering activities in small towns than in larger ones. Wuthnow (1989) found that volunteers living in small towns emphasize solidarity benefits and norms of reciprocity while the volunteers in suburban environments emphasize self development.

A number of recent studies, all using longitudinal data, show that volunteers subsequently enjoy better physical health in old age (Stephan, 1991), score higher on measures of functional ability (Moen *et al.,* 1992) and, most striking of all, are at lower risk of mortality (Musick *et al.,* 1999; Oman *et al.,* 1999; Rogers, 1996; Sabin 1993). However, causal effects and selection effects can be mutually reinforcing. Volunteering improves health, but it is also most likely that

healthier people are more likely to volunteer.

Recent scientific work has established both a theoretical basis and strong empirical evidence for a causal impact of social relationships on health. Prospective studies, which control for baseline health status, consistently show increased risk of death among persons with a low quantity, and sometimes low quality, of social relationships. Volunteering is a way for people to become integrated into their community, and it is well-established that social integration yields positive mental health effects (House *et al.* 1988). Volunteering assumes an especially important role among the elderly because it can "inoculate, or protect, [them] ... from hazards of retirement, physical decline and inactivity" (Fischer and Schaffer, 1993). The volunteering may prevent social isolation which is a major risk factor for mortality from widely varying causes. The mechanisms through which social relationships affect health and the factors that promote or inhibit the development and maintenance of social relationships remain to be explored. In order to explore the significance of these effects we decided to use two available variables "satisfaction with your life" which was described "*All things considered, how satisfied are you with your life as a whole these days*", and "how much freedom of choice and control" which was described in the inquiry by "*Some people feel they have completely free choice and control over their lives, while other people feel that what they do has no real effect on what happened to them*". The last one is a classical sociological question of locus of internal control. The Rotter (1942) approach proved that higher internal control means better mental health and higher level of felt happiness.

5.3 Data

Our empirical analysis was based on the integrated data of European Values Survey (EVS). We considered the 4th wave of this inquiry which was gathered by the European Systems Study Group (EVSSG).

In our analysis we start by analyzing the decision to participate in volunteering activities without distinguishing among the various types of volunteering.[1] Thus we have defined the variable «participation in unpaid activities» as our dependent variable. This variable is a dummy variable which is equal to 1 if the respondent does some type of unpaid work (i.e., answered yes to at least one of the question regarding unpaid work) and is equal to 0 otherwise.

[1] In Section 5.5, we distinguish four types of volunteering activities and define the corresponding dependent variables.

The explanatory variables are described in Table 5.1. These variables are divided into three groups: socioeconomic variables (income, education, employment status), demographic variables (age, square of age, gender, size of town, number of children in household, marital status) and attitudinal variables (level of satisfaction with life, level of choice and control, importance of religion). Many of the variables were originally categorical variables. In order to incorporate categorical variables in the regression, one needs to choose a reference category and define dummy variables for each one of the remaining categories.[2] In other words, if a categorical variable has k categories, one needs to define $k-1$ dummy variables. A dummy variable corresponding to a given category indicates whether the respondent belongs to that category or not. The exclusion of one of the categories is necessary to avoid problems of multicollinearity. Table 5.1 indicates the reference category as well as the name of the dummy variable associated with each category. It is worth mentioning that the interpretation of the coefficients associated with a dummy variable should always be done with respect to the excluded category.

It should be noted that we include as explanatory variables both the age and the square of age. This allows us to test a quadratic relationship between age and participation in volunteering activities, a relationship which has been suggested in previous studies. In addition, regarding the number of children in the household we have several variables which take into account the ages of the children.

Finally, since we have data for 31 countries and we believe that there may exist important country specific effects that influence the volunteering decision (such as culture, religion, availability of public services,...) we include 30 country dummy variables (not shown in Table 5.1). The excluded country is Austria, hence country dummy coefficients should be interpreted relatively to Austria.

5.4 Explaining the probability of volunteering

The logistic regression is a form of regression which is used when the dependent variable is a binary variable. In this case, our objective is to investigate the relationship between a set of explanatory variables and the occurrence of unpaid work. Let $\mathbf{X}$ be the set of explanatory

[2] This procedure is automatic in most statistical packages. For example, in SPSS, one just needs to indicate that the variable is categorical and automatically the program generates the dummy variables associated with each category except the reference one.

Table 5.1: Description of explanatory variables.

Explanat. variable	Description
Income	Categorical variable. The reference category is "low income"
Inc_med	Dummy equal to 1 if individual has medium income level
Inc_high	Dummy equal to 1 if individual has high income level
Education	Categorical variable. The reference category is "low education"
Edu_med	Dummy equal to 1 if individual has medium education level
Edu_high	Dummy equal to 1 if individual has high education level
Employment	Categorical variable. The reference category is "full time employment"
Emp_ptime	Dummy equal to 1 if individual is part-time employed
Emp_slemp	Dummy equal to 1 if individual is self-employed
Emp_ret	Dummy equal to 1 if individual is retired
Emp_hwife	Dummy equal to 1 if individual is house wife
Emp_stud	Dummy equal to 1 if individual is a student
Emp_unem	Dummy equal to 1 if individual is unemployed
Emp_oth	Dummy equal to 1 if individual has other employement situation
Age	Age of the individual
Age2	Square of age
Female	Dummy equal to 1 if individual is a female, equal to 0 if a male
Town	Size of town. Reference category is "small town" (<2000 inhabitants)
Town_medsm	Dummy equal to 1 if individual lives in "medium-small town" (2000-20000)
Town_medlrg	Dummy equal to 1 if individual lives in "medium-large town" (20000-100000)
Town_lrg	Dummy equal to 1 if individual lives in "large"(>100000 inhabitants)
Hous5^{-}	Number of people in the household aged below 5
Hous5^{-}12	Number of people in the household aged 5-12
Hous13^{-}17	Number of people in the household aged 13-17
Hous18^{+}	Number of people in the household aged 18 or above
Marital Status	Categorical variable. Reference category is "married"
MS_livto	Dummy equal to 1 if individual is lives together as married
MS_dvr	Dummy equal to 1 if individual is divorced
MS_sep	Dummy equal to 1 if individual is separated
MS_wid	Dummy equal to 1 if individual is widowed
MS_sng	Dummy equal to 1 if individual is single
Life Satisfaction	Categorical variable. Reference category is "unsatisfied"
Sat_med	Dummy equal to 1 if individual has medium level of satisfaction
Sat_high	Dummy equal to 1 if individual has high level of satisfaction
Choice & control	Level choice & control, considering life decision & situation. Ref. "low choice & control"
Cont_med	Dummy equal to 1 if individual has medium level of choice and control
Cont_high	Dummy equal to 1 if individual has high level of choice and control
Religion import.	Categorical variable. Reference category is "very important"
Rlig_rather	Dummy equal to 1 if individual considers religion "not very important"
Rlig_notsoim	Dummy equal to 1 if individual considers religion "rather important"
Rlig_unimpor	Dummy equal to 1 if individual considers religion "not important"

variables and let Y be our dependent dummy variable which is equal to 1 if the respondent does unpaid activities. It is assumed that the probability of participating in volunteering activities depends on the set of explanatory variables as follows:

$$P(Y = 1|\mathbf{X}) = G(Z) = \frac{\exp(Z)}{1 + \exp(Z)}, \tag{5.1}$$

where Z is given by:

$$\begin{aligned} Z \;=\; & \beta_0 + \beta_1 Inc\_med + \beta_2 Inc\_high + \beta_3 Edu\_med + \beta_4 Edu\_high + \beta_5 Emp\_ptime + \\ & \beta_6 Emp\_semp + \beta_7 Emp\_ret + \beta_8 Emp\_hwife + \beta_9 Emp\_stud + \beta_{10} Emp\_unem + \\ & \beta_{11} Emp\_oth + \beta_{12} Age + \beta_{13} Age2 + \beta_{14} Female + \beta_{15} Town\_medsm + \beta_{16} Town\_medlrg + \\ & \beta_{17} Town\_lrg + \beta_{18} Hous5^{-} + \beta_{19} Hous5^{-}12 + \beta_{20} Hous13^{-}17 + \beta_{21} Hous18^{+} + \\ & \beta_{22} MS\_livto + \beta_{23} MS\_dvr + \beta_{24} MS\_sep + \beta_{25} MS\_wid + \beta_{26} MS\_sng + \\ & \beta_{27} Sat\_med + \beta_{28} Sat\_high + \beta_{23} Cont\_med + \beta_{24} Cont\_high + \beta_{25} Rlig\_rather + \\ & \beta_{26} Rlig\_notsoim + \beta_{27} Rlig\_unimpor + \delta_1 Country_1 + \cdots + \delta_{30} Country_{30} \end{aligned} \tag{5.2}$$

Since $G(Z)$ is a non-linear function, the impact of a change in the explanatory variable x_k in the probability of volunteering is not equal to β_k. Let $P(\mathbf{X}) = P(Y = 1|\mathbf{X}) = G(Z)$, then the impact on $P(\mathbf{X})$ of an infinitesimal increase in variable x_k is given by:

$$\begin{aligned} \frac{\partial P}{\partial x_k} &= \frac{dG}{dZ}\frac{\partial Z}{dx_k} = \frac{\exp(Z)}{[1 + \exp(Z)]}\left[1 - \frac{\exp(Z)}{[1 + \exp(Z)]}\right]\beta_k \\ &= \frac{\exp(Z)}{[1 + \exp(Z)]^2}\beta_k \end{aligned}$$

For dummy variables the impact of changing x_k from 0 to 1 is given by the difference between G evaluated at $x_k = 1$ and G evaluated at $x_k = 0$, maintaining the values of the remaining variables. Notice that, in both cases, the sign of the impact is equal to the sign of the coefficient associated with the variable, β_k. However the magnitude of the impact depends on the value of Z, and thus depends on the value of all explanatory variables.

In terms of interpretation it is sometimes useful to look at the odds ratio or relative probability (the ratio of the probability of volunteering to the probability of not volunteering). From

equation (5.1) it is easy to show that:

$$\frac{P}{1-P} = \exp(Z)$$

If we compare the odds ratio for two individuals, i and j, who are identical except in the k characteristic, then

$$\frac{P_i/(1-P_i)}{P_j/(1-P_j)} = \exp\left(\beta_k \left(x_{ik} - x_{jk}\right)\right).$$

Moreover, if $x_{ik} - x_{jk} = 1$, i.e. there is a unit change in x_k, then $\frac{P_i/(1-P_i)}{P_j/(1-P_j)} = \exp(\beta_k)$. The exponentiated coefficient $\exp(\beta_k)$ is called the *odds ratio*. Note that their interpretation is particularly useful for dummy variables. For a dummy variable, the odds ratio tells us that, controlling for the remaining explanatory variables, an individual having a given characteristic (dummy equal to 1) has a relative probability of engaging in volunteering activities which is $\exp(\beta_k)$ times the relative probability of volunteering for an individual not having that characteristic (dummy equal to 0).

Table 5.2 presents the results of the logist regression. Overall the results show that the model has the explanatory power and that all categorical and scale variables are significant.

All *socioeconomic variables* are statistically significant at the 1% level, suggesting that they have a significant impact on the volunteering decision. Regarding income our results show that both medium-income and high-income individual have an higher probability of being involved in unpaid work than low-income individuals (the reference category). Moreover, since the coefficient associated with high-income is higher than the one associated with medium-income, our results suggest that the probability of participating in volunteering activities is increasing with income. This findings are consistent with the results obtained by Schady (2001) and Menchik and Weisbrod (1987).

The variable education also has a positive and statistically significant impact on the probability of participation in volunteering activities. Both medium and high education level individuals have higher probability of volunteering than low education individual and the value of the coefficient is larger for highly educated individuals. In fact, the relative probability of a high education individual volunteering is 2.3 times ($e^{0.856}$) the relative probability of a low education individual volunteering whereas the corresponding figure for a medium education individual is 1.5. This

Table 5.2: Results of logistic regression explaining the probability of doing unpaid work.

Variable	Coefficient	Wald	Variable	Coefficient	Wald
Income		17.359***	Age	0.042***	24.017
Inc_med	0.190***	13.321	Age2	–0.0004***	18.084
Inc_high	0.224***	15.367	Female	-0.328***	65.182
Education		241.271***	Town		47.190***
Edu_med	0.390***	66.597	Town_medsm	0.015	0.061
Edu_high	0.856***	240.511	Town_medlrg	-0.234***	13.204
Employment		56.733***	Town_large	-0.288***	21.441
Emp_ptime	0.196***	7.143	Hous5^{-}	–0.114***	8.137
Emp_slemp	0.131	2.631	Hous5^{-}12	0.066**	4.959
Emp_ret	–0.060	0.630	Hous13^{-}17	0.106***	9.356
Emp_hwife	–0.012	0.020	Hous18^{+}	0.035*	2.765
Emp_stud	0.452***	23.575	Marital Status		12.685**
Emp_unem	–0.371***	15.758	MS_livto	–0.573***	8.120
Emp_oth	–0.152	1.078	MS_dvr	0.030	0.151
Life Satisfaction		49.198***	MS_sep	0.135	0.765
Sat_med	0.215***	6.631	MS_wid	–0.081	0.836
Sat_high	0.475***	29.867	MS_sng	0.072	1.387
Choice & control		13.315***	Country		540.733***
Cont_med	0.268***	10.015	Constant	–3.710***	196.947
Cont_high	0.319***	13.289			
Religion import.		150.363***			
Rlig_rather	-0.350***	37.422	Omnibus test (Chi-Sq)	1728.5	p-val 0.000
Rlig_ nosoim	-0.603***	102.146	Hosmer &Lemeshow (Chi-Sq)	6.167	p-val 0.629
Rlig_unimpor	-0.753***	132.362	Number of observations		18374

suggests that the volunteering probability is increasing with the level of education. The fact that individual with more education volunteer more might be explained by the phenomenon called by Smith (1981) as "*general activity syndrome*" which means that "individual who engage in a form of socio-culturally valued behavior has tendency to engage in other types of socio-culturally valued behavior too. Education plays a central role to make individual incorporate the societal values and follow the societal norms in their behavior" Thus our results are consistent with previous findings in the literature (Freeman, 1997; McPherson and Roltolo, 1996; Herzog and Morgan, 1993; Brady *et al.*, 1999).

With respect to the *employment status* our results show that it is a significant variable but not all the categories show significant differences relatively to the full time employment category. Students have an higher probability of volunteering than full time employed. This fact may be related with time availability and the possibility to acquire skills and competencies which might be useful in the market place and it confirms Ziemek (2003). The availability of time may explain that the individuals employed in part time also have an higher probability of volunteering than full time employed. On the other hand, unemployed have a statistically significant lower probability of volunteering. In our opinion the self esteem problem which many times is verified among unemployed individuals may explain the lower probability of participating in voluntary activities by unemployed people The remaining categories (self-employed, retired and housewives) do not show a statistically significant difference with respect to the full employed.

Let us now analyze the *demographic variables*. The variables age and age squared are both statistically significant. Since the coefficient associated with age squared is negative, the relationship between age and probability of participating in volunteering activities is a concave one. At first volunteering increases with age but, after a certain age, volunteering starts to decrease with age. In our case, controlling for the remaining variables, the probability of volunteering is maximal at 53 years of age. These results are very similar to the ones obtained by Herzog *et al.* (1993) and Menchikand Weisbrod (1987).

The impact of gender is statistically significant at the 1% level. Our regression shows that the relative probability of a female volunteering is 72% of the relative probability of a male volunteering. This result contradicts previous findings by Gaskin and Smith (1997) and Hodgkinson and Weitzman (1996).

The *size of the town* is a statistically significant variable at the 1% level. Our results show

that if an individual lives in a large town (over 100.000 inhabitants)) or in a medium-large town (between 20000 and 100.000 inhabitants) he/she has lower probability of being volunteer than individuals who live in small town (till 2.000 inhabitants). On the other hand, there does not exist a significant difference between living in a medium-small town and a small town. These results are consistent with Wuthnow (1989) findings on this issue. The size of town influences the availability of many social infrastructures and institution which provide some services like cultural or sports services. In smaller places is rather frequent that these kind of services are operated by associations functioning basically with volunteer work.

Considering *marital status* our results reveal that individuals who live together as married have lower probability of being volunteers than married individuals. On the other hand, there does not exist a statistically significant difference between divorced, separated, single, widowed people and married people in their propensity to volunteer. On this issue we do not confirm the Sundeen (1990) and Freeman (1997) result that single people are less likely to volunteer.

Regarding the *number of children*, our results show that increasing the number of children below 5 has a negative impact on the probability of volunteering. On the contrary, increasing the number of children above 5 increases the propensity to volunteer. Thus the impact of the number of children in the household depends a lot on the age of the children. For younger children, the reduction in the time available leads to lower participation in volunteering whereas for school-aged children the increase in the social-network implies an higher propensity for volunteering. Our results are similar to previous ones (Damico *et al.,* 1998; Menchik and Weisbrod, 1987; Schlozman *et al.,* 1994).

The *attitudinal characteristics* have a significant influence on the probability of volunteering. An higher level of satisfaction with life is positively associated with participation in volunteering activities. Similarly, individual who feel that they have a high level of choice and control over their lives also have an higher propensity to volunteer. These findings are consistent with House (1988) and Fischer and Schaffer (1993) results. Finally, the effect of religion is positive. The higher the importance given to religion by the individual, the more likely he/she is to do volunteer work.

Our regression also included country dummy variables to control for country specific effects. The coefficients associated with the country dummies and the corresponding Wald statistics are presented in Table 5.3. Recall that the reference country is Austria, thus we are comparing the

intercept term for each country with respect to Austria.

Table 5.3: Coefficients of country dummies in logistic regression of unpaid work.

Variable	Coefficient	Wald	Variable	Coefficient	Wald
Country		540.733***	Lithuania	–0.756***	28.594
Belgium	0.207**	3.965	Luxembourg	–0.002	0.000
Bulgaria	–0.392***	8.326	Malta	–0.407***	8.225
Belarus	–0.273**	4.428	Netherlands	0.873***	61.533
Croatia	–0.613***	24.320	Poland	–1.224***	23.606
Czech Rep.	0.330***	10.792	Portugal	–1.299***	12.567
Denmark	0.422***	14.384	Romania	–0.805***	10.586
Estonia	–0.384***	9.022	Russian Fed.	–1.753***	36.472
Finland	0.592***	26.438	Slovakia	1.117***	49.900
France	0.153	1.988	Slovenia	0.020	0.006
Germany	–0.280	2.379	Spain	–1.267***	15.593
Hungary	–0.541***	17.109	Sweden	1.441***	10.201
Iceland	–0.021	0.037	Ukraine	–1.523***	13.811
Irland	–0.090	0.572	Great Britan	not estim.	
Italy	–0.152	2.055	North Irland	–0.339	0.723
Latvia	–0.132	1.139			

An overall look to the country dummies significance shows that controlling for country specific effects is really relevant. As a whole the country variables have a Wald statistic equal to 540.7 and hence are strongly significant. Next we analyze the impact of each country dummy.

First, one can conclude that the individuals from former socialist countries (Bulgaria, Belarus, Croatia, Estonia, Hungary, Lithuania, Poland, Romania, Russian Federation and Ukraine) are less likely to do unpaid work than individuals from Austria (the coefficients are all negative and statistically significant). Latvia and Slovenia also have negative coefficients but they are not statistically significant suggesting that, for given levels of the remaining variables, these countries do not differ much from Austria in their volunteering propensity.

As it was mentioned before, there are some reasons for the small participation rate in post-socialist countries: the lack of tradition transmitted from generation to generation; the relative poverty, implying that more energy is spent in satisfying the basic needs; the low social sensitivity; and the perception about the capacity for social acting.(Gocko 2006)

In the *Latin countries*, France and Italy do not show statistically significant differences with respect to Austria. On the other hand, individuals from Portugal and Spain have lower propensity to be volunteers than the individuals from Austria. One reason for the low volunteering propensity in the Iberian countries is the relatively small associative activities due the 20th century dictatorships which limited all those activity except the ones which were controlled by the state.

The individuals from *Scandinavian countries* except Iceland (Denmark, Finland, and Sweden) have higher propensity to volunteer than Austrians. A similar result holds for individuals from Belgium, Netherlands and Slovakia. The strengthened European and Scandinavian model of social economy places expectations of voluntary social work in nonprofit organizations, church and church associations. According to the latest studies (Karjalainen and Saranpää, 2002), in Finland the large part of the work dealing with social problems of the citizens is covered with voluntary associations and activities.

To summarize, our results show significant differences across countries regarding the propensity to volunteer. These differences are linked with the socioeconomic, political and cultural environment in which the volunteering institutions function and which may influence the volunteering activities. For example, compulsory voting and service requirements can be argued to influence civic activity and yet also question the voluntary nature of volunteering (Tuan, 2005). Different welfare models are connected to the societal needs and requirements for individual participation and the role of the third sector in each society. In general, policies regarding civil society differ to a great extent in the countries covered, and the effect of this in the voluntary activity is central.

Comparing our findings about the volunteer activity across Europe with the Global Cultural Map arranged by World Values Surveys and based on some dimensions of cross-cultural variation((1) Traditional/Secular rational and (2) Survival/Self-expression values), we found a lot of consistency applied to the volunteering activity.

5.5 Volunteering decision for various types of volunteer activities

In this section we investigate whether the determinants of volunteering are the same for the various types of volunteering activities. To do so we start by reducing the number of volunteer activities to the most important types of volunteering activities. Using principal component analysis we identify four different types of volunteering types that explain most of the underlying variability. For each type of volunteering activity, we then define a dummy variable indicating whether the individual participated or not in that type of activity. Finally we run four separate logistic regressions, one for each type of volunteering activity.

5.5.1 Principal component analysis

The questionnaire considers 14 types of unpaid work and it would be difficult to compare all of them. Thus we wonder if it is possible to divide these different types of volunteering according to some common characteristics. To answer this question we use principal component analysis. Using the oblimin rotation method with Kaiser normalization and excluded cases listwise, we obtained 4 components (see Table 5.4).

Bartlett's test of sphericity indicates whether the correlation matrix is an identity matrix, which would indicate that variables are unrelated. We clearly reject the null hypothesis that the correlation matrix is an identity matrix ($p - value < 0.001$). The Kaiser-Meyer-Olkin measure is a statistic that indicates the proportion of variance in the variables that might be explained by underlying factors. The value of 0.815 indicates a good adequacy. Table 5.4 shows the correlations between the variables and the factors, with values less than 0.3 deleted.

The first component aggregates the following variables:

- "Unpaid work local political action groups"
- "Unpaid work human rights"
- "Unpaid work peace movement"
- "Unpaid work environment, conservation, animal rights",

Table 5.4: Results of principal component analysis for types of unpaid work.

	Component			
Type of unpaid work	1	2	3	4
Peace movement	0.681			
Human rights	0.660			
Environment, conservation and animal rights	0.639			
Local politic action groups	0.485			
Labour unions		0.769		
Political parties or groups		0.667		
Professional associations		0.481		
Sports or recreation			0.706	
Youth work			0.647	
Education, arts, musics or cultural activities			0.507	
Religious or church organizations				0.737
Social welfare service for elderly, handic. or depriv. people				0.603
Woman's group				0.457
Organization concerned with health				0.316
Principal component analysis, oblimin with Kaiser norm.				
Kaiser-Meyer-Olkin Measure of Sampling Adequacy	0.815			
Bartlett's Test of Sphericity (Chi-square)	20537.7	p-value	0.000	

This component captures unpaid activities related to "social awareness volunteering". We created a binary variable with the same name, which takes the value 1 if the individual does at least one type of unpaid work in this group, and takes the value 0 otherwise. People who participate in this type of activities are not likely to receive direct benefits but they are concerned with general and comprehensive social issues. That is why we have chosen the name "social awareness".

The second component aggregates the following variables:

- Unpaid work labour unions
- Unpaid work political parties or groups
- Unpaid work professional associations

This component captures activities that might be more related with personal interests and

that may provide direct benefits to the people who engage in these activities. We called this component "professional and political volunteering" and defined a binary variable with the same name. This variable is equal to 1 if the individual did at least one type of unpaid work in this group and is equal to 0 otherwise.

The third component aggregates the following variables:

- Unpaid work education, arts, music or cultural activities
- Unpaid work youth work
- Unpaid work sports or recreation

This component also captures activities that may benefit directly the volunteer, but more related with cultural and recreational activities. We called it "education and leisure volunteering" and created another binary variable with the same name. The value "1" represents situations where the individuals does at least one type of unpaid work in this group and takes the value "0" otherwise.

The fourth component aggregates the following variables:

- "Unpaid work social welfare service for elderly, handicapped or deprived people"
- "Unpaid work religious or church organization"
- "Unpaid work women's group"
- "Unpaid work organization concerned with health"

Like the first component, this kind of unpaid work is not likely to generate direct benefits for the volunteer. Since this work is related with concerns about the underprivileged/disadvantaged people we decided to call this component "social justice volunteering". We created a binary variable with the same name. This variable takes the value 1 when the individual participated in at least one type of volunteer work in this group and it is equal to 0 otherwise.

5.5.2 Logistic model for various types of volunteering work

In this subsection we use logistic regression for each one of the four types of volunteering work identified in the previous subsection. The explanatory variables are the same than the ones

used for unpaid work in general (see Table 5.1). We are interested in identifying the major determinants for each type of volunteering work and the main differences between the various types of volunteer work. The results of the four logistic regressions are presented in Table 5.5.

An overall look to the results in Table 5.5 allows us draw some general conclusions. First, all estimated models present a strong overall significance as indicated by the Omnibus Tests. In fact, the null hypothesis that all coefficients are equal to zero is clearly rejected (the p-value of 0.000 is a sign that the model is statistically significant for any significance level). To test goodness of fit we also used the Hosmer and Lemeshow test. At each step, this is a goodness-of-fit test of the null hypothesis that the model adequately fits the data. As the significance of the test is big (i.e., greater than 0.05) then the model is adequate to fit the data. Second, the set of variables which are statistically significant varies across the four regressions, indicating that the set of determinants of volunteering depends on the type of volunteering activity. There are only two variables that are statistically significant for all the four types of volunteering activity: education and country. This supports the view that education is the most consistent predictor of volunteering and shows that country differences are prevalent for all types of volunteering.

Let us now analyze in greater detail the determinants of each type of volunteering activity. The statistically significant variables for "social awareness volunteering" are: education, age, age squared, size of town, marital status, level of choice and control, religion and country. On the contrary, it is quite interesting to note that level of income, gender, number of children in the household and level of satisfaction with life do not have a significant impact on the propensity for "social awareness volunteering".

The impact of education, age, level of choice and control and religion is similar, in qualitative terms, to the one for volunteering in general. In fact, the probability of doing social awareness volunteer activities increases with the level of education; the influence of age follows an inverted U pattern with the maximum occurring at 37.5 years of age; and the propensity for social awareness volunteering increases with the level of control and choice and the importance of religion for the individual.

On the contrary, the impact of marital status and the size of the town show some interesting differences. For example, single and separated individuals have higher propensity for social awareness volunteering than married people. It is also interesting to note that individuals living in medium-large and in large towns have lower probability of engaging in social awareness

Table 5.5: Results of logistic regressions for the various types of volunteer work.

Explanat. variable	Social awareness	Social justice	Prof. & Political	Educ. & Leisure
Inc_med	-0.025	0.092	0.252**	0.268***
Inc_high	0.040	0.043	0.384***	0.331***
Edu_med	0.408***	0.358***	0.303***	0.443***
Edu_high	0.833***	0.646***	0.931***	0.912***
Emp_ptime	0.195	0.214**	-0.352**	0.437***
Emp_slemp	0.249*	0.160	0.208*	0.204***
Emp_ret	-0.051	0.168	-0.622***	0.104
Emp_hwife	0.085	0.184	-1.418***	-0.071
Emp_stud	0.417**	0.341	-0.147	0.557***
Emp_unem	-0.101	-0.217	-0.686***	-0.230*
Emp_oth	0.157	0.164	-0.363	-0.548**
Age	0.03**	0.078***	0.078***	0.009
Age2	-0.0004***	-0.0007***	-0.0007***	0.0002
Female	-0.118	0.239***	-0.540***	-0.576***
Town_medsm	-0.002	-0.042	0.142	0.035
Town_medlrg	-0.399***	-0.272***	0.002	-0.210**
Town_large	-0.259**	-0.223**	-0.006	-0.357***
Hous5^{-}	-0.047	-0.003	-0.084	-0.164***
Hous5^{-}12	0.054	0.021	-0.041	0.139***
Hous13^{-}17	0.027	0.143***	0.140**	0.169***
Hous18^{+}	0.050	0.030	-0.018	0.055**
MS_livto	0.444	0.302	-0.723	-0.423*
MS_dvr	0.269	0.109	-0.017	0.059
MS_sep	0.575**	0.219	-0.260	1.151
MS_wid	-0.238	0.117	-0.152	-0.317**
MS_sng	0.298**	0.090	-0.116	0.104
Sat_med	0.190	0.082	0.226	0.299**
Sat_high	0.333*	0.309**	0.369**	0.611***
Cont_med	0.411**	0.203*	0.270	0.331***
Cont_high	0.434**	0.266**	0.225	0.440***
Rlig_rather	-0.337***	-0.845***	0.025	0.055
Rlig_nosoimp	-0.466***	-1.535***	-0.034	-0.086
Rlig_noimpor	-0.586***	-1.899***	-0.179	0.246***
Constant	-5,108***	-4.192***	-5.229***	-2.971***
Omnibus Test (Chi-sq)	422.96; pv:0.000	1333.13; pv:0.000	751.62; pv:0.000	103-22.51; pv:0.000
Hosme&Lameshow	7.835 pv:0.450	9.143pv:0.330	8.247 pv:0.410	20.508 p-val:0.075
Number of observat.	15553	15553	15553	15 553

volunteering than individuals living in small town, but individuals living in medium-small towns do not show relevant differences with respect to individuals living in small towns. Although for volunteering in general living in a small town increases the propensity to volunteer.

Regarding "social justice volunteering" the main determinants are: education, employment status, age, age squared, gender, size of town, number of children between 13 and 17, level of choice and control, religion and country. On the contrary, income, number of children below 5, number of children between 5 and 12, number of children above 18, marital status and level of satisfaction with life do not have a significant impact on this type volunteering.

The impact of gender on social justice volunteering is precisely the opposite of volunteering in general. The relative probability of a female doing social justice volunteering is about 27% higher than the male relative probability ($e^{0.239} = 1.27$). On the other hand, the impact of the remaining significant variables is precisely the same in qualitative terms than for volunteering in general. However it is worth mentioning that the propensity for social justice volunteering seems to be much more sensitive to the individual attitude towards religion. Controlling for the remaining variables, the odds ratio for an individual who considers religion very important is 6.7 times ($e^{1.899}$) the odds ratio of an individual who considers that religion is not important at all (for volunteering in general the corresponding figure is only 2.1). The age for which the propensity for social justice volunteering reaches a maximum is 55.7.

Concerning "professional and political volunteering" the statistically significant variables are: income, education, employment status, age and age squared, gender, number of children between 13-17, and country. Income and education have a positive impact on the propensity for professional and political volunteering. It worth mentioning that this type of volunteering is particularly sensitive to changes in these two variables. The impact of age follows a quadratic relationship similar to the one for volunteering in general. Gender also has a strong effect on the probability of professional and political volunteering. In this type of volunteering, the relative probability of a female volunteering is only 58% of the relative probability of a male volunteering. The other very important variable is employment status. Part-time employed, retired people, housewives and unemployed all have significantly lower probability of being involved in professional and political volunteering than full-time employed. This result is quite natural since people more involved in professional activities are also more likely to be engaged in the volunteering activities related with labour and professional issues.

It is interesting to note that professional and political volunteering is not affected by attitudinal characteristics, such as satisfaction with life, the level of control and choice or the importance of religion. In addition the size of the town, the number of children (except between 13-17) and the marital status are also not relevant to explain the propensity for professional and political volunteering.

The analysis of the education and leisure volunteering regression reveals that this type of volunteering is influenced in a significant manner by all our explanatory variables, expect age. For most variables, the impact is similar, in qualitative terms to the one described for volunteering in general (income, education, gender, size of town, number of children, satisfaction with life, choice and control, importance of religion). However, it should be noted that this type of volunteering is more sensitive than volunteering in general to education, gender, life satisfaction and choice and control.

The impact of the employment status on education and leisure volunteering shows some interesting differences with respect to the case of volunteering in general. Self employed, part-time employed and students individuals all have a significantly higher probability of engaging in education and leisure volunteering than full employed individuals, a pattern which is not observed for others types of volunteering. Similarly, the impact of the marital status also has some interesting features. Widowed and living together as married individuals have a much lower propensity for education and leisure volunteering than married people.

The impact of the country dummy variables on each type of volunteering is presented in Table 5.6. The countries are divided into four groups depending on whether they have a positive and statistically significant impact; a positive but not significant impact; a negative but not statistically significant impact; and a negative and statistically significant impact. As in the case of general volunteering one can conclude that it is very important to take into account country differences in the probability of volunteering for each of the four types of volunteering.

There are only two countries that show higher propensity for volunteering than Austria for all types of volunteering: Slovakia and Great Britan. Similarly, only Lithuania has a negative and statistically significant difference with respect to Austria for all types of volunteering. For the remaining countries, their position with respect to Austria depends on the type of volunteering activities. In spite of this, one can identify countries which, in general, have higher (or lower) propensity for volunteering. For example, Netherlands has an higher propensity for

volunteering than Austria, except for professional and political volunteering, while Latvia has a lower propensity for volunteering than Austria, except for education and leisure volunteering.

5.6 Conclusion

In this chapter we investigated the factors that influence the decision of volunteering. We started by identifying the set of explanatory variables which have been considered in previous studies analyzing the decision to participate in volunteering activities. In our study we decided to include a set of socioeconomic variables, a set of demographic variables and a set of attitudinal variables. In addition, we included country dummy variables to control for the influence of country-specific effects. Then we estimated logistic regressions to analyze which of the explanatory variables have a significant impact on the probability of engaging in volunteering activities. The regression analysis was divided into two parts. In the first part we analyzed the determinants of volunteering in general. In the second part we identified four major types of volunteering and ran separate logistic regressions so as to understand the determinants of each type of volunteering.

The results of the logistic regression explaining the probability of volunteering in general confirm most results in previous studies. For example, education and income have a positive effect on the propensity for volunteering. The influence of age on the probability of volunteering has an inverted U shape, with the maximum propensity for volunteering occurring around fifty three years of age. As the number of children increases, the propensity for volunteering also increases, except for the case of very young children (below 5) where the opposite is true. Employment status as well as marital status also influence the probability of volunteering.

For volunteering in general the most novel contributions of our study are the inclusion of attitudinal characteristic as determinants of volunteering and the study of country effects. Our results show that the level of choice and control, the level of satisfaction with life and the importance given to religion are all important factors in explaining the probability of volunteering. In addition, our results suggest that there are large country differences regarding the propensity for volunteering. Thus, in studies dealing with data from several countries, one needs to control for country specific effects.

The second part of this chapter also provides a very interesting contribution. Previous studies have analyzed the determinants of volunteering in general, as we did in the first part of

this chapter. However, different types of volunteering are likely to have a different set of determinants. Identifying the set of determinants for each major type of volunteering activity was precisely our objective in the second part of this chapter. Our results clearly indicate that the set of determinants of the propensity for volunteering is not the same for all types of volunteering. Moreover the sign and magnitude of the impacts of each explanatory variables varies according to the type of volunteering activity. For instance, males have higher propensity than females to engage in professional and political volunteering as well as in educational and leisure volunteering but the opposite holds for social justice volunteering. Giving more importance to religion generally affects positively the propensity for volunteering, but in the case of professional and political volunteering the attitude towards religion seems to be irrelevant. Another interesting example of differences between types of volunteering is the case of income. Income influences positively professional and political volunteering as well as education and leisure volunteering but has no effect on social awareness and social justice volunteering. Overall, these results suggest that it is important to study separately each type of volunteering as there are significant differences across the various types of volunteering.

Table 5.6: Country effects for the various types of volunteer work.

Variable impact	Social awareness	Social justice	Profess. & Political	Education & leisure
Positive and significative effect	Belgium 0.63*** Finland 0.39* Luxemburg 0.91*** Netherlands 0.66** Slovakia 0.87*** Gr. Britain 2.156***	Netherlands 0.74*** Slovakia 0.71*** Sweden 2.13*** Gr. Britain 2.57*** N Ireland 0.70*	Slovakia 0.74*** Gr. Britain 2.14***	Czech R 0.37*** Denmark 0.37*** Finland 0.41* Netherlands 0.93** Slovakia 0.63*** Sweden 1.19** Gr. Britain 1.49***
Positive but not significative effect	Czech R 0.27 Denmark 0.30 Italy 0.10 Malta 0.02 Slovenia 0.30 Sweden 1.04	Belgium 0.11 Finland 0.49 Iceland 0.13 Luxemburg 0.24	Bulgaria 0.16 Belarus 0.02 Denmark 0.11 Finland 0.18 Italy 0.002 Malta 0.06 Romania 0.35 Slovenia 0.25 Sweden 0.55	Belgium 0.08 France 0.18 Ireland 0.06 Luxemburg 0.15
Negative but not significative effect	Bulgaria -0.40 Belarus -0.05 Estonia -0.29 France -0.24 Hungary -0.16 Ireland -0.0003 Poland -0.75 Portugal -1.63 Romania - 0.94 Russian F -18.06 Spain -18.04 Ukraine -1.42 N. Ireland -18.34	Czech Rep.-0.2 Denmark - 0.17 France -0.11 Germany -0.004 Hungary -0.10 Ireland -0.23 Italy -0.13 Spain -0.50	Belgium -0.26 Croatia -0.10 Czech Rep. -0.04 Iceland -0.08 Ireland -0.19 Luxembourg -0.19 Netherlands -0.16 Portugal -18.48 Ukraine -0.41 N Ireland -0.2	Estonia -0.24 Germany -0.07 Iceland -0.04 Italy -0.20 Latvia -0.17 Slovenia -0.08 Ukraine -19.33
Negative and significative effect	Croatia -0.516** Germany -0.76* Iceland -0.54** Latvia -0.50* Lithuania -1.05***	Bulgaria -1.01*** Belarus -0.31* Croatia-0.60*** Estonia -0.34* Latvia -0.62*** Lituania-1.04*** Malta -0.41** Poland -1.50*** Portugal -1.11** Romania -1.78*** Russian F.-2.72*** Slovenia -0.76*** Ukraine - 2.68***	Estonia-0.89*** France -0.82*** Germany -2.11*** Hungary -0.97*** Latvia -0.67*** Lithuania -0.69*** Poland -0.76* Russian F.-1.49*** Spain -1.03*	Bulgaria -0.88*** Belarus -1.07*** Croatia -0.73*** Hungary -0.77*** Lithuania -1.04*** Malta -0.61*** Poland -2.21*** Portugal -0.97** Romania -1.61*** Russian F.-1.91*** Spain -0.85*** N. Ireland -2.16**

Chapter 6

Volunteering in different types of activities – how much interdependency?

6.1 Introduction

In the last chapter we studied the volunteering decision for the various types of volunteering activities. In that analysis we considered the decision to participate in a given type of volunteering decision as an isolated decision. However it is more adequate to view the decision to volunteer in the various types of volunteering as being interrelated. The objective of this chapter is to analyze the interdependencies between the decisions of participating or not in the various types of volunteering activities. In this chapter we consider two different ways of modelling these interdependencies. First, we consider a model where the decision to be a volunteer in one type of volunteering may influence the decision to do other types of volunteering. We estimate the reduced form of this model using multivariate probit estimation. Secondly we model the volunteering decision as a choice between multiple mutually exclusive alternatives and investigate how changing the independent variables affects the probability of choosing each one of the alternatives. This model is estimated using the multinomial logit regression. Like in the previous chapter we use the 4th wave of the European Value Survey in our estimations.

The chapter is organized as follows. In the next section we present an exploratory analysis

of the degree of association between the various types of volunteering. In Section 6.3 we present and discuss the results of the multivariate probit model. Section 6.4 presents the multinomial logit regression for explaining the probability of participating in each type of volunteering or in multivolunteering, including the estimation of the corresponding marginal effects. Finally, Section 6.5 concludes the chapter.

6.2 Preliminary analysis of the association between types of volunteering

As mentioned above, this chapter analyzes the relationship between the different types of volunteering using two modelling strategies. Before presenting these two models, it is interesting to explore the connection between the different types of volunteering using simple descriptive statistics tools: frequency tables and contingency tables.

Table 6.1 presents the frequencies for the number of types of volunteering performed (considering the four types of volunteering identified in the previous chapter). The table shows that 63.3% of individuals did not participate in any volunteering activity whereas 24.8% participated in only one type of volunteering. However there are also 11% of the individuals in the sample who participated in more than one type of volunteering activities.

Table 6.1: Distribution of the number of types of volunteering performed.

Number of types of volunteering	Frequency	%
Does not volunteer	14402	63.3
Participates in 1 type of volunteering	5650	24.8
Participates in 2 types of volunteering	1824	8.0
Participates in 3 types of volunteering	635	2.8
Participates in 4 types of volunteering	232	1.0
Total	22743	100

In our exploratory analysis we also estimated the degree of association between the different types of unpaid work. Since the volunteering variables are binary variables, it is not correct to compute the Pearson correlation coefficient. One alternative is to compute the association measure and test the independence between pairs of volunteering types using the Chi-Squared test. Table 6.2 presents the results.

Table 6.2: Association measures and tests of independence between types of volunteering.

	Social Awareness	Political & Professional	Educational & Leisure	Social Justice
Social Awareness	-	60.3%	64.6%	68.1%
Chi-sq test	-	820.67	896.67	1486.99
Political & Professional	60.3%	-	56.9%	56.1%
Chi-sq test	820.67	-	828.56	590.35
Educational & Cultural	64.6%	56.9%	-	58.8%
Chi-sq test	896.67	828.56	-	660.67
Social Justice	68.1%	56.1%	58.8%	-
Chi-sq test	1486.99	590.35	660.67	-

In all pairs we have more than 50% of matching cases. The chi-square tests have all p-values below 0.001. Thus we can clearly reject the null hypothesis of independence for all pairs of volunteering work.

In the next section we present an econometric model in which we analyze the decision to be a volunteer in each type of volunteering, where the types of volunteering are latent variables which are interdependent, as our exploratory analyses suggests.

6.3 Multivariate probit analysis

Let us consider a model to explain the following latent variables: propensity to do social awareness volunteering (y_1^*), propensity to do professional and political volunteering (y_2^*), propensity to do educational and leisure volunteering work (y_3^*) and propensity to do social justice volunteering (y_4^*). We assume that these latent variables are influenced by a set of exogenous variables but they are also interrelated. In other words the propensity to do a certain type of volunteering influences the propensity to do other types of volunteering. The structural model can be described as follows:

$$\begin{cases} y_1^* = \mathbf{X}'\boldsymbol{\alpha}_1 + \mathbf{X}_1'\boldsymbol{\beta}_1 + \gamma_{1,2}y_2^* + \gamma_{1,3}y_3^* + \gamma_{1,4}y_4^* + \varepsilon_1 \\ y_2^* = \mathbf{X}'\boldsymbol{\alpha}_2 + \mathbf{X}_2'\boldsymbol{\beta}_2 + \gamma_{2,1}y_1^* + \gamma_{2,3}y_3^* + \gamma_{2,4}y_4^* + \varepsilon_2 \\ y_3^* = \mathbf{X}'\boldsymbol{\alpha}_3 + \mathbf{X}_3'\boldsymbol{\beta}_3 + \gamma_{3,1}y_1^* + \gamma_{3,2}y_2^* + \gamma_{3,4}y_4^* + \varepsilon_3 \\ y_4^* = \mathbf{X}'\boldsymbol{\alpha}_4 + \mathbf{X}_4'\boldsymbol{\beta}_4 + \gamma_{4,1}y_1^* + \gamma_{4,2}y_2^* + \gamma_{4,3}y_3^* + \varepsilon_4 \end{cases}$$

where $\mathbf{X}$, $\mathbf{X}_1$, $\mathbf{X}_2$, $\mathbf{X}_3$, $\mathbf{X}_4$ are vectors of exogenous variables. The vector $\mathbf{X}$ includes all explanatory variables that influence the propensity to do all types of volunteering work ($\mathbf{X}$ includes the constant), while the variables in $\mathbf{X}_1$, $\mathbf{X}_2$, $\mathbf{X}_3$, $\mathbf{X_4}$ only affect the propensity to do social awareness volunteering, professional and political volunteering, educational and leisure volunteering and social justice volunteering, respectively. In this model the propensity to do a type of volunteer work might be influenced by the propensity to do another type. The error terms ε_1, ε_2, ε_3 and ε_4 are not correlated. In order for this structural form to be identifiable, one would need to have at least 3 exogenous variables that are excluded from each equation, and that can be used as instruments for the endogenous variables included in that equation. However, for volunteering, it is hard to identify exogenous variables that affect one type of volunteering but not the others. As a consequence it is not possible to estimate the structural form of the model.

The propensities to do social awareness volunteering, professional and political volunteering, educational and leisure volunteering and social justice volunteering are unobservable variables. However we observe whether the individual does a given type of volunteer work or not. We assume that:

$$y_i = \begin{cases} 1 \text{ if } y_i^* > 0 \\ 0 \text{ if } y_i^* < 0 \end{cases}$$

If we solve the structural model with respect to the endogenous variables (y_1^*, y_2^*, y_3^* and y_4^*) we get the reduced form of the model where the endogenous variables are expressed as a function of the exogenous variables and the reduced form errors.

$$\begin{cases} y_1^* = \mathbf{X}'\lambda_{1,0} + \mathbf{X}_1'\boldsymbol{\lambda}_{1,1} + \mathbf{X}_2'\boldsymbol{\lambda}_{1,2} + \mathbf{X}_3'\boldsymbol{\lambda}_{1,3} + \mathbf{X}_4'\boldsymbol{\lambda}_{1,4} + u_1 \\ y_2^* = \mathbf{X}'\lambda_{2,0} + \mathbf{X}_1'\boldsymbol{\lambda}_{2,1} + \mathbf{X}_2'\boldsymbol{\lambda}_{2,2} + \mathbf{X}_3'\boldsymbol{\lambda}_{2,3} + \mathbf{X}_4'\boldsymbol{\lambda}_{2,4} + u_2 \\ y_3^* = \mathbf{X}'\lambda_{3,0} + \mathbf{X}_1'\boldsymbol{\lambda}_{3,1} + \mathbf{X}_2'\boldsymbol{\lambda}_{3,2} + \mathbf{X}_3'\boldsymbol{\lambda}_{3,3} + \mathbf{X}_4'\boldsymbol{\lambda}_{3,4} + u_3 \\ y_4^* = \mathbf{X}'\lambda_{4,0} + \mathbf{X}_1'\boldsymbol{\lambda}_{4,1} + \mathbf{X}_2'\boldsymbol{\lambda}_{4,2} + \mathbf{X}_3'\boldsymbol{\lambda}_{4,3} + \mathbf{X}_4'\boldsymbol{\lambda}_{4,4} + u_4 \end{cases}$$

If the latent variables are related, the error terms of the reduced form will be correlated (they can be written as a function of the structural form errors and the parameters $\gamma_{i,j}$). The fact that the u_i's are correlated should be taken into account in the estimation procedure by considering their joint distribution. This is precisely what the multivarariate probit model does, by assuming

that vector (u_1, u_2, u_3, u_4) follows the multivariate normal distribution with mean $(0, 0, 0, 0)$ and correlation matrix R.

For this analysis we used the statistical program LIMDEP Version 9.0. The program's characteristics did not allow us to use the categorical variable country with 31 different categories. To solve this problem we used two approaches. In the first approach, we grouped countries considering their geographic location, defining three dummy variables: WestEC (takes the value 1 for Western European countries: Austria, Belgium, Denmark, Finland, France, Germany, Iceland, Ireland, Luxemburg, Netherlands, North Ireland and Sweden), MedEC (takes the value 1 for Mediterranean European countries: Italy, Malta, Portugal, Spain and Slovenia) and EastEC (takes the value 1 for Eastern European countries: Bulgaria, Belarus, Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Russian Federation, Slovakia and Ukraine). In the second approach, we created the variable Human Development Index (HDI index) and the variable HDI index squared in order to test if the increase of HDI has an influence in the probability of volunteering. We used the HDI index for the year of the inquiry. As the results were almost the same considering these two approaches, we only present the results considering the variable HDI index and HDI index squared. These variables were also used for the multinomial logit model and subsequent marginal effects estimation in the next section.

The results of the estimation of the reduced form of the model are presented in Table 6.3 and the correlation matrix of the disturbances terms in the multivariate probit model is presented in Table 6.4.

All disturbances terms have positive and statistically significant correlations. This strong association means that the unobservable factors which positively influence the decision to do one type of volunteering also influence positively the decision to do other types of volunteering. These results are consistent with the fact that 32.4 of the volunteers do more that one type of unpaid work. The highest correlation occurs for the pair *social awareness volunteering - social justice* volunteering while the weakest correlation is for the pair *social justice - professional and political volunteering.*

Table 6.3: Results of the reduced form of the multivariate probit model for the four types of volunteering work.

Variable/category	Soc. Awarn.	Pol&Prof	Cul&Leis.	Soc. Just
Inc_med	-0.021	0.103**	0.137***	0.045
Inc_high	-0.0003	0.144***	0.152***	0.005
Edu_med	0.216***	0.153***	0.230***	0.186***
Edu_high	0.426***	0.447***	0.499***	0.319***
Emp_ptime	0.085	-0.175***	0.238***	0.133**
Emp_slemp	0.066	0.125**	0.100*	0.077
Emp_ret	-0.010	-0.333***	0.031	0.094*
Emp_hwife	0.021	-0.662***	-0.063	0.069
Emp_stud	0.220***	-0.039	0.319***	0.174**
Emp_unem	-0.080	-0.340***	-0.142**	-0.126*
Emp_oth	0.024	-0.222	-0.276**	0.110
Age	0.024***	0.041***	0.004	0.04***
Age.sq	-0.0002***	-0.0004***	0.0001	-0.0003***
Female	-0.058	-0.263***	-0.309***	0.128***
Town_medsm	0.054	0.092*	0.008	0.018
Town_medlrg	0.090	0.053	-0.071	-0.064
Town_large	-0.119**	0.022	-0.173***	-0.057
Hous5^{-}	-0.027	-0.035	-0.073***	0.004
Hous5^{-}12	-0.033	-0.019	0.077***	0.015
Hous13^{-}17	0.006	0.069**	0.093***	0.076***
Hous18^{+}	0.013	-0.002	0.007	0.011
MS_livto	0.168	-0.228	-0.256*	-0.078
MS_dvr	0.119*	-0.018	0.050	0.069
MS_sep	0.238*	-0.142	0.054	0.052
MS_wid	-0.108	-0.068	-0.149**	-0.057
MS_sng	0.112	-0.054	0.055	0.066
Sat_med	0.127	0.087	0.195***	0.093
Sat_high	0.211***	0.197**	0.394***	0.204***
Cont_med	0.190**	0.149*	0.192***	0.102*
Cont_high	0.182**	0.150*	0.237***	0.122**
Rlig_rather	-0.159***	0.012	0.065	-0.466***
Rlig_nosoim	-0.180***	-0.032	0.053	-0.784***
Rlig_unimpor	-0.195***	-0.118**	0.013	-0.925***
HDIindex	0.0008	-0.004	0.003	0.0003
HDIindex_sq	1.536	2.414	0.205	1.781
Constant	-3.120	-1.108	-4.521	-3.396
Log likelihood	-16961.84			

Table 6.4: Multivariate probit disturbances' correlation matrix.

types of volunteering	Soc. Awarn.	Pol&Prof	Cul&Leisure	Soc. Just
Soc. Awarn	-	0.366^{***}	0.375^{***}	0.435^{***}
Pol&Prof	0.366^{***}	-	0.341^{***}	0.312^{***}
Cul&Educ	0.375^{***}	0.341^{***}	-	0.331^{***}
Soc. Just	0.435^{***}	0.312^{***}	0.331^{***}	-

$^{***}p<0.001$

6.4 Multinomial logit and marginal effects analysis

Often the decision to do volunteering work in some kind of volunteer activity has a consequence of also involving the volunteer in other types of volunteer work. In this section we model the volunteering decision as a choice between mutually exclusive alternatives, where in the alternatives we also consider the options associated with doing simultaneously two or more types of volunteering activities.

Figure 6.1 represents the decision tree of volunteering considering the four types of volunteering identified in the previous chapter: social wareness volunteering (SA); political and professional volunteering ($P\&P$); educational and leisure volunteering ($E\&L$) ; or social justice volunteering (SJ). An individual may decide not to be volunteer (NV), to volunteer in only one of the types of volunteering (SA, $P\&P$, $E\&L$ or SJ) or to volunteer simultaneously in two, three or even the 4 types of volunteering. The Figure shows the sixteen mutually exclusive alternatives among which the individual has to choose precisely one alternative. The alternative chosen by the decision maker is the one with the highest utility among all the alternatives.

The choice between m mutually exclusive alternatives can be modelled using the random utility model. The utility of alternative j ($j = 1, \ldots, m$) for individual i is given by:

$$U_{ij} = V_{ij} + \varepsilon_{ij}$$

where V_{ij} is the observable utility and ε_{ij} is the random utility of individual i if he chooses alternative j. In our case, the observable utility of individual i is related with the individual observable characteristics (such as gender, income, education, number of children, employment status, marital status, importance of religion, level of choice and control and level of life satisfac-

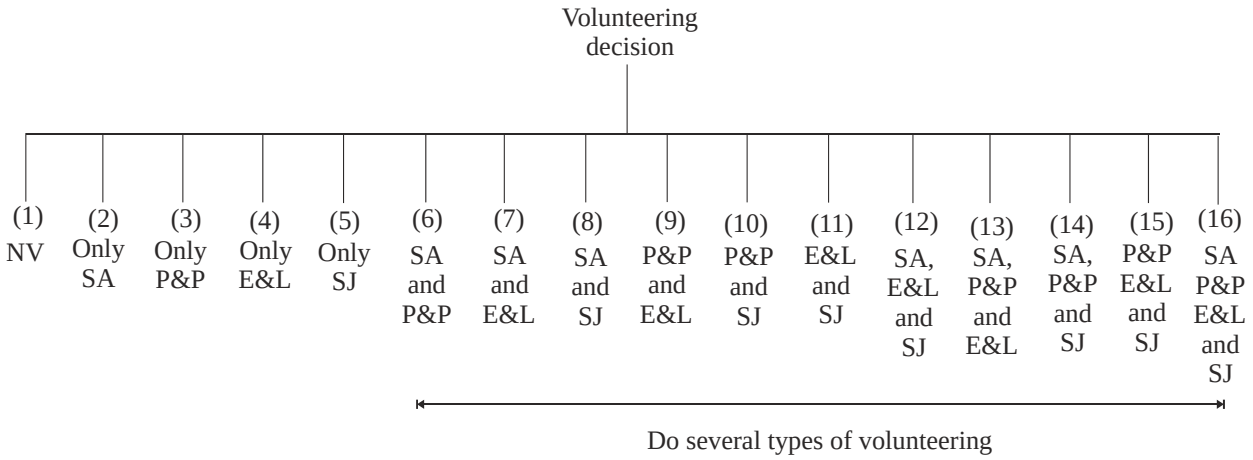

Figure 6.1: The choice between the several volunteering options.

tion). On the other hand, the unobserved factors might be related with psychological (cognitive and emotional) motives to volunteer, personality types or others individual's characteristics discussed in 3.4.2.

Let $\mathbf{x}_i$ denote the vector of characteristics of individual i, we assume that the observable component of the utility is given by $V_{ij} = \mathbf{x}_i'\boldsymbol{\beta}_j$. The chosen alternative is the one with the highest utility:

$$\begin{aligned}
\Pr[y_i = j] &= \Pr[U_{ij} \geq U_{ik}, \quad \text{for all } k \neq j] \\
&= \Pr[U_{ik} - U_{ij} \leq 0; \quad \text{for all } k \neq j] \\
&= \Pr[\varepsilon_{ik} - \varepsilon_{ij} \leq V_{ij} - V_{ik}; \quad \text{for all } k \neq j] \\
&= \Pr\left[\widetilde{\varepsilon}_{ikj} \ \leq -\widetilde{V}_{ikj}; \quad \text{for all } k \neq j\right]
\end{aligned}$$

where $\widetilde{\varepsilon}_{ikj} = \varepsilon_{ik} - \varepsilon_{ij}$ and $\widetilde{V}_{ikj} = V_{ik} - V_{ij}$. This implies that the probability of a given alternative being chosen depends on the joint distribution of the error terms. If one assumes that the error terms, ε_j, are i.i.d. with an extreme value density function, then it can be shown that the probability of alternative j being chosen by individual i is given by:

$$\Pr[y_i = j] = p_{ij} = \frac{e^{V_{ij}}}{e^{V_{i1}} + e^{V_{i2}} + \cdots + e^{V_{im}}} = \frac{e^{\mathbf{x}_i'\boldsymbol{\beta}_j}}{e^{\mathbf{x}_i'\boldsymbol{\beta}_1} + e^{\mathbf{x}_i'\boldsymbol{\beta}_2} + \cdots + e^{\mathbf{x}_i'\boldsymbol{\beta}_m}}.$$

Since $\sum_{j=1}^{m} p_{ij} = 1$ a restriction is needed for the model to be identified. Normally it is assumed

that the coefficients of the first alternative (the base category) are equal to zero, $\boldsymbol{\beta}_1 = 0$.

One important question in the multinomial model is the effect on the probability of choosing alternative j when a certain explanatory variable increases. The answer to this question is given by the marginal effect. The marginal effect define the partial derivative of the probability of choosing a given alternative, j, with respect to a certain regressor, x_{ik}:

$$\begin{aligned}\frac{\partial p_{ij}}{\partial x_{ik}} &= \frac{e^{\mathbf{x}_i'\boldsymbol{\beta}_j} \cdot \beta_{jk} \cdot \left(\sum_{l=1}^{m} e^{\mathbf{x}_i'\boldsymbol{\beta}_l}\right) - \left(\sum_{l=1}^{m} e^{\mathbf{x}_i'\boldsymbol{\beta}_l} \cdot \beta_{lk}\right) e^{\mathbf{x}_i'\boldsymbol{\beta}_j}}{\left(\sum_{l=1}^{m} e^{\mathbf{x}_i'\boldsymbol{\beta}_l}\right)^2} \\ &= p_{ij}\beta_{jk} - p_{ij}\left(\sum_{l=1}^{m} p_{il}\beta_{lk}\right) = p_{ij}\left(\beta_{kj} - \overline{\beta}_k\right)\end{aligned}$$

where $\overline{\beta}_k$ is the probability weighted average of the β_{kl} across the m alternatives. This implies that the sign of the marginal effect may not the same than the sign of β_{kj}. Considering this we should not restrict ourselves to the estimation of the multinomial model. Instead we should always estimate the marginal effects. Marginal effect are normally calculated at the means of the independent variables. For dummy variables the marginal effect is calculated as a discrete change in y as the variable change from 0 to 1.

In Figure 6.1 the volunteering decision is represented as a choice between 16 mutually exclusive alternatives and ideally we would like know how the various factors influence the probability of choosing each one of those alternatives. However data[1] and program capacity constraints do not allow us to consider the 16 options. Thus, in the estimation of the multinomial logit model, we decided to group alternatives (6) to (16): to volunteer in several types of volunteering. As a consequence the alternatives considered in the estimation of the multinomial logit were: not to volunteer, to volunteer only in social awareness activities, to volunteer only in political and professional activities, to volunteer only in educational and leisure activities, to volunteer only in social justice activities and to volunteer in several types of activities. Like in the previous section we use the variables Human Development Index, HDI and HDI square as explanatory variables.

The results of multinomial logit are shown in the Table 6.6. As explained before the sign of the coefficients for each alternative do not necessarily tell us the sign of the impact of the

[1] For some alternatives, the number of individuals choosing that option was too small for us to be able to consider that option separately in the multinomial logit regression.

Table 6.5: Frequencies of the various volunteering alternatives in the multinomial model.

Volunteering alternatives in the multinomial model	Frequency
Do not volunteer	14402
Only social awareness volunteering	486
Only political and professional volunteering	2034
Only Educational and cultural volunteering	743
Only social justice volunteering	2387
More than 1 type of volunteering	2688
Total	22740

explanatory variable on the probability of choosing that alternative. Therefore one should be careful in interpreting the results of the multinomial regressions. However, it is possible to interpret these results by comparison with the base category. In our case, the excluded category is "not to volunteering" (this is category 1). The interpretation is similar to the interpretation in the binary logit model. The relative probability of choosing alternative j rather than alternative 1 is given by (using the normalization $\boldsymbol{\beta}_1 = 0$):

$$\frac{\Pr(y_i = j)}{\Pr(y_i = 1)} = \frac{\frac{e^{\mathbf{x}_i'\boldsymbol{\beta}_j}}{e^{\mathbf{x}_i'\boldsymbol{\beta}_1}+e^{\mathbf{x}_i'\boldsymbol{\beta}_2}+\cdots+e^{\mathbf{x}_i'\boldsymbol{\beta}_m}}}{\frac{e^{\mathbf{0}}}{e^{\mathbf{x}_i'\boldsymbol{\beta}_1}+e^{\mathbf{x}_i'\boldsymbol{\beta}_2}+\cdots+e^{\mathbf{x}_i'\boldsymbol{\beta}_m}}} = e^{\mathbf{x}_i'\boldsymbol{\beta}_j}$$

Thus $e^{\beta_{jk}}$ indicates the proportionate change in the relative risk of alternative j when x_{ik} changes by one unit. As a consequence, the coefficients in Table 6.6 could be interpreted for each of the alternatives by comparing with the alternative of not volunteering. Since these interpretations would be very similar to the ones in the previous chapter we will not present them here.

Table 6.7 shows the results of the marginal effects estimation. Analyzing the results of marginal effects we verify that most variables have a significant influence on the volunteering decision. When income increases the probability of not volunteering decreases whereas the probability of participating only in educational and leisure volunteering, the probability of participating only in professsional and political volunteering and the probability of doing more than one type of volunteering increase. The effect on the probability of other types of volunteering is smaller and

Table 6.6: Results of the multinomial logit for the volunteering alternatives.

Variable/category	Soc. Awarn.	Soc.Just	Pol&Prof.	Educ&Leis	More than 1
Inc_med	0.050	0.105	0.202	0.282***	0.264***
Inc_high	0.064	-0.061	0.339**	0.341***	0.349***
Edu_med	0.338**	0.170**	0.228**	0.319***	0.532***
Edu_high	0.782***	0.379***	0.757***	0.688***	1.192***
Emp_ptime	-0.451*	0.269**	-0.393**	0.467***	0.317***
Emp_slemp	0.310	0.217**	-0.122	0.214**	0.400***
Emp_ret	0.083	0.171	-1.073***	-0.037	-0.146
Emp_hwife	0.280	0.335***	-1.936***	0.095	-0.120
Emp_stud	0.554**	0.320*	0.016	0.662***	0.486***
Emp_unem	-0.122	-0.244	-0.777***	-0.228*	-0.420***
Emp_oth	0.479	0.366*	-1.183**	-0.369	-0.241
Age	0.060**	-0.070***	0.077***	-0.002	0.060***
Age.sq	-0.0007	-0.0007***	-0.0007***	-0.0002	-0.0006***
Female	-0.221*	0.258***	-0.488***	-0.613***	-0.274***
Town_medsm	-0.173	0.051	0.125	-0.035	-0.062
Town_medlrg	-0.253	-0.226**	0.071	-0.126	-0.222**
Town_large	-0.135	-0.117	0.006	-0.333***	-0.426***
Hous5^{-}	-0.306***	-0.345***	-0.332***	-0.522***	-0.586***
Hous5^{-}12	-0.213**	-0.160***	-0.170**	0.012	-0.150***
Hous13^{-}17	-0.213**	-0.215***	-0.110	-0.121**	-0.024
Hous18^{+}	-0.080	-0.137***	-0.103**	-0.131***	-0.139***
MS_livto	-0.415	-0.931***	-0.262	-0.811***	-0.570**
MS_dvr	0.155	-0.187	-0.138	-0.121	-0.096
MS_sep	0.704**	-0.138	-0.128	0.020	-0.162
MS_wid	-0.228	-0.173	-0.20	-0.369**	-0.250***
MS_sng	0.101	-0.353***	-0.33**	0.125	-0.178**
Sat_med	0.301	-0.352***	-0.135	0.498***	0.258**
Sat_high	0.442*	-0.648***	-0.368**	0.828***	0.653***
Cont_med	0.369	0.192	0.258	0.296**	0.397***
Cont_high	0.269	0.202	0.257	0.372***	0.461***
Rlig_rather	-0.049	-0.844***	0.206	0.257***	-0.546***
Rlig_nosoim	0.009	-1.440***	0.072	0.254***	-0.864***
Rlig_unimpor	0.061	-1.584***	-0.063	0.220**	-1.098***
HDIindex	0.048***	-0.029***	-0.034***	-0,041***	0,066***
HDIindex_sq	28.846***	-18.165***	16.972***	26.529***	-41.139***
Cons.	14.166***	7.680*	10.765**	12.857***	22.410***
Pseudo R2	0.1756; p- value: 0.0000				
Log likelihood	-17613.51				

actually the effect of income on the probability of participating only in social justice volunteering is slightly negative.

The impact of education on the volunteering decision is similar to the impact of income. Higher levels of education lead to higher probability of volunteering. The highest increases occur in the probability of participating only in educational and leisure volunteering and in participating in more than one type of volunteering. However, individuals with high level of education also have a significantly higher probability of participating only in social awareness volunteering or only in political and professional volunteering.

The opportunity to have more time seems to be an explanation for the higher probability to do more than one type of volunteering when an individual changes their employment status from full employed to part time employed or self employed or student status. Students and part time employed are also more likely to participate only in educational and leisure activities. On the other hand, being unemployed seems to increase the probability to not volunteering, most likely due to problems of low self esteem.

To analyze the impact of age we need to consider the marginal effect of the variables age and age squared. The impact of age on the probability of volunteering follows an inverted U shape. Till a certain age becoming older increases the probability of participating in volunteering activities, after that becoming older decreases the probability of volunteering. Volunteering only in educational and leisure activities seems to be less sensitive to age than the remaining alternatives.

Being a woman increases the probability of not volunteering as well as the probability of participating only in social justice volunteering. This last result confirmes the results of the previous chapter. On the other hand, being a woman decreases the probability of engaging only in political and professional volunteering, engaging only in educational and leisure volunteering or engaging in more than one type of volunteering.

Another variable that affects the choice among the volunteering alternatives is the size of the place where the individual's lives. Changing the place of living from smaller to medium large or large town decreases the probability of participating only in social justice volunteering activities and the probability of doing several types of volunteering. However there are no significant differences between small and medium small towns. The impact of the size of the town on volunteering may be related with the availability of services. In smaller places, individuals who

Table 6.7: Marginal effects in the multinomial model of volunteering alternatives.

Variable/category	Not volunt	Soc. Awarn.	Soc.Jus	Prof&Pol	Educ&Leis	+the 1
	y=0 652	y=0.025	y=0.078	y=0.034	y=0.106	y=0.104
Inc_med	-0.049***	-0.001	0.002	0.004	0.023***	0.020***
Inc_high	-0.054***	-0.001	-0.011*	0.009**	0.028***	0.029***
Edu_med	-0.078***	0.005	0.004	0.004	0.021***	0.044***
Edu_high	-0.191***	0.013***	0.004	0.016***	0.042***	0.116***
Emp_ptime	-0.061***	-0.011***	0.014	-0.014***	0.046***	0.025**
Emp_slemp	-0.059***	0.006	0.010	-0.006	0.013	0.037***
Emp_ret	0.019	0.003	0.017*	-0.027***	-0.001	-0.011
Emp_hwife	-0.002	0.008	0.030***	-0.033***	0.010	-0.012
Emp_stud	-0.114***	-0.010	0.011	-0.005	0.062***	0.035**
Emp_unem	0.070***	-0.001	-0.010	-0.017***	-0.012	-0.029***
Emp_oth	0.020	0.016	0.038*	-0.024***	-0.031*	0.020
Age	-0.010***	0.001*	0.004***	0.002***	-0.0001	0.005***
Age.sq	0.0001***	-0.00001*	-0.00004***	-0.00002**	-0.000001	-0.00004***
Female	0.063***	-0.003	0.028***	-0.013***	-0.056***	-0.018***
Town_medsm	-0.004	-0.004	0.003	0.004	-0.004	0.006
Town_medlrg	0.037***	-0.005	-0.013*	0.004	-0.007	-0.017**
Town_large	0.058***	-0.001	-0.002***	0.003	-0.025***	-0.033***
Hous5^{-}	0.106***	-0.004	-0.014***	-0.006**	-0.038***	-0.044***
Hous5^{-}12	0.025***	-0.004*	-0.010**	-0.004*	0.005	-0.012***
Hous13^{-}17	0.027***	-0.004	-0.014***	-0.002	-0.009*	0.002
Hous18^{+}	0.029***	-.0.001	-0.007***	-0.002	0.009***	-0.010***
MS_LVT	0.133***	-0.005	-0.042***	-0.002	-0.050***	-0.034**
MS_dvr	0.024	0.005	-0.011	-0.003	-0.009	-0.006
MS_sep	0.016	0.025*	-0.010	-0.004	0.002	-0.015
MS_wid	0.069***	-0.003	-0.006	-0.003	-0.025*	-0.032***
MS_sng	0.043***	-0.004	-0.021***	-0.008**	-0.006	-0.011***
Sat_med	-0.080***	0.004	0.018**	0.0003	0.041***	0.014
Sat_high	-0.149***	0.005	0.032***	0.005	0.064**	0.044***
Cont_med	-0.069***	0.007	0.007	0.005	0.020	0.030**
Cont_high	-0.078***	0.003	0.006	0.005	0.027**	0.036***
Rlig_rather	0.049***	0.006	-0.052***	0.010**	0.038***	-0.045***
Rlig_nosoim	0.092***	0.004	-0.082***	0.007	0.045***	-0.065***
Rlig_unimpor	0.105***	0.002	-0.079***	-0.003	0.044***	-0.076***
HDIindex	0.010***	-0.001***	-0.001*	-0.001**	-0.003***	-0.05***
HDIindex_sq	-6.433***	0.472***	0.651*	0.273***	1.772***	3.264***

want to perform some kind of activities have to create associations for that purpose, usually based on volunteer activity.

With an increase in the number of children of all ages, individuals have higher probability of not participating in volunteering. The two volunteering options that are more negatively affected by the number of children are volunteering only in social justice activities and volunteering in more than one type of volunteering. These results are according to expectations. In particular the fact that the probability of multiple volunteering decreases may be explained by the fact that households with children have less available time and thus it is more difficult for them to engage in several volunteering activities. Change of the marital status from married to any other situation seems to increase the probability to not volunteering. Probably the stability provided by marriage may influence in a positive way the volunteering attitude.

The variable «level of satisfaction with life» shows an interesting behavior. Higher levels of satisfaction with life are associated with higher probabilities of being a volunteer only in social justice activities, being a volunteer only in educational and leisure activities and higher probabilities of doing several types of volunteering. Similarly, higher levels of choice and control also lead to higher probability of multiple volunteering engagement and higher probability of engaging in educational and leisure volunteering.

Considering the marginal effects estimation, the attitudinal variable «importance of religion» is also very important. When religion is less important for an individual he has a lower probability of engaging in multiple volunteering and lower probability of engaging only in social justice volunteering.

To study the impact of HDI changes we need to consider the effect of HDI and HDI squared. The impact of the HDI variable on volunteering follows a U shape. When we go from very low levels of the human development index to medium levels the probability of volunteering decreases, but further increases in the HDI lead to increases in the probability of volunteering. The higher probability of volunteering in countries with lower levels of HDI may be related with the lack of public services to respond to the needs of the population in these countries.

6.5 Conclusion

In this chapter we analyzed the interdependencies between the decisions of participating or not in the various types of volunteering activities using two different approaches. First, we considered a model where the decision to be a volunteer in one type of volunteering may influence the decision to do other types of volunteering. We estimate the reduced form of this model using multivariate probit estimation. Our results show that the unobserved factors that influence the probability of doing a given type of volunteering are significantly correlated with the unobserved factors that influence the probability of doing other types of volunteering.

In the second approach we modelled the volunteering decision as a choice between several mutually exclusive alternatives and investigate how changing the independent variables affects the probability of choosing each one of the alternatives. This model was estimated using the multinomial logit regression. Our results show that higher education and higher income are associated with higher probabilities of being engaged in multiple volunteering. Individual who are part-time employed, self-employed and students have higher probability of engaging in multiple volunteering than full time employed whereas the reverse happens for unemployed individuals. The variables satisfaction with life, level of choice and control and importance of religion also have a positive impact on the probability of engaging in multiple volunteering. On the contrary the probability of engaging in multiple volunteering is negatively affected by the number of children in the household and is lower in medium large and large towns than in small towns.

Chapter 7

Motivations for volunteering

7.1 Introduction

The objective of this chapter is to understand the motivations for volunteering. In order to achieve this aim, we analyze both the importance given by the respondent to the various reasons for doing volunteer work and whether he performs or not a certain kind of volunteer work. Since the second wave of the Word Value Survey and the European Value Survey is the only available wave with information regarding the reasons for volunteering, we will use the data from this wave in this chapter.

The chapter starts by presenting descriptive statistics results on the importance given to the various reasons for volunteering and on the various types of unpaid work in our sample. An interesting issue is whether the reasons for volunteering are related or not with the various types of unpaid work. We explore this issue in Section 7.3. We compare, for each possible reason to volunteer and each type of unpaid work, the proportion of volunteers that consider the reason important with the proportion of non-volunteers that consider the same reason important. If there is a statistically significant difference between these two proportions, then we may conclude that this reason is relevant for that type of volunteer work.

In the next section we use exploratory factorial analysis to identify the main factors behind the reasons for volunteering. The principal component analysis reveals the existence of three main factors. We use the classification proposed by Andreoni (1990) and Nunes and Onofri (2002) to interpret theses three factors. In addition we estimate a structural equations confir-

matory model that reveals that the latent motivation variables are positively correlated.

In section 7.5 we study the impact of the various types of motivation on the probability of volunteering in the several types of unpaid work. We start by using principal component analysis to identify the main types of unpaid work. Next we estimate logit models for social awareness volunteering, political and professional volunteering and educational and leisure volunteering, introducing the latent motivation variables as independent variables. The next section of the chapter analyzes whether the socioeconomic characteristics of the individuals are important to explain the various types of motivation. Finally, the last section concludes this chapter.

7.2 Descriptive statistics

Our empirical analysis is based on the 2^{nd} wave of the Word Value Survey (WVS) and the European Value Survey (EVS). The reason for using this wave is that this is the only wave which contains information regarding the reasons for doing volunteer work. There is data for 8 countries (Argentina, Austria, Belgium, Brazil, Bulgaria, Canada, Chile and China) and a total of 3485 observations.

In this section we present some descriptive statistics for the importance given to the various reasons for volunteering and for the various kinds of unpaid work.

7.2.1 Reasons for volunteering

Concerning the reasons for doing volunteer work, the question that the individuals had to respond was: "Thinking about the reasons for doing the voluntary work, please use the following five-point scale to indicate how important each of the reasons below are in your own case". Each of these reasons corresponds to an ordinal variable taking values from 1 (not important) to 5 (very important).

The questionnaire listed the following 14 reasons for doing unpaid work:

- Solidarity with the poor and disadvantaged
- Compassion for those in need
- Opportunity to repay something

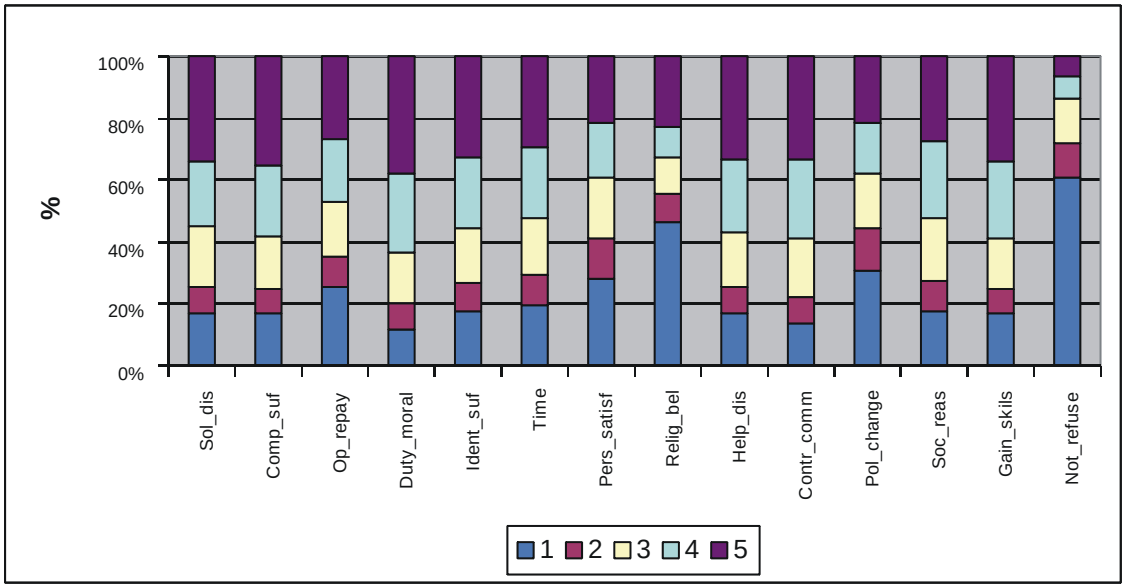

Figure 7.1: Reasons for doing unpaid work.

- Sense of duty, moral, obligation
- Identifying with people who suffer
- Time on my hands
- Personal satisfaction
- Religious belief
- Help disadvantaged people
- Make a contribution to my local community
- Bring about social or political change
- For social reasons
- Gain new skills and useful experience
- Did not want to, but could not refuse

Figure 7.1 summarizes the results in the sample for these 14 variables.

Analyzing Figure 7.1 one verifies that the reasons that are considered most important are: "Sense of duty, moral obligation", "Help disadvantaged people", "Make a contribution to my local community" and "Gain new skills and useful experience".

In our sample, the reason "Sense of duty, moral obligation" is the most important reason to do voluntary work, with 62% of the sample considering this reason either important or very important (values 4 or 5). These results are consistent with the findings of Govekar and Govekar (2002) who argue that "volunteering is something that people feel morally obliged to do".

Another very important reason to do volunteering work is to "Gain new skills and useful experience". In our inquiry about 60% of answers are either important (4) or very important (5). Notice that this reason is very consistent with the investment model for volunteering, which is indicated by many studies as an important motive, especially for the youngest. Volunteering is rewarded in the labour market and it is encouraged by many public policies.

On the other hand, we may identify almost all primary motivation for volunteering which were referred in Omoto and Snyder work (1995).[1] The results show that the least important reason for volunteering is "did not want to, but could not refuse". In fact, 60% of the respondents declare that this reason is not important and 86% give an importance level equal or below 3 (not so important). This result differs from the one obtained in Govekar and Govekar (2002) concerning the same reason.

Another not so important reason seems to be "Religious belief" with almost 60% of values 1 or 2. There are many discussion considering this issue because, in the one hand to be a religious person seems to increase the probability of being a volunteer, on the other hand it seems that individuals do not consider this fact as a reason to do volunteer work. These results are not consistent with the findings by Hoge *et al.* (1998) and Wuthnow (1991). Recent studies have begun to question the relevance of the intensity of one's beliefs to volunteering (Park and Smith, 2000; Wilson and Janoski, 1995), although religious beliefs are still considered influential for those heavily involved in volunteer work (Musick, 1999).

Personal satisfaction also seems to be a relatively unimportant reason do volunteer work. In the sample, 42.7% of the respondents consider that this reason is unimportant or not so important. This fact is rather strange considering that in many inquiries personal satisfaction is mentioned as one of the main reasons for volunteering. For instance, in a national inquiry about

[1] Values, understanding, personal development, community concern and esteem enhancement.

volunteering in Australia[2] around 59.4% of the volunteers mentioned that personal satisfaction was the main reason for volunteering.

7.2.2 Types of unpaid work

As mentioned before we are also interested in studying whether the respondent does several kinds of unpaid work. The questionnaire considered the following types of unpaid work:

- Social welfare service for elderly, handicapped or deprived people
- Religious or church organization
- Education, arts, music or cultural activities
- Labour unions
- Political parties or groups
- Local political action groups
- Human rights
- Professional associations
- Youth work
- Sports or recreation
- Unpaid work women's group
- Peace movement
- Organization concerned with health
- Other groups

The volunteering participation rate by type of unpaid work is represented in Figure 7.2.

In general the levels of participation of individuals in volunteering activities in the 2nd wave were much smaller than in the 4th wave which we analyzed in the previous two chapters.

[2] Available in http://www.volunteeringwa.org.au/

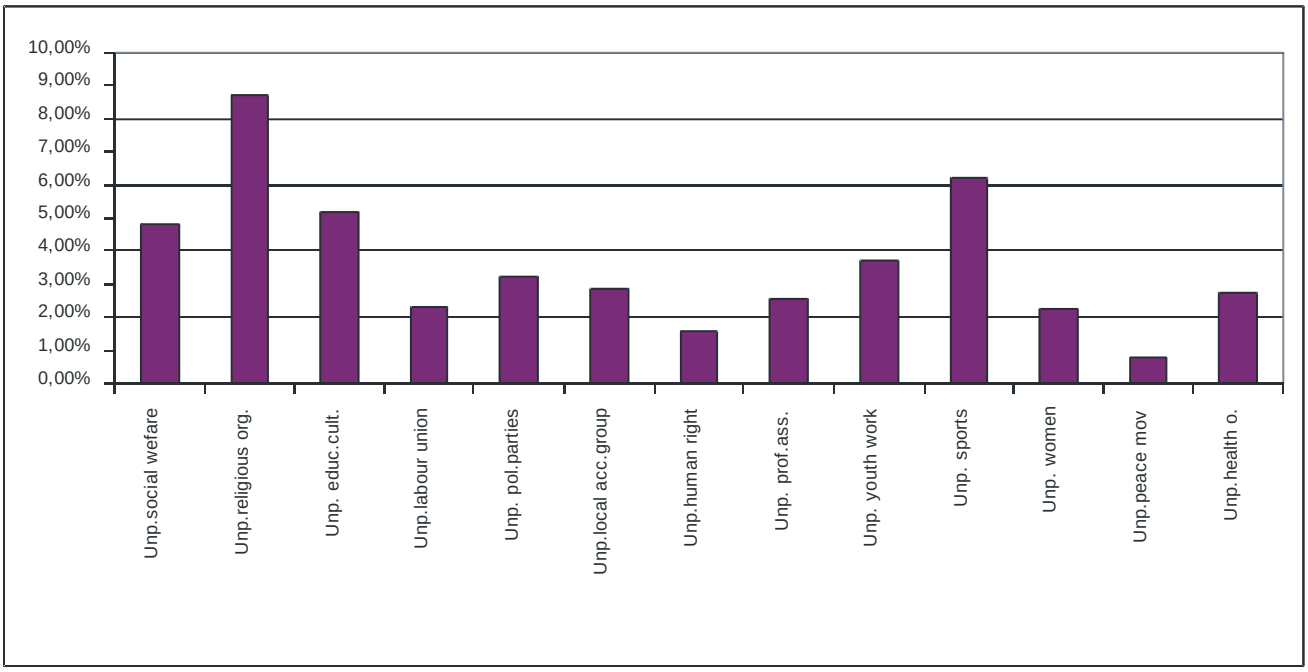

Figure 7.2: Volunteering participation rate for each type of unpaid work

The highest participation rate, 8.7% of the individuals, occurs for unpaid work in religious or church organizations. The second highest participation is verified in sports (6.2%) and then in educational and cultural activities (5.9%). The lowest levels occurs for unpaid work in peace movements organizations (0.8%) and human right organizations (1.6%).

Figure 7.3 shows the percentage of volunteers by country. The figure shows that there are significant differences in volunteering percentages across countries. Canada and China are the two countries with higher percentage of volunteers whereas Argentina and Bulgaria have the lowest percentages of volunteers.

7.3 Relating reasons for volunteering with types of voluntary work

An interesting question is whether the reasons that are mentioned as important to do volunteer work are related with doing or not doing a certain type of volunteer work. We explore this issue in this section using a relatively simple technique. We compare, for each possible reason to volunteer and for each type of unpaid work, the proportion of volunteers that consider that reason

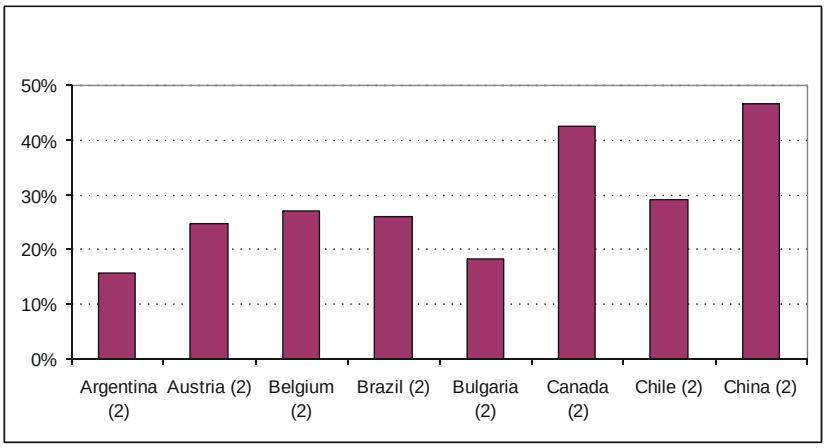

Figure 7.3: Volunteering participation rate by country – 2nd wave

important with the proportion of non-volunteers that also consider the same reason important. If there is a statistically significant positive difference between these two proportions, then we argue that reason is relevant for that type of volunteer work.

In order to perform this analysis we need to transform the variables that measure the importance of each reason for volunteering. As explained above these variables are ordinal variables (with 5 categories). To perform the test of differences between two proportions we need to transform all the 14 variables in binary variables. Each binary variable takes the value 1 (important) if the ordinal variables takes a value from 3 to 5 and takes the value 0 (not important) otherwise.

We are interest in testing the difference between the proportions of two different populations. In our case, we wish to look at the population of volunteers and the population of non-volunteers of a certain kind of unpaid work. Let π_1 be the percentage of individuals in the population of volunteers who consider a given reason for volunteering important, and let π_2 be the corresponding proportion in the population of non-volunteers. Our null hypothesis is:

$$H_0 : \quad \pi_1 - \pi_2 = 0$$

and the alternative hypothesis is:

$$H_1 : \ \pi_1 \neq \pi_2$$

If we select random samples of the two populations and compute their sample proportions,

we can evaluate whether the null hypothesis should be rejected or not. Let p_1 and p_2 be the sample proportions, in population 1 and 2, respectively and let n_1, n_2 be the corresponding number of observations in each sample. It is well know that

$$Z = \frac{(p_1 - p_2) - (\pi_1 - \pi_1)}{s_{p_1 - p_2}}$$

where $s_{p_1 - p_2}$ is equal to:

$$s_{p_1 - p_2} = \sqrt{\frac{p_1(1 - p_1)}{n_1} + \frac{p_2(1 - p_2)}{n_2}}$$

is approximately normal for large samples. But, under the null hypothesis, Z is equal to:

$$Z = \frac{(p_1 - p_2)}{s_{p_1 - p_2}}$$

and this is the $z-$statistic that is computed for the above hypothesis test. If the $z-$statistic has a value that is statistically different from 0 the null hypothesis is rejected, otherwise it is not.

The results for the 14 reasons to volunteer and for the types of unpaid work are shown in Table 7.1. The objective of the table is to identify the most important reasons to do one particular kind of unpaid work.

Analyzing the several reasons for volunteering we verify that there are some reasons that are statistically significant in a positive or a negative manner for almost all kinds of volunteer work. One case where this happens is the reason "*Help disadvantaged people"*, which is positively related with the following types of volunteering: social welfare service for elderly, handicapped or deprived people, religious or church organization, local political action groups, human rights, women's group, peace movement and organizations concerned with health. This is consistent with the idea that the altruistic reason to help disadvantaged people directs individuals to volunteer in kinds of unpaid work where they do not expect a direct reward, expecting instead an intrinsic satisfaction (Smith, 1981) of "doing good". On the contrary, as it might be expected, this is not the motivation for individuals who are volunteers in activities related with education, arts and culture; sports or recreation; and youth work and professional associations. Our results confirmed these expectations.

Table 7.1: Results of the tests for the difference between the proportion of volunteers and the proportion of non volunteers who consider a given reason important.

Types of unp work	Solid. poor	Comp. need	Opp. repay	Duty obliga.	Ident. suffer	Time hands	Pers. satisf.	Relig Bel	Help disad	Con loc comm	Soc pol change	Soc. reas.	skills exp.	Could not ref
Soc. welfare	10.5%***	4.1%**	-2.1%	1.0%	7.0%***	2.9%	-7.8%**	7.3%***	11.0%***	4,2%**	-0.8%	-2.3%	-6.2%***	-3.7%
Relig. organiz	6.6%***	5.0%***	5.0%***	4.6%***	2.1%*	-1.6%	-1.9%	44.8%***	9.0%***	10.5%***	-0.9%	-3.7%**	-4.6%***	-0.8%
Educ. cultural	-7.7%***	-9.6%***	-2.3%	6,4%***	-9.7%***	-5.9%***	-7.5%***	-8.5%***	-6.7%***	-0.4%	1.5%	0.0%	-0.9%	-13.4%***
Lab.unions	0.9%	0.7%	-1.1%	-4.85%	3.1%	-3.4%	4.6%	-6.3%	0.4%	0.6%	20.6%***	5.3%*	4.2%	6.1%
Polit. parties	4.5%**	0.1%	-8.7%***	4.0%*	2.1%	-1.2%	-7.7%**	-23.1%***	1.3%	7.5%***	28.2%***	-3.0%	1.5%	1.3%
Loc.pol. a.gr.	7.9%***	-0.4%	-2.0%	0.5%	7.4%***	-3.0%	-4.6%*	2.2%	7.5%**	8.9%***	12.5%***	0.6%	-1.8%	2.3%
Hum. rights	8.4%***	-6.6%**	-2.9%	0.8%	5.5%**	-9.1%**	-12.5%***	0.6%	10.0%***	1.5%	19.9%***	3.2%	-6.9%**	-4.2%
Prof. assoc.	-6.5%***	0.0%	-3.4%	2.1%	-6.0%***	-6.7%**	-0.7%	-13.9%***	-6.5%***	2.3%	11.3%***	1.4%	-1.7%	-.2.5%
Youth w.	-2.2	-7.0%***	0.4%	-5.4%***	-7.2%***	-3.5%*	-2.9%	-3.9%	-5.5%***	0.6%	-2.9%	3.9%*	0.8%	-7.0%*
Sport recr.	-6.5%***	-4.7%***	2.6%	-1.4%	-6.1%***	-5.3%**	0.1%	-10.6%***	-8.8%***	3.8%**	-2.9%	7.4%***	50%***	-1.4%
Women group	4.5%*	3.8%*	6.7%**	-3.4%	1.0%	2.8%	-9.2%**	12.6%***	4.5%*	3.3%	1.2%	12.4%***	-0.9%	-3.2%
Peace movem.	5.3%	-4.7%	-4.8%	6.0%*	3.1%	-11.5%**	-5.3%	9.3%*	9.9%**	4.4%	23.5%***	-0.9%	3.3%	-2.5%
Health organ.	2.2%	2.8%	1.9%	-1.2%	7.3%***	-3.5%	-5.3%*	1.5%	5.2%**	4.3%*	5.5%*	-3.3%	-3.1%	-9.3%*

Level of significance:***= 0.01; **= 0.05: *= 0.1 (unilateral critic values)

A second important reason for many different kinds of volunteering is "*Solidarity with the poor and disadvantaged*" which belongs to the same type of altruistic motivations. This is a significant motivation for individuals who volunteer in the following activities: social welfare service for elderly, handicapped or deprived people; religious or church organization; local political action groups; political parties or groups; human rights; women's group. On the other hand, volunteering in activities such as education, arts, music or cultural activities, sports or recreation and professional associations does not seem to be motivated by this reason. In fact, the proportion of volunteers in these activities who consider "*Solidarity with the poor and disadvantaged*" an important reason is significantly lower than the corresponding proportion among non volunteers.

The reasons "*Identifying with people who suffers"* and "*Compassion for those in need"* also show a pattern similar to the two previous reasons. Individuals who volunteer in social welfare service for elderly, handicapped or deprived people, religious or church organization, local political action groups, human rights and organization concerned with health give higher importance to the reason "*Identifying with people who suffers"* than individuals who do not volunteer in these activities. The contrary happens for individuals who are engaged on unpaid work in education, arts, music or cultural activities, professional associations, youth work and sports or recreation. The reason "*Compassion for those in need"* does not seem to be important for volunteering in human rights and organization concerned with health but with respect to the remaining volunteer activities shows a similar behavior.

The "*Religious belief*" is another important reason for many kinds of volunteer work. It is, of course, a positive motivation for unpaid work in religious or church organization; but also for social welfare services for elderly, handicapped or deprived people, women's group and peace movement. On the other hand, the individuals who volunteer in education, arts, music or cultural activities, political parties or groups, sports or recreation and professional associations give less importance to this reason than non volunteers, suggesting that the reason why they are volunteering is not their religious belief.

Considering our data and analyzing the results of the tests for the difference between two proportions we identify three reason which only have negative statistically significant differences. These reasons are: "*Time on my hands*"; *"Personal satisfaction*" and *"Did not want but could not refuse"*. A negative statistically significant value means that the proportion of volunteers

who consider that reason important is lower than the corresponding proportion among non volunteers. Consequently, our results suggest that these three reasons are not considered important motivations for any type of volunteering.

With respect to the first reason, "*Time on my hands*", we verify that, for several types of volunteering, the proportion of volunteers who consider this reason important is significantly lower than the proportion of non volunteers who consider this reason important. The volunteering activities for which this happens are: professional associations, youth work, sports or recreation, peace movement, education, arts, music or cultural activities and human rights. The reason "*Personal satisfaction"* is considered less important for individuals who are engaged in volunteering in political parties or groups, local political action groups, human rights, women's groups, organization concerned with health, social welfare service for elderly, handicapped or deprived people and education, arts, music or cultural activities than for individuals who are not volunteers. Similarly, the reason "*Did not want but could not refuse*" is not an important reason for individuals who volunteer in education, arts, music or cultural activities, youth work, and organization concerned with health.

For two types of reasons, "*Make a contribution to my local community*" and "*Bring about social or political change*", all statistically significant differences are positive. The first reason, make a contribution for my local community, is more important for individuals who are engaged in unpaid work in social welfare service for elderly, handicapped or deprived people, religious or church organization, political parties or groups, local political action groups, sports or recreation and organization concerned with health than for individuals who do not volunteer in these activities. The preoccupation about the status quo of social and political situation expressed in the reason "*Bring about social or political change*" is a motivation for the following kinds of unpaid work: labour unions, political parties or groups, local political action groups, human rights, professional associations and peace movement.

Social reasons are more important for individuals who volunteer in youth work, sports or recreation, women's group and labour unions than for individuals who do not volunteer in these activities. On the contrary, this reason is less important for individuals who volunteer in religious or church organizations.

Individuals who volunteer in religious or church organization and in women's groups give more importance to the reason "*Opportunity to repay something"* than individual who are not

engaged in these activities.

The reason "*Moral obligation or sense of duty*" is important for volunteers in religious or church organization, political parties or groups, and peace movement but not for volunteers in education, arts, music or cultural activities or youth work. On the contrary, the reason "*Gain new skills and a useful experience"* seems to be particularly important for individuals who volunteer in sports or recreation but not for those who volunteer in social welfare service for elderly, handicapped or deprived people, religious or church organization and human rights organizations.

7.4 Motivations for volunteering

7.4.1 Types of motivation for volunteering

Andreoni (1990) identifies two types of motivation for volunteering: the altruistic motivation and the egoistic or warm glow motivation. Smith (1981) connects altruism to intrinsic motivation, concluding that "Altruism is an aspect of human motivation that is present to the degree that the individual derives intrinsic satisfaction or psychic reward from attempting to optimize the intrinsic satisfaction of one or more other persons without the conscious expectation of participating in exchange relationship whereby those "others" would be obligated to make similar/related satisfaction optimization effort in return".

Following Andreoni (1990), Nunes and Onofri (2002) studied the warm glow motivation using the contingent valuation analysis.[3]

They identified two types of warm glowers:

- "*Ego driven*" warm glowers – these kind of individuals "want to obtain a personal advantage or a personal sense of pride from their contribution, because they will obtain a social status, or because they feel that they obtain a social status, from the act of contributing itself." Nunes and Onofri (2002)

[3] "Contingent valuation (CV) techniques have produced significative results for public policies definition. The simple, but powerful, idea to ask directly consumers-citizens how much they are willing to pay for obtaining a certain public good had in, practical terms, a breakthrough effect. In theoretical terms, the well-known Samuelson's rule has lost some appeal, because instead of calculating the optimal (theoretical) equilibrium for the public provision of public goods, economists could simply and directly ask consumers if they wanted the good and how much they were willing to pay for it." from Nunes and Onofri (2002).

The inspiration factors for this kind of warm glowers derived from possibility of obtaining a personal advantage, from a feeling of usefulness or goodness towards society and himself and from strengthened personal reputation in the local community;

- "*Social Oriented*" warm glowers – who feel directly related and responsible for the provision of the public good and, in this way, experience a tighter sense of sentiment of social cohesion together and ultimately, seek a social return" Nunes and Onofri (2002) The inspiration factor for this kind of warm glowers is a possibility to feel more socially integrated; feel more social cohesion.

In our analysis we try to confirm the ideas of Andreoni (1990) and Nunes and Onofri (2002) about volunteering motivations.

7.4.2 Exploratory factorial analysis of reasons for volunteering

We first group the reasons for doing unpaid work using principal component analysis (PCA). PCA is a vector space transform often used to reduce a multidimensional data set to a lower dimensions for analysis.

Table 7.2 presents the results of the principal component analysis. We identified three factors.

The measure KMO is a statistic that indicates the proportion of variance in the variables that might be caused by underlying factors. The value of 0.883 indicates a good adequacy. The table 7.2 show the correlations between the variables and the factors, with values less then 0.4 deleted.

Based on the results of the PCA analysis and the motivation types defined by Andreoni (1990) and Nunes and Onofri (2002) we may define 3 types of motivation:

- The altruistic motivated individuals;
- The ego driven "warm glowers";
- The social oriented "warm glowers".

The altruistic motivated individuals indicated the following reasons for volunteering:

- Solidarity with the poor and disadvantaged;

Table 7.2: Results from principal component analysis to reasons for voluntary work.

	Component		
Reasons voluntary work	1	2	3
Solidarity with the poor	0.794		
Compassion for those in need	0.788		
Opportunity to repay something	0.533		
Sense of duty moral obligation	0.596		
Identifying with people who suffer	0.791		
Time on my hands		0.602	
Personal satisfaction		0.659	
Religious believes	0.579		
Help disadvantages people	0.812		
Make a contribution to my local community			0.625
Bring about social or political change			0.799
For social reasons		0.719	
Gain a new skills and useful experience		0.688	0.461
Did not want to, but could not refuse		0.621	
Cronbach's Alpha	0.828	0.688	0.475
Principal component analysis, oblimin with Kaiser normalization			
Kaiser-Meyer-Olkin Measure of Sampling Adequacy	0.883		
Bartlett's Test of Sphericity (Chi-square)	11235.783	p-value	0.000

- Compassion for those in need;
- Opportunity to repay something;
- Sense of duty, moral, obligation;
- Identifying with people who suffer;
- Religious belief;
- Help disadvantaged people.

The ego driven "warm glowers" are associated with the following reasons for doing an unpaid work:

- Time on my hands;

- Personal satisfaction;
- For social reasons;
- Gain new skills and useful experience;
- Did not want to, but could not refuse.

These reasons are more related with personal expectation and advantages that the individuals expect to obtain trough volunteering.

Finally, the social oriented "warm glowers" are associated with the following reasons for doing an unpaid work:

- Make a contribution to my local community;
- Bring about social or political change.

These two reason are related, in our opinion, with certain social exposure but individuals do not expect to receive direct advantages of their volunteer participations.

7.4.3 SEM confirmatory model of volunteering motivations

A structural equation modeling (SEM) analysis of volunteers motivations was undertaken using the AMOS (version 16.0) statistical program. There are usually two main parts to SEM: the structural model showing potential causal dependencies between endogenous and exogenous variables, and the measurement model showing the relations between the latent variables and their indicators. Confirmatory factor analysis models contain only the measurement part while path diagrams (to be distinct from linear regression) can be viewed as a SEM that only has the structural part.

When a SEM is used as a confirmatory technique, it is very important to specify the model correctly based on the «theory» that one is attempting to confirm. Figure 7.4 illustrates graphically our confirmatory SEM. This model was built to test the ideas of Andreoni (1990) and Nunes and Onofri (2002). Our three latent variables are: altruistic motivation, ego driven warm glow motivation and social oriented warm glow motivation. The measurement variables are the 14 reason to do volunteer work included in the 2nd wave questionnaire. Our model also estimates the correlation between the latent variables.

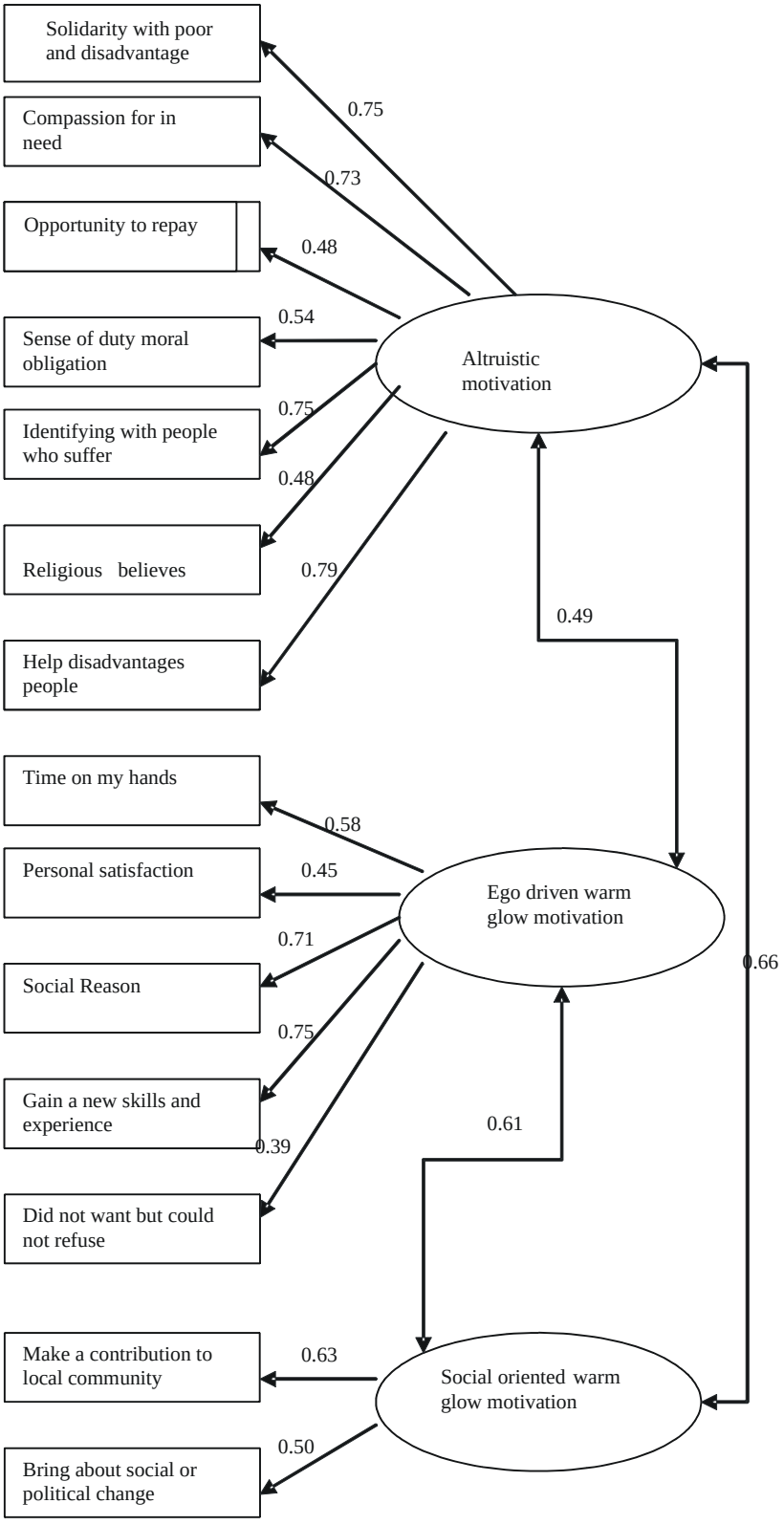

Figure 7.4: SEM model : Reasons and motivations for voluntary work

Using a SEM analysis program, one can compare the estimated matrices representing the relationships between variables in the model to the actual matrices. Formal statistical tests and fit indices have been developed for these purposes. Individual parameters of the model can also be examined within the estimated model in order to see how well the proposed model fits the driving theory. Most, though not all, estimation methods make such tests of the model possible.

For each measure of fit, rules of thumb have evolved regarding what represents good fit between model and data. These rules of thumb often need to be updated based on contextual factors such as the sample size, the ratio of indicators to factors, and the overall size of the model. Measures of fit differ in several ways. Because different measures of fit capture different elements of the fit of the model, it is appropriate to report a selection of different fit measures.

Some of the more commonly used measures of fit include:

- Chi-Square: A fundamental measure of fit used in the calculation of many other fit measures. Conceptually it is a function of the sample size and the difference between the observed covariance matrix and the model covariance matrix. The result for our model is : $\chi^2(74df) = 740.194; p < .001$

- Root Mean Square Error of Approximation (RMSEA). The indicator for this model is $RMSEA = .027$. A value of the RMSEA of 0.05 or less indicates a close fit of the model in relation to the degrees of freedom.

- Comparative Fit Index (CFI). In our model $CFI = 0.916$. CFI values close to 1 indicate a very good fit.

We may conclude that the model fits well the data. In addition, we verify that the three latent variables in the model are positively correlated. The estimated correlation between the latent variables "Altruistic motivation" and "Social oriented warm glow motivation" is 0.66. It is interesting to notice that this correlation is stronger than the correlation between the two "warm glow" types of motivation (0.61). The weakest (0.49) but still strong correlation occurs between the latent variables "Altruistic motivation" and "Ego driven warm glow motivation".

The values indicated in the arrows report the standardized parameter estimates. For instance, the value 0.75 in the arrow from "Altruistic motivation" to "Solidarity poor and disadvantaged" means that when "Altruistic motivation" goes up by 1 standard deviation, the

variable "Solidarity with poor and disadvantaged" goes up by 0.75 standard deviations.

The influence of the latent variable "Altruistic motivation" on the indicator variables confirms the findings of the initial factorial analysis. The altruistic motivation explains over 70% of the standard deviation of the reasons: "Help disadvantaged people", "Solidarity with poor and disadvantaged" and "Identifying with people who suffer". The weakest influence (below 50%) of this latent variable was registered on the reasons: "Religious belief" and "Opportunity to repay something".

The "Social oriented warm glow motivation" explains about 63% of the standard deviation of the reason "Make a contribution to my local community" and 50% of the standard deviation of the reason "Bring about social or political change".

The motivation "Ego driven warm glow" explains above 70% of the reason related with the possibility to gain new skills doing the voluntary work ("Gain a new skills and experience") which is the strongest influence of this latent variable. On the other hand, this latent variable explains only 39% of the reason related with the impossibility to refuse the invitation to do some kind of voluntary work, which is the weakest indicator in the whole model.

The result of the SEM estimation confirm the result of the PCA estimation and support the theory proposed by Nunes and Onofri (2002) and Andreoni (1990) classifying the motivations for volunteering.

7.5 Motivations and probability of volunteering

In this section we investigate whether there is a relationship between the types of volunteering and the latent motivations. Our starting point is the idea that individuals with different motivations do different types of volunteering. For instance, individuals who are altruistically motivated are more likely to do types of volunteering (such as, volunteering in world peace associations and volunteering to help disadvantage people) in which they do not receive any kind of direct reward than individuals who are not altruistically motivated. On the contrary, one expects that individuals who have ego driven motivations to be more likely engaged in volunteer work in professional and political associations which may provide them new and valuables contacts for the future.

In order to reduce the number of unpaid activities, we used PCA to group the 13 types

of unpaid work according to their common characteristics. Using the oblimin rotation method with Kaiser normalization and excluded cases listwise, we obtained 3 components (see Table 7.3). It should be noted that the same analysis, performed with data from the 4^{th} wave, in Chapter 5, revealed the existence of 4 components. This fact suggests that there may exist some instability regarding the correct number of components even though the differences in the data and countries analyzed may be to a large extent responsible for the divergence in the results between the 2^{nd} and the 4^{th} waves.

Table 7.3: Results from principal component analysis to unpaid work.

	Component		
Type of unpaid work	1	2	3
Human rights	0.660		
Peace movement	0.627		
Local politic action groups	0.575		
Social welfare service for elderly, handic. or depriv. people	0.570		
Organization concerned with health	0.502		
Women's group	0.430		
Political parties or groups		0.694	
Professional associations		0.632	
Labour unions		0.542	
Sports or recreation			0.669
Youth work			0.640
Education, arts, musics or cultural activities			0.537
Religious or church organizations			0.47
Principal component analysis, oblimin with Kaiser norm.			
Kaiser-Meyer-Olkin Measure of Sampling Adequacy	0.814		
Bartlett's Test of Sphericity (Chi-square)	11909.98	p-value	0.000

The value of the KMO statistic 0.814 indicates a good adequacy. Table 7.3 shows the correlations between the variables and the factors, with values less then 0.4 deleted.

The first component aggregates the following types of unpaid work: human rights; peace movement; local political action groups; social welfare service for elderly, handicapped or deprived people; organization concerned with health; and women's group. This component captures unpaid activities related to "social awareness volunteering". When we compare this component with the ones obtained in Chapter 5 we verify that, except for the variable "unpaid work

religious or church organization", this components aggregates the "social awareness volunteering" and the "social justice volunteering" identified in the 4^{th} wave.

We created a binary variable with the same name, which takes the value 1 if the individual does at least one type of unpaid work in this group, and takes the value 0 otherwise. People who participate in this type of activities are not likely to receive direct benefits but they are concerned with general and comprehensive social issues. That is why we have chosen the name social awareness (2).

The second component aggregates the following variables: unpaid work labour unions; unpaid work political parties or groups; and unpaid work professional associations.

This component captures activities that might be more related with personal interests and that may provide direct benefits to the people who engage in these activities. We called this component professional and political volunteering (2) and defined a binary variable with the same name. This variable is equal to 1 if the individual did at least one type of unpaid work in this group and is equal to 0 otherwise. This component grouped the same variables as the Principal Component Analysis of 4th wave in the Chapter 5.

The third component aggregates the following types of unpaid work: education, arts, music or cultural activities; youth work; sports or recreation and religious or church organization. This component also captures activities that may benefit directly the volunteer and the activities related with religious organizations. It groups all kinds of unpaid work which were included in the 4^{th} wave component education and leisure volunteering plus the unpaid work in religious organizations. In order to maintain the same principles we decided to call it education and leisure volunteering (2) and created another binary variable with the same name.

Considering the findings in the model of Figure 7.4 we created three motivation variables. These variables were computed as the weighted average of the associated reasons for volunteering, taking into account the standardized parameter estimates. As a result we obtained a continuous variable for each motivation: altruistic motivation, warm glow ego driven motivation and warm glow social oriented motivation. We want to know if these three motivation variables influence the probability of doing each type of volunteer work. Thus we decided to run logit regressions where the motivation variables are included as explanatory variables. The logit regressions also include the socioeconomic and demographic variables included in the regressions of Chapter 5. The regressions in this section and in the following section use data only from Brazil. As

mentioned before, one of the most consistent predictors of volunteering is the educational level. As the only valid answers for this variable are from Brazil we decided to run the regressions using only the Brazil observations. Moreover it should be highlighted that, due to the lack of valid answers, we were unable to include in the regression the following variables: number of people in the household and level of choice and control. The results of these regressions are shown in Table 7.4.

Before we analyze the results it should be noted that, since now we include the three motivations as explanatory variables, the impact of the remaining variables has to be analyzed for the same levels of motivation. For instance, maintaining the same levels of motivation and other explanatory variables, what is the impact of increasing education on the probability of volunteering? This interpretation is quite different from the one in Chapter 5 and, in our opinion partially explains why fewer factors are relevant. In fact, once we include motivations as explanatory variables, it is natural that some of the other variables stop having additional explanatory power. However it should also be noted that there are much fewer observations in these regressions than in the regressions of Chapter 5, which also helps explaining why fewer variables are statistically significant.

Analyzing the results we verify that there are fewer significative variables than in the regressions of Chapter 5. However, the significative variables are consistent with our previous findings. For example, individuals with higher educational level are more likely to participate in social awareness and political and professional volunteering than individuals with lower education level. Considering the variable income, we verify that high income individuals are more likely to participate in social awareness volunteering than low income individuals. Moreover, a female has less probability to do political and professional volunteering than a man. Individuals who live in large towns are also less likely to participate in political and professional volunteering and educational and leisure volunteering than individuals who live in a small town.

The most interesting fact about these regressions is that we may conclude something about the motivations which influence the decision of participating in a given type of volunteering. The results show that the altruistic motivation has a positive impact on the probability of doing social awareness volunteering. On the other hand, individuals who are motivated by warm glow social oriented reasons are more likely to volunteer in political and professional volunteering. This kind of motivation is connected with egoistic motivation with social preoccupations. These

Table 7.4: Results of the logit regressions for the various types of volunteering, including motivations as determinants.

Explanatory variable	Social Awareness 2	Political & Professional 2	Educational & Leisure 2
Inc_med	0.185	0.380	0.614
Inc_high	0.557**	0.602	0.315
Educ_med	0.346	-0.207	0.056
Educ. high	0.926***	1.020**	0.119
Emp_ptime	-0.242	-0.757*	-0.748**
Emp_slemp	-0.131	0.187	-0.166
Emp_ret	-0.159	-0.975	-0.387
Emp_hwife	-0.005	-0.996	-0.168
Emp_stud	0.128	-1.252	0.553
Emp_unempl	-0.379	-0.147	-0.170
Age	0.163**	0.045	-0.034
Age2	-0.002*	-0.0001	0.001
female	0.361	-0.812***	0.057
Town_medlrg	-0.614**	-0.440	-0.708***
Town_lg	-0.260	-0.982***	-0.779***
MS_livto	0.694*	0.237	0.422
MS_dvr	0.233	-1.059	0.347
MS_sep	0.401	-0.236	0.041
MS_wid	0.003	-0.786	0.007
MS_single	0.048	0.021	0.475*
Sat_med	0.335	1.496	0.109
Sat_high	0.951*	1.449	0.156
Rlig_rather	-0.125	0.116	-0.359*
Rlig_nosoimp	-0.136	-0-159	-0.830**
Rlig_notimp	-0.253	0.218	-0.726*
Warm glow social	0.024	0.623***	0.076
Warm glow ego	0.086	-0.254	-0.040
Altruistic	0.391**	-0.156	0.124
Constant	-7.754***	-4.556**	-0.132
Omnibus test	chi-sq81,374;p<0.01	chi-sq110,37;p<0.01	chi-sq48,78;p<0.01
Hosmer & Lemeshow Test	0.810	0.521	0.648

findings seem to confirm the Andreoni's (1990) opinion that individuals are not purely egoistic or altruistic as their utility function contains both of these two behaviors. In our regressions, none of the types of motivation has a significant impact on the probability of doing educational and leisure volunteering.

7.6 The determinants of motivations

In Section 7.4 we identified three latent motivation variables: altruistic motivation, warm glow ego driven motivation and warm glow social driven motivation. In this section we try to investigate whether the socioeconomic and demographic variables that we have been considering influence the motivation variables. It should be noted that these estimations are exploratory. Lack of many variables and many missing values did not allow us to use the same set of variables we used in other estimations and the number of observations is relatively small (we only include data from Brazil).

The results of ordinary least squares regression estimations are presented in Table 7.5

Concerning the indicators of global adjustment (R^2 and the $F-$ tests) one can conclude that the models have some explanatory power. The null hypothesis that all coefficients are equal to zero is rejected at the 5% level in the three regressions but it would not rejected at the 1% level in the ego driven warm glow motivation regression. Thus, in terms of global adjustment the altruistic motivation regression and the social oriented warm glow motivation regressions are better.

There is only one variable which is statistically significant for all types of motivation. The importance given to religion influences all types of motivation in the same direction: people who give more importance to religion are more motivated for volunteering (note that the excluded category in the regression is "religion is very important").

In the altruistic motivation regression, besides the importance of religion, only two other variables are significant: the educational level and the gender. According to the results, upper education level individuals tend to be less altruistically motivated than low education level individuals. In addition, females are more altruistic motivated then men. This finding is consistent with Ziemek (2003) and Prouteau and Wolff (2004) findings. Ziemek (2003) argued that "male volunteers exhibit higher shares of private consumption and investment motivation and lower

Table 7.5: Results of the OLS regressions explaining the various types of motivation.

Explanatory variable	Altruistic	Ego driven warm glow	Soc. orient. warm glow
Inc_med	-0.020	0.092	0.193*
Inc_high	-0.066	-0.093	0.041
Educ_middle	-0.051	-0.031	0.261**
Educ_upper	-0.265**	-0.194	0.431***
Emp_ptime	-0.081	0.011	-0.081
Emp_slemp	-0.058	-0.123	-0.439***
Emp_ret	0.009	-0.123	-0.351**
Emp_hwife	0.062	-0.131	-0.0001
Emp_stud	0.012	0.062	0.114
Emp_unem	-0.141	-0.146	-0.547***
Age	0.025	-0.025	0.049
Age2	-0.0003	0.00002	-0.0006
Female	0.179***	0.100	0.047
Town_medsm	0.035	0.050	0.189*
Town_medlrg	0.043	-0.100	-0.066
MS_livto	-0.012	-0.044	0.056
MS_dvr	0.151	0.213	0.474
MS_sep	0.128	0.039	0.308
MS_wid	0.103	-0.083	0.138
MS_sng	0.0001	0.116	0.252**
Sat_med	-0.051	-0.162	0.298
Sat_high	0.120	0.079	0.465*
Rlig_rather	-0.322***	-0.173**	-0.217**
Rlig_nosoimp	-0.397***	-0.142	-0.114
Rlig_noimpor	-0.381***	-0.095	-0.317
Constant	3.883***	4.480***	1.992***
Anova	F=4.227p-value<0.01	F=1.557p-value<0.05	F=2.241p-value<0.01
R-Sq	0.150	0.061	0.094
Number of observat.	627	627	627

shares of altruism motivation as compared to female volunteers". Prouteau and Wolff (2004) found that concerning the motivation to help others female are more likely to be motivated by this reason then men. It should be noted that religion is the most important variable in explaining the altruistic motivation, both in terms of the level of significance and magnitude of the coefficients.

Regarding the social oriented warm glow motivation regression it is interesting to notice that education has a clearly positive and significant impact on this type of motivation. On the other hand, the impact of income does not seem to be monotonous: medium income level individual have higher levels of social oriented warm glow than low income individuals, but high income individuals do not differ from low income individuals in terms this type of motivation. Other two variables that have a positive impact are leaving in a small-medium town (with respect to leaving in a small town) and being single. On the other hand being self-employed , retired or unemployed decreases the level of social driven warm glow motivation (with respect to being full time employed). These results are consistent with our expectations.

Although the models have some explanatory power, the results suggest that there are unobservable variables that influence the various types motivations.

7.7 Conclusion

In this chapter we studied the motivations to do volunteer work and their relationship with the probability of doing the various types of unpaid work. The chapter used the second wave of the WVS and EVS as this was the only wave with information regarding the reasons for volunteering.

An interesting question that we explored in this chapter was whether the reasons that are mentioned as important for volunteering are related with doing or not doing a certain type of unpaid work. Considering a given reason for volunteering and a given type of unpaid work, we compared the proportion of volunteers who consider that reason important with the proportion of non-volunteer who also consider that reason important. This allowed us to identify the types of unpaid work for which a certain reason was important. This simple analysis showed interesting links between reasons for doing unpaid work and doing or not doing a certain type of unpaid work.

Using the various reasons for doing volunteer work we then performed exploratory and confirmatory factorial analysis to investigate whether one obtains the three types of motivations suggested by Andreoni (1990) and Nunes and Onofri (2002). The results are quite supportive of the existence of three types of motivations: the altruistic motivation, the social oriented warm glow motivation and the ego driven warm glow motivation. In addition, the confirmatory structural equation model showed that the latent motivation variables are correlated. In particular, the altruistic motivation and the social oriented warm glow motivation have a high positive correlation.

Using principal component analysis we identified three types of unpaid work: social awareness volunteering, political and professional volunteering and educational and leisure volunteering. We ran logit regressions to explain the probability of each of the three types of volunteering, including the motivations as explanatory variables. The results show that the level of altruistic motivation has a significant impact on the probability participating in social awareness volunteering. On the other hand, the social oriented warm glow motivation has a positive impact on the probability of doing political and professional volunteering. Surprisingly, our results suggest that the ego driven warm glow motivation is not a relevant determinant for any of the types of volunteer work. We found out that the level of education and the level of income, the size of the town and the gender are significant for individuals motivated to do volunteering work.

The exploratory OLS regressions allowed us to identify the determinants of the various types of motivations. The available research concerning this subject is usually of a more descriptive nature, so our estimations are a possible contribution for future discussion on this subject. We found that, among our socioeconomic and demographic variables, there are few that influence motivations. The importance given to religion is the only variable with significant impact in all types of motivation, having a particularly strong influence on the altruistic motivation. The level of education has negative influence on the level of altruistic motivation, but a clearly positive impact of the social driven warm glow motivation. Another interesting result is that being a female increases the level of altruistic motivation.

Chapter 8

Conclusion

One objective of this thesis was to explore and test several explanatory models of volunteering activity. In particular, we identified the factors that determine whether individuals volunteer or not, considering both volunteering in general as well as volunteering in particular types of activities. The thesis also studied the interdependencies between the various types of volunteering and analyzed the volunteering decision as a choice among mutually exclusive alternatives that include the possibility of doing simultaneously more than one type of volunteering activity. Another objective of this work was to explore the motivations for volunteering. We explored the relationship between motivations and the various types of volunteering work and performed an exploratory analysis of the determinants of the different types of motivations.

We started by positioning the volunteering activity in the social sector of economy. We discussed the term «Social Economy» and other related terms used in Europe such as «Third Sector» and «Non Profit Sector». All these terms are related and are used to define the areas in the economy between the public and private sectors of activity. However the level of acceptance/recognition of the various terms is not the same in all countries. In our study we decided to use, following the French tradition, the «Social Economy» term. In particular, we discussed the importance of volunteering as a mobilizing mechanism between individual spheres of interests and concerns and public issues. Since one of the determinants of volunteering considered in this work was the country of living, the first part of our thesis also included a short description of the characteristics of volunteering activity in different European countries. We analyzed countries according to their geographic proximity. We found out that there are

some common characteristics that allow us to group countries as follows: the former socialist countries; the Mediterranean countries; the Scandinavian countries; and the Western European countries. This grouping was used latter on in the estimation of the multivariate probit and mulinomial logit models.

In order to make out the determinants of the volunteering decision we started by identifying the set of variables which have been considered in previous studies. In our study we decided to include a set of socioeconomic variables, a set of demographic variables and a set of attitudinal variables. In addition, we included country dummy variables to control for the influence of country-specific effects.

Through the estimation of logistic regressions using the 4th wave of the EVS we identified which of the explanatory variables have a significant impact on the probability of engaging in volunteering activities. The regression analysis was divided into two parts. In the first part we analyzed the determinants of volunteering in general. In the second part we identified four major types of volunteering and ran separate logistic regressions so as to understand the determinants of each type of volunteering.

The results of the logistic regression explaining the probability of volunteering in general confirmed most results in previous studies. For instance, education and income have a positive effect on the propensity for volunteering. The influence of age on the probability of volunteering has an inverted U shape, with the maximum propensity for volunteering occurring around fifty three years of age. As the number of children increases, the propensity for volunteering also increases, except for the case of very young children (below 5) where the opposite is true. Employment status as well as marital status also influence the probability of volunteering.

In the analysis of the determinants of the probability of volunteering in general our main contribution was the inclusion of attitudinal characteristic as determinants of volunteering and the study of country specific effects. We concluded that the level of choice and control, the level of satisfaction with life and the importance given to religion are all important factors in explaining the probability of volunteering. In addition, our results revealed that there are large country differences regarding the propensity for volunteering. Individuals from Scandinavian countries and from some Western European countries, such as Belgium and Netherlands, are more likely to engage in volunteering work while individuals from Mediterranean countries and post-socialist countries are less likely to engage in volunteering activity.

Using principal component analysis we identified four types of volunteering activities: social awareness volunteering, social justice volunteering, professional and political volunteering and educational and leisure volunteering. This lead us to investigate whether the various types of volunteering activity have the same set of determinants.

Our results clearly indicate that the set of determinants of the propensity for volunteering is not the same for all types of volunteering. For instance, income has a positive and statistically significant impact on the probability of volunteering in professional and political as well as in educational and leisure activities but does not influence the other types of volunteering. Age is not statistically significant for the educational and leisure volunteering but influences the probability of engaging in the remaining volunteering activities. Being a female has a positive impact on the probability of engaging in social justice volunteering whereas it has a negative impact on the probability of engaging in professional and political volunteering as well as in education and leisure volunteering activities. Having children above 5 years of age influences positively the probability of engaging in educational and leisure activities but does not have a significant influence in other types of volunteering. Finally, the importance given to religion is an important variable to explain the probability of volunteering in social awareness and social justice activities but is not relevant to explain other types of volunteering. Regarding the country dummy variables, although there are some differences relatively to volunteering in general, the general pattern is similar. Overall, there is lower propensity for volunteering in post-socialist and Iberian countries whereas the opposite is true for Scandinavian countries, Great Britain, Netherlands and Slovakia.

Analyzing the data we found out that there were many individuals who declared to do more than one type of volunteering. This suggests that the propensity to do a certain type of volunteer activity may influence the propensity to do other types of volunteer work. Through the estimation of a multivariate probit model we confirmed that the various types of volunteering were correlated. More specifically, we found positive and statistically significant correlations between the disturbances terms of the various types of volunteering, indicating that the unobserved factors which positively influenced the decision to do one type of volunteering also influence the decision to do other types of volunteering.

The multinomial model and corresponding marginal effects estimation allowed us to estimate the effects on the probability of choosing one alternative when a certain explanatory variable

increases. Unfortunately data constrains only permitted the estimation of the multinomial model with 6 categories (not volunteering, volunteering only in social awareness activities, volunteering only in political and professional activities, volunteering only in educational and leisure activities, volunteering only in social justice activities and volunteering in more than one type of activity). The analysis of the marginal effects of multinomial model revealed some differences with respect to the separate logit regressions but the largest value added of this analysis came from the results concerning the probability of engaging in more than one type of volunteering. Our results showed that higher education and higher income are associated with higher probabilities of being engaged in multiple volunteering. Individual who are part-time employed, self-employed and students have higher probability of engaging in multiple volunteering than full time employed whereas the reverse happens for unemployed individuals. The variables satisfaction with life, level of choice and control and importance of religion also have a positive impact on the probability of engaging in multiple volunteering. On the contrary the probability of engaging in multiple volunteering is negatively affected by the number of children in the household and is lower in medium large and large towns than in small towns.

The next issue explored in the thesis, using the 2nd WVS data, were the motivations for volunteering. Using the test for the difference between the proportions of two different populations we examined if the reasons that are mentioned as important to do volunteer work are related with doing or not doing a certain type of volunteer work. We concluded that more altruistic reasons like: "help disadvantages peoples" or "solidarity with poor" or "identify with people who suffer" are positively related with types of unpaid work where individuals do not expect a direct reward and are instead driven by an intrinsic satisfaction (unpaid work in social welfare organization; human rights; religious organizations; etc.). On the other hand, reasons like "time in my hands", "personal satisfaction" or "did not want but could not refuse" are not considered important motivations for any type of volunteering. The preoccupation with the status quo of the social and political situation expressed in the reason "Bring about social or political change" is a motivation for volunteering in labour unions, political parties or groups, local political action groups, human rights, professional associations and peace movements. Similarly, the reason "Moral obligation or sense of duty" is important for volunteers in religious or church organization, political parties or groups, and peace movement but not for volunteers in education, arts, music or cultural activities or youth work. On the contrary, the reason "Gain new skills and a

useful experience" seems to be particularly important for individuals who volunteer in sports or recreation.

Applying principal component analysis to various reasons for volunteering we identified three types of motivations. We interpreted these three factors using the classification of motivations proposed by Andreoni (1990) and Nunes and Onofri (2002): altruistic motivation, warm glow ego driven motivation and warm glow social oriented motivation. Using a confirmatory structural equation model we found that these motivations have very strong correlations. We might conclude that individuals are motivated jointly by altruistic and egoistic motivations when they decided to volunteer.

The last part of our work used a much more restricted data set considering only observations from Brazil. In this part, we started by introducing the three latent motivation variables into the logistic model explaining the probability of volunteering. Our results show that the altruistic motivation has a positive impact on the probability of doing social awareness volunteering. On the other hand, individuals who are motivated by warm glow social oriented reasons are more likely to volunteer in political and professional volunteering. Surprisingly, the ego driven warm glow motivation does not seem to be significant for any type of volunteering. Lastly, we investigated whether the socioeconomic, demographic and attitudinal variables that we have been considering influence the motivational variables. These regressions should be considered exploratory work, but we hope they are a contribution for future discussion on this subject. The results revealed that there are few significant variables to explain the three types of motivations (e.g. the importance of religion, educational level and the place of living). People who give more importance to religion are more motivated to do volunteer work. The other important variables that influence the motivation for volunteer are educational level and gender. According to the results, upper education level individuals tend to be less altruistically motivated than low education level individuals. In addition, females are more altruistically motivated than men.

Overall, we believe that the major contributions of this thesis are related with: (*i*) the inclusion of attitudinal and country specific effects in the analysis of volunteering; (*ii*) the recognition that different types of volunteering have a different set of relevant explanatory variables; (*iii*) the consideration that the different types of volunteering activities are interrelated; (*iv*) the study of the motivations for engaging in volunteering activities and of the relationship between motivations and the engagement in the different types of volunteering activities.

It should be highlighted that our work only analyzed the decision of participating in volunteering activities. Our data set did not include variables such as the number of hours of volunteering or the wage. Thus we were unable to estimate the supply of volunteering work and to analyze important issues like the impact of the wage in the supply of volunteering. It would be extremely interesting to analyze these types of issues with a multi-country data set, but that was not our case.

Another limitation of our data set is related with the fact that the 4th wave of the EVS does not include variables concerning the reasons for volunteering. In general, the 4th wave is a much more complete and reliable data set, but the lack of the motivation variables obliged us to use the 2nd wave of the data in the last chapter of our thesis (moreover, the last two sections of this chapter used only Brazil data). Probably the results regarding motivations and their relationship with the various types of volunteering would have been much stronger if we had a better data set.

Regarding suggestions for future work we believe that a deeper study of cross country differences might be of great interest. In our analysis the country dummy variables only influenced the constant term in the regression. However it is possible that the influence of the explanatory variables on the probability of volunteering also differs across countries. Thus it may be interesting to run separate regressions for each country. It would also be interesting to study whether we can "pool" some countries together and run separate regressions for the various groups of countries. We are aware that this work does not provide answers to a great deal of questions related with volunteering. However our objective is to contribute to the refinement of the questions that need to be addressed by future researchers.

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