

ANALYSIS OF CROSS-COUNTRY DIFFERENCES IN THE NON-PROFIT SECTOR SIZE

Primož Pevcin*

Abstract:

This paper theoretically and empirically investigates variations in the size of the non-profit sector among countries. Although the non-profit sector has experienced growth in relative socio-economic importance in recent decades, the available data on the size of the sector indicates substantial variations among countries. Existing literature provides several multi- and interdisciplinary theories, hypotheses and concepts that try to explain those differences, such as for instance the heterogeneity and failure theories, the resource dependence theory and interdependence theory. Empirical findings indicate that the selection of the measurement of sector size influences the ability to explain the differences in the size of the sector across countries. The results of a cross-section regression analysis indicate that almost three quarters of cross-national variation in the sector workforce could be explained, whereas pooled regression indicates that almost three fifths of variation in sector size, if workforce and expenditures are taken as dimensions of the sector, could be explained. Moreover, regression analysis tends to support the propositions of resource dependence and demand heterogeneity (government failure) theory, although there is also some ground for supporting the interdependence theory.

Keywords: Non-profit sector workforce and expenditures, heterogeneity and failure theories, resource dependence theory, interdependence theory, correlation and regression analysis.

JEL Classification: L30

1. Introduction

Salamon and Anheier (1997) have defined the non-profit sector as a collection of entities (organisations) with five characteristics: institutionalisation, separation from government, self-governance, non-profit distribution and a certain degree of voluntarism.¹ The non-profit sector includes a diverse set of organisations which basically serve common purposes, such as organisations in health, human services, arts, culture, education, research, religious services, fund-raising and advocacy

* University of Ljubljana, Faculty of Administration, Gosarjeva ulica 5, SI-1000 Ljubljana, Slovenia (primoz.pevcin@fu.uni-lj.si).

¹ See also UN (2003).

activities, *etc.*² This is a very diverse sector that tends to produce certain quasi-public goods and services, determined by the willingness of individuals, businesses, governments and other institutions to cooperate with non-profit organisations for the purpose of achieving their mission and goals (Hodginkson and Weitzman, 1996).³ Indeed, the theory of the commons, an interdisciplinary approach to non-profit sector analysis, initiated by Lohmann (1992), argues that the non-profit sector actually produces the so-called commons. As Worth (2009) has argued, commons (or, according to him, common goods) are the third kind of goods which are different from private goods in a sense that they cannot be consumed alone by an individual, but they also differ from public goods in the sense that they do not benefit all the people.⁴

The non-profit sector emerged due to several forces, including the failure of both market and government to provide certain goods and services to citizens, the emergence of pluralism and individual freedom in modern societies and increased pressures on solidarity among people (Salamon, 1999).⁵ The non-profit sector currently represents an important part of the economical, political and social environment in most developed countries.⁶ Nevertheless, substantial variations exist in the size of non-profit sectors in separate countries, which can be seen in existing data sources. Consequently, the main purpose of the paper is to identify and empirically validate potential factors that shape the differences in the size of the non-profit sector in various countries. The paper is organised as follows: Chapter 2 presents an overview of existing empirical research; Chapter 3 delivers an insight into data on sector size and a discussion on cross-national variations in socio-economic importance of the sector; Chapter 4 describes theories of non-profit sector growth and development; Chapter 5 presents data used in empirical analysis and Chapter 6 presents the methodology and findings of empirical analysis of cross-country variations in sector size; finally, the paper concludes with brief concluding remarks and a list of references.

2 Corry (2010) has pointed out that this sector in practice includes non-governmental organisations (NGO's), charities, self-help groups, social enterprises, clubs and networks. Thus, this means that non-profit sector does not include only non-governmental organisations (Salamon, 2010), although the terms may often be used as synonyms and potentially confusing. Lewis (2010) has argued that these two labels are often used as synonyms in relation to international and developing country activities, as United Nations tended to label certain international non-state organisations with consultative status in UN activities as NGO's. Moreover, since this is a very diverse sector, numerous alternative sector labels are used in literature, such as for instance third sector, voluntary sector, independent sector, civil society sector *etc.* (see Worth, 2009; Lorentzen, 2010).

3 This notion has also contributed to accentuate the distinction between the non-profit and government sector. The non-profit sector should rely primarily on the ideas of individualism and pluralism in goods and services provision while the government sector should primarily rely on the ideas of equality and justice in goods and the provision of services.

4 Most of the commons (scientific meetings, church meetings *etc.*) are available only to members and participants, but not to all people. This actually means that the main difference between commons and public goods is the inability of the former to be indivisible.

5 This means that the existence of the non-profit sector is, in fact, the result of the development of democratic society and the capitalist economic system.

6 Salamon *et al.* (2007) have reported that these organisations should, on average, account for approximately 5 % of GDP.

2. Empirical Research Overview

So far, several empirical studies have been performed that have tried to investigate the determinants of non-profit sector growth, development and variations. There is, however, a lack of studies focused on the determinants of cross-country variations in the size of the non-profit sector. The majority of existing studies is country specific, as for instance Corbin (1999), Grønbjerg and Paarlberg (2001), Luksetich (2008), *etc.* Besides, most studies are focused on the verification of particular theories and their empirical effect on the size of the non-profit sector. For instance, the findings of several studies suggest a positive relationship between income and the size of the non-profit sector.⁷ Grønbjerg and Paarlberg (2001) have also revealed that the size of the non-profit sector is more sensitive to opportunity structures created by social and political conditions in the community,⁸ meaning that supply side factors should be more important in determining the size of the non-profit sector.⁹ Similarly, Luksetich (2008) has found a positive and statistically significant relationship between governmental grants and the number of non-profit organisations in the United States.¹⁰

One of the few cross-country empirical researches has been performed by Salamon and Sokolowski (2001) or Matsunaga, Yamauchi and Okuyama (2010). The former authors have pointed out a positive relationship between governmental social spending and the amount of volunteer participation, although they have expected negative relationship due to the »crowding-out effect«. In contrast, the latter authors, like the former also using CNP (2004) data for, and employing several other relevant control variables in the analysis, have found a negative effect of governmental health and education expenditures on paid employment in the non-profit sector,¹¹ and they have also argued intensively in the favour of government failure theory.

Nevertheless, there is a clear lack of cross-country oriented studies, a potential factor being the lack of internationally comparable data. The approach taken in this study is to combine the experience of existing studies and develop a cross-section econometric model in which the size of the non-profit sector, measured by the share of sector employment and expenditures, is to be explained through relevant economic, social, cultural and political factors. Consequently, the concepts and ideas of relevant

7 For instance, Corbin (1999) has reported that in his study correlation coefficient between *per capita* income and number of non-profit social service organisations is approximately 0.50.

8 For instance, they have reported that correlation coefficient between percentage of adults with bachelor degree and the number of charitable non-profit organisations is 0.49.

9 Ben-Ner and van Hoomissen (1992) have even suggested that the wealth is important determinant for the size of all sectors in the economy, and non-profit sector should be no exception.

10 Actually, Luksetich (2008) has calculated that a 10% increase in the amount of governmental grants increases the number of non-profit organisations by 3.8%. This notion has also been addressed in other empirical studies. For instance, Bielefeld (2000) has also pointed out positive relationship between public social expenditures and size of the non-profit sector.

11 Their results indicate that a percentage increase in governmental expenditures would decrease paid employment in the non-profit sector by approximately 1.8 percent (c.p.). Interestingly, the results are not so straightforward, if paid and volunteer employment is taken as dependent variable.

non-profit theories are combined in the development of the econometric model. The main purpose of this research is to investigate the relationship between selected explanatory variables and the size of the non-profit sector. The research would also like to determine how much of the cross-country variation in the size of the non-profit sector can be explained with the selected explanatory variables.

3. Cross-Country Evidence on the Size of the Non-Profit Sector

Existing literature and empirical evidence generally supports the thesis that there has been a substantial growth in the number of non-profit organisations and consequently also in the socio-economic importance of the non-profit sector in recent decades (see Salamon, 1994; Weisbrod, 1998; Hammack, 2001, *etc.*).¹² Nevertheless, substantial differences exist in the development and relative socio-economic importance of the non-profit sector among countries, even among developed ones. This can also be surmised from existing cross-national data on the size of the non-profit sector, published in CNP (2004).¹³ As shown in Table 1, the size of the non-profit sector, if measured by the share of its workforce in the economically active population or by the share of sector expenditure in GDP,¹⁴ seems to be greater in some Western and Northern European countries, as well as in Anglo-Saxon countries. In contrast, the activities of non-profit organizations are usually hampered in totalitarian political regimes, as the tendency exists there for the political system and government to dominate civil society. This fact can, for example, be observed in post-socialist countries and in some Asian

12 For instance, Salamon (1994), who has labelled that process as »associational revolution«, has stressed that this growth occurred because the non-profit sector actually increasingly complements the government and markets in the provision of important services, especially in health, education and social areas. Since those services are often funded or subsidised by the government, the government should be seen as (an indirect) promoter of the growing importance of non-profit organisations in the economy. In contrast, Weisbrod (1998) has stressed that the main reason for the growth is to be found in rising heterogeneity of the population caused by greater human migrations and information flows, whereas Hammack (2001) has argued that this growth occurred predominantly because individuals, businesses and other institutions gained greater independence from the government and increased incomes allowed them to increase demand for educational, health care, cultural and social services.

13 It should be stressed that there is a lack of internationally comparable data which can be attributed, among other factors, to a great diversity of activities that non-profit organisations perform and great diversity of organisational forms of non-profit organisations.

14 It should be noted that various “alternative” measurements of the size of the non-profit sector exist, predominantly in the form of various indexes such as the Civil Society Index (Civicus, 2006), the Global Civil Society Index (Salamon and Sokolowski, 2004) or another Global Civil Society Index (Glasius, Kaldor and Anheier, 2002) which measures only cross-border aspects of civil society. Nevertheless, certain limitations to such measurements exist, including for instance the issue of formal rigorousness, inclusion of all dimensions of the sector, the ability to express results in one number, *etc.* (see Lyons, 2009). Moreover, one of the problems associated with using those indexes is that they tend to be developed for specific sets or groups of countries, thereby omitting the usage of alternative measurements in analyses performed in the same sample of countries.

and African countries in which the size of the non-profit sector remains relatively smaller than in comparable industrial western countries.¹⁵

Table 1

Size of the Non-Profit Sector (sector workforce and sector expenditures) in Selected Countries¹⁶

Country	Workforce (share of econ. active population, %)	Expendi- ture (share of GDP, %)	Country	Workforce (share of econ. active population, %)	Expendi- ture (share of GDP, %)
Argentina	4.8	5.1	Japan	4.2	5.0
Australia	6.3	5.4	Kenya	2.1	2.5
Austria	4.9	3.0	Mexico	0.4	0.5
Belgium	10.9	8.4	Morocco	1.5	0.8
Brazil	1.6	1.5	Netherlands	14.4	15.5
Canada	12.1	6.7	Norway	7.2	3.7
Chile	5.2	1.5	Pakistan	1.0	0.3
Colombia	2.4	2.1	Peru	2.5	2.2
Czech Rep.	2.0	1.7	Philippines	1.9	1.5
Denmark	6.8	6.6	Poland	0.8	1.3
Egypt	2.8	2.0	Portugal	4.2	4.2
Finland	5.3	3.9	Romania	0.8	0.3
France	7.6	3.8	Slovakia	0.8	1.4
Germany	5.9	4.0	South Africa	3.4	1.3
Hungary	1.1	2.8	South Korea	2.4	4.8
India	1.4	0.6	Spain	4.3	4
Ireland	10.4	8.4	Sweden	7.1	4.1
Israel	8.0	12.7	Un. Kingdom	8.5	6.8
Italy	3.8	3.1	United States	9.8	7.5

Source: CNP (2004)

15 Civicus (2006) in particular has reported that in post-socialist countries one of the major factors affecting the lesser extent of non-profit economy is the legacy of socialism, since a rather negative attitude towards voluntary work has been observed in those countries. The argument is that citizens of those countries strongly associate this type of work with the socialist era during which people were often 'coerced into volunteering' for state-controlled organisations. In addition, Howard (2002) has stressed another two important factors hampering the development of the non-profit sector in post-socialist countries; the ongoing persistence of friendship networks which served as substitutes for non-existent non-profit and even for-profit organisations during the socialist era and great disappointment with political and economic development after the fall of communism, which caused a demobilisation of people from public activities.

16 The data for the share of the non-profit sector in the economically active population excludes religious worship organisations. The data refers to the collecting period of 1995-2000, except for Portugal (2000), Canada (2003), Chile and Denmark (2004). See the source for data and methodological references.

4. An Introduction to the Theory Explaining Variations in Non-Profit Sector Size

The status and importance of the non-profit sector is influenced by various factors, including the state of domestic economy and public policies, changes in population preferences *etc.* but certain sources of support based on voluntary donations of time and other contributions are unique to this sector (Hodgkinson and Weitzman, 1996). Salamon *et.al.* (2007) have revealed a distinctive economic structure of the sector that is associated with the substantial labour intensity and mobilisation of volunteer effort. This means that sector operation is based on the existence of the so-called economies of grants which enable the sector to operate in almost all areas of social life, often quite independently of current political and economic conditions (Ott, 2001).¹⁷

Consequently, several approaches in theory and practice attempt to rationally explain the observed differences in size of the non-profit sector among countries and societies. The existing hypotheses, concepts and theories of the differences in size and development of the non-profit sector can be divided into demand side and supply side approaches. The demand side approaches usually focus on the role of the non-profit sector in provision of goods and services that are not adequately provided by the for-profit and government sector. Supply side approaches, in contrast, usually stipulate that the size of the non-profit sector is related to the extent of resources available to the sector, which should depend also on the wealth of a certain society (Grønbjerg and Paarlberg, 2001).¹⁸

One of the most influential of the typical demand side oriented approaches are failure theories. These theories are economic in their nature; they state that the non-profit sector exists due to market failure, contract failure and government failure (Young, 1998). According to the market failure argument, the need for the non-profit sector emerges in order to offset transaction costs, a typical example being the costs of obtaining information or costs of pooling the resources to achieve common goals, *etc.* Similarly, the contract failure argument supplements the idea of market failure argument in the case of complex goods (*i.e.*, higher education, medical treatment *etc.*), where consumers are

17 The essence of the non-profit sector is that it receives operating resources from many different sources, although the relative importance of each type of source historically varies. For instance, recently observed trends, which can also be inferred from data extracted from CNP (2004), have revealed that user fees and other sources from commercial activities are, on average, increasingly replacing governmental funding that prevailed in last few decades while private philanthropy has become relatively negligible. This has happened due to increased pressures for commercialisation of non-profit sector activities. Nevertheless, substantial cross country variations exist also in the relative importance of different types of financing. Specifically, user fees tend to prevail in Latin America and Eastern Europe, whereas government funding tends to be the most important source of revenue in Western Europe. For more on this topic see also Salamon *et al.* (2007).

18 It is worth noting that supply side oriented approaches emerged later as demand side hypotheses often provided inconclusive statements on the reasons for the existence of the non-profit sector.

unable to competently evaluate the quality and quantity of services they are receiving.¹⁹ Finally, the government failure argument stipulates that the need for a non-profit sector emerges when governments fail to correct market failures, thereby creating the space for non-profit organisations to fulfil unsatisfied needs.

It is worth noting that certain political and structural reasons usually exist to prevent government from fulfilling such unsatisfied needs. For example, there exist political limitations to government provision of goods and services since governmental policy making and implementation tend to be subjected to constraint of political feasibility, which is not the case in non-profit sector (Douglas, 1987). Similarly, the nature of government is to respond to the needs and demands of the majority. This means that in diverse societies there is a problem of achieving universal agreement on goods and services provided by the government. Hence the government failure argument is closely related to the heterogeneity theory (see Weisbrod, 1988), which argues that the relative importance of the non-profit sector is related to the increased heterogeneity of modern societies. In essence, heterogeneity causes the preferences and needs of citizens to differ more and more, thereby decreasing demand for universal public goods and services but increasing demand for “public” goods and services with more individualistic and pluralistic characteristics.²⁰ The conclusion is that countries with more homogeneous demand should have a relatively smaller non-profit sector than countries with more heterogeneous demand.

However, existing literature also stresses that it is necessary to differentiate two distinct features of heterogeneity: socio-economic (supply side) heterogeneity and cultural (demand side) heterogeneity. The cultural aspect of heterogeneity (described by ethno-linguistic and religious fragmentation of society) is actually in line with Weisbrod's proposition, but the effect of socio-economic heterogeneity on the size of the non-profit sector should be opposite. The idea is that the resources available for non-profit organisations are more easily attainable in more socially homogeneous societies with greater social cohesion, which increases the frequency of social interactions (Corbin, 1999). Furthermore, the resource dependence approach even argues that resources available to the non-profit sector depend on the wealth of a certain society (as a prerequisite for the ability to contribute funds), which is closely related to altruism

19 Market and contract failure arguments are sometimes labelled as trust theory (see Hansmann, 1996; Anheier, 2000). Imperfections in market relationship and informational asymmetry can cause a state in which providers are able to exploit their market position and the ignorance of buyers to maximise their interest (Grønbjerg, 1998). In this sense, because non-profit sector organisations have less incentives and possibilities to exploit buyers' ignorance, they are usually more trusted in the provision of certain goods and services which are characterised by large market imperfections or the existence of important informational asymmetries.

20 As the heterogeneity of the population increases, more and more voters differ from the median voter which means that the government cannot easily follow their preferences. As Young (1998) has stressed, this causes increased niches and demands for non-profit organisations to provide additional »public« goods and services in order to meet those preferences. Those categorical and pluralistic constraints of government policy making, as described by Douglas (1987), are actually focal points of the heterogeneity approach.

and giving theories of non-profit sector which address psychological, sociological and economic aspects of individual philanthropy, altruism, charity and voluntarism (Mount, 1996), although they tend to be more micro oriented in their nature.²¹

Salamon (1987) has also argued that the government provides substantial financial resources to the non-profit sector that in turn delivers the services, thereby replacing governmental provision. These are actually the foundations of the so-called interdependence theory that claims the government is a partner to non-profits in the production of quasi-public goods, meaning that there exists a complementary relationship between the non-profit sector and the government in dealing with market and government failures. This government – non-profit sector relationship has also been addressed in the so-called social origins theory (Salamon and Anheier, 1998) which argues that the size of the non-profit sector is a result of power relations among different social classes and key social institutions. However, in contrast to the interdependence theory, the social origins theory points out that no uniform relationship between size of the governmental social (welfare) spending and the size of the non-profit sector exists. Consequently, the theory proposes four different non-profit regime types: statist, social-democratic, liberal and corporatist (Salamon and Sokolowski, 2001).²²

5. Data Description

The empirical analysis is based on a sample of 38 countries which is due to the fact that there exists only a limited amount of available and internationally comparable data on the size of the non-profit sector.²³ The main approaches evaluated in the study are the heterogeneity of demand and supply, the resource dependence theory, the interdependence theory and failure theories.²⁴ However, it needs to be stressed once again that this is an exploratory study that attempts to create some insight into

21 In relation to resource availability, it should be noted that some authors have pointed out the inverse relationship between government and donor support for non-profit activity (see, *e.g.*, Andreoni and Payne, 2003, 2011), which means that one type of support should effectively crowd out other types of support. This actually means that government social spending should crowd-out volunteering and, subsequently, non-profit activities.

22 Kabalo (2009) has even suggested that a fifth non-profit regime exists, closer related to power relations between social classes in decolonised and newly emerged states. She has argued that clashing patterns between a welfare state and the size of the non-profit sector could be expected in those countries, depending mostly on the historical experience.

23 The sample of analysed countries includes Argentina, Australia, Austria, Belgium, Brazil, Canada, Chile, Colombia, the Czech Republic, Denmark, Egypt, Finland, France, Germany, Hungary, India, Ireland, Israel, Italy, Japan, Kenya, Mexico, Morocco, the Netherlands, Norway, Pakistan, Peru, Philippines, Poland, Portugal, Romania, Slovakia, South Africa, South Korea, Spain, Sweden, the United Kingdom and the United States.

24 This means that empirical analysis is based on the framework developed by Corbin (1999), although this study is cross-nationally oriented, meaning that different variables are used in order to explain the variations on the basis of the availability of data in the international context.

potential factors that shape the differences in the size of the sector among countries and particularly the extent of variation that could be explained with those factors.²⁵

The non-profit sector workforce as a percentage of the economically active population (Workforce) and the non-profit sector expenditure as a percentage of GDP (Expenditures) are used as dependent variables which are, according to Anheier (2000), two of the most commonly used measurements for non-profit sector size. As previously noted, the data for these variables is derived from CNP (2004).

The first explanatory variable describes the supply-side heterogeneity of the society. Existing research suggests that the most suitable measurement of socio-economic heterogeneity of a society is income inequality. Therefore, the Gini index (Income inequality) is used as a proxy for income inequality in society. The Gini index measures the extent to which distribution of income between individuals and households in society deviates from a perfectly equal distribution. This means that greater values of the index indicate greater income inequality in society. The source of data for these measurements is UN (2009) for the period 1992-2007.

The second explanatory variable describes the level of democratic development of the society which should try to explain the notion that the socio-economic importance of the non-profit sector is the result of democratic development of society. In this context, it should be expected that the non-profit sector is greater in more democratic countries. The source of data for these measurements is the index of democracy (Democracy) taken from Vanhanen (2000). This index attempts to measure democracy through competition and participation, where a greater value of index denotes greater democracy. The data relates to year 2000, since it is taken from Dataset Version 2.0.

The third explanatory variable relates to the resource dependence hypothesis which stipulates that the development of the non-profit sector is related to the availability of resources to the sector. Variable real gross domestic product *per capita* in 1.000 purchasing power parity USD is used as a measurement of wealth of the society (Wealth), although it often does not perfectly reflect the wealth and development of a society as several authors have stated that it does not incorporate all aspects of well-being (see Mishan, 1993; Stiglitz, Sen and Fitoussi, 2008).²⁶ The source of data for these measurements is Freedom House (2002) and it relates to the year 2000.

The fourth explanatory variable used in the analysis relates to interdependence hypothesis. This variable describes the size of government transfer expenditures in GDP (Transfers). It describes the amount of governmental welfare related spending; the study would like to show whether this spending promotes or crowds out non-profit

25 Since many variables used in the analysis are not collected and reviewed on regular basis, the focus is more oriented towards the evaluation of the concepts discussed in the paper rather than issues related to data quality.

26 Namely, GDP levels do not take into account certain real costs of production because these costs do not pass through markets. Nevertheless, since the resource availability tends to depend on income, GDP *per capita* should reasonably be used to test this hypothesis.

sector (social) activities. The data for this variable is taken from the Gwartney and Lawson (2009) dataset and relates to the year 2000. The existing data in the dataset has been modified for the purpose of the analysis. Initial ratings (originally denoted V_j) for each country have been reversed by the formula $10 - V_j$. This modification should enable countries with a greater governmental transfer expenditure ratio to also have greater values of the explanatory variable, so the relation between size of government and size of non-profit sector could be directly tested.

The fifth explanatory variable used in the analysis relates to the market failure argument. Although it is difficult to directly investigate the effect of the market failure argument, an insight into the existence of market failure could be indirectly observed through poverty (Corbin, 1999). However, it is very difficult to gain internationally comparable data on poverty in cross-national comparison. Measurements of absolute poverty are closely related to the development of society, thus omitting the possibility of associating those levels with the perceived market failure. Besides, data on Head Count Index that measures the percentage of population in country with a standard of living below the national poverty line is biased, since definitions of poverty vary between countries and wealthier countries tend to employ more generous standards of poverty and some countries do not even report official index values (see World Bank, 2010). Nevertheless, for the purpose of developing the model, the variable measuring of poverty with the Head Count Index (Poverty) is included. The source of data for these measurements is CIA (2010).

Finally, in relation to demand side heterogeneity and government failure hypotheses, three explanatory variables are used to describe ethnic (Ethnics), linguistic (Language) and religious (Religion) fragmentation of society. All three indexes are calculated as one minus the Herfindahl index of ethnic, linguistic or religious group shares, where ethnic fragmentation includes not only linguistic, but also racial and physical characteristics which are omitted if only linguistic fragmentation is taken into consideration. The source of data for these measurements is Alesina *et al.* (2003).²⁷

27 It is worth noting that Alesina *et al.* (2003) used separate measurements for ethnic and linguistic fragmentation of society, where also racial and ethnic and not just linguistic differences are taken into account. This distinction is particularly important for Latin American countries which tend to be linguistically more homogenous than ethnically. In contrast, linguistic fragmentation has a greater tendency to also reflect ethnic fragmentation in European countries. Nevertheless, some extent of correlation between these two measurements should be expected, although the effect of linguistic fragmentation prevails over the effect of ethnic fragmentation. Alternatively, Desmet, Ortuno-Ortin and Wacziarg (2009) have created a combined measurement of ethno-linguistic fragmentation of society which is based on linguistic cleavages. Nevertheless, since this measure (at 15th level of aggregation) is highly positively related to the measurement of linguistic fragmentation of society ($r=0.85$; $p<0.01$) and slightly less positively related to ethnic fragmentation of society ($r=0.53$; $p<0.01$), two separate measurements of ethnic and linguistic fragmentation of society are used in the analysis as it is assumed that this combined measurement better describes linguistic rather than ethnic fragmentation of society.

Table 2

Descriptive Statistics

Variable	Mean	Standard Deviation
Workforce	4.7526	3.5492
Expenditures	3.9737	3.3244
Income inequality	36.6289	9.6245
Democracy	26.3437	11.6263
Wealth	15.4825	9.2468
Transfers	3.9574	2.2129
Poverty	20.5774	12.4347
Ethnics	0.3006	0.2407
Language	0.2791	0.2720
Religion	0.4137	0.2356

Descriptive statistics are presented in Table 2. The mean share of non-profit sector workforce in the economically active population for selected 38 countries is approximately 4.75%; with the Netherlands having the maximum value (14.4%) and Mexico having the minimum value (0.4%). The mean share of non-profit sector expenditures in GDP is approximately 3.97%; with the Netherlands again having the maximum value (15.5%) and Pakistan having the minimum value (0.3%). The mean value of income inequality (Gini index) is approximately 36; Denmark having the minimum value at 24.7 and Colombia having the maximum value at 58.5 as country with the largest income inequality in the sample. The mean value of Vanhanen's index of democracy is approximately 26, with Pakistan having the minimum value and Italy having the maximum value, whereas the mean value of GDP *per capita* (wealth) in the sample is approximately 15,500 PPP USD, with Kenya having the minimum value at just slightly above 1,000 USD and the United States having the maximum value at almost 32,000 USD. The mean value of the governmental transfer expenditure variable is approximately 3.96; with Pakistan having the minimum value and France having the maximum value with the greatest extent of governmental transfer expenditure (in GDP) in the sample. The mean value of Head Count Index (poverty) is 20.58%, with Ireland having the minimum value at 4.2% and Kenya having the maximum value at 50%, where half of population lives below the national poverty line. The mean value of the ethnic fragmentation of society is 0.30, with South Korea having the minimum value at 0.002 and Kenya having the maximum value at 0.86 as the most ethnically fragmented society in the sample. Regarding the last two explanatory variables, the mean value of linguistic fragmentation is approximately 0.28, again with South Korea and Kenya having the minimum and maximum value respectively (although in this case at almost 0.89). The mean value for religious fragmentation is approximately 0.41 with Morocco having the minimum value at 0.0035 and South Africa having the maximum value at 0.86 as the most religiously fragmented society in the sample.

6. Methodology and Findings

Results of the empirical analysis, namely the correlation and multiple regression analysis, provide support for most of the explanatory variables used in the model. Bivariate Pearson correlation coefficients are presented in Table 3.²⁸ The strongest relationship is between wealth (GDP *p.c.*) and the share of non-profit sector workforce in economically active population ($r=0,79$; $p<0,01$), although the relationship between wealth and non-profit sector expenditures is also strong and statistically significant ($r=0,66$). The relationship between democracy and non-profit sector size is also positive and statistically significant, which is also theoretically plausible. Furthermore, the relationship between poverty and non-profit sector size is negative and statistically significant, which is in line with theoretical predictions of the market failure argument. The relationship between income inequality and non-profit sector size is negative, although rather weak and also statistically insignificant. Nevertheless, the relationship is in line with the proposition of the (supply) heterogeneity theory that social cohesion and non-profit sector size are positively related. The same applies to the relationship between non-profit sector size and linguistic/religious fragmentation of society. The relationship is positive in both instances, which is in line with the propositions of the (demand) heterogeneity theory, although both relationships are rather weak and statistically insignificant. Interestingly, the relationship between governmental transfer spending and non-profit sector size is also positive and statistically significant, which obviously contradicts the possibility of the crowding-out effect and may support the idea of a complementary role of government and the non-profit sector when dealing with both market and government failures (interdependence theory).²⁹ Finally, the relationship between ethnic fragmentation and non-profit sector size is negative. This is not in line with theoretical predictions of the demand heterogeneity theory, although this relationship is also statistically insignificant.

28 The relationships between the dependent and explanatory variables that are either surprising or do not confirm the expected relationships are presented in italics.

29 The positive relationship between governmental transfer expenditures (which also include subsidies) and size of the non-profit sector suggests that some of the spending is also received by non-profit organisations that deliver social services. It should be acknowledged that this variable is used to test the interdependence theory.

Table 3

Zero-Order Correlations of Variables Included in the Model³⁰

	Workforce	Expenditures	Income inequality	Democracy	Wealth	Transfers	Poverty	Ethnics	Language	Religion
Workforce	1									
Expenditures	.859 ^{**}	1								
Income inequality	-.240	-.229	1							
Democracy	.482 ^{**}	.514 ^{**}	-.471 ^{**}	1						
Wealth	.786 ^{**}	.660 ^{**}	-.513 ^{**}	.728 ^{**}	1					
Transfers	.480 ^{**}	.433 ^{**}	-.551 ^{**}	.818 ^{**}	.641 ^{**}	1				
Poverty	-.466 ^{**}	-.389 [*]	.667 ^{**}	-.529 ^{**}	-.663 ^{**}	-.634 ^{**}	1			
Ethnics	-.182	-.240	.578 ^{**}	-.571 ^{**}	-.474 ^{**}	-.494 ^{**}	.657 ^{**}	1		
Language	.010	.000	.217	-.307 [*]	-.321 [*]	-.335 [*]	.472 ^{**}	.631 ^{**}	1	
Religion	.217	.222	-.005	.094	.223	.020	.078	.149	.277 [*]	1

The results of the ordinary least squares regression analysis (OLS) are presented in Table 4.

Table 4

Multiple Regression Analysis³¹

Dependent var. Explanatory var.	Workforce	Expenditures
Constant	-5.1670 (2.526, -2.05)**	-2.9333 (1.884, -1.56)
Income inequality	<i>0.0960</i> (0.037, 2.57)**	<i>0.0456</i> (0.0352, 1.30)
Democracy	<i>-0.1007</i> (0.048, -2.11)*	/
Wealth	0.4176 (0.047, 8.88)***	0.2880 (0.051, 5.61)***
Transfers	0.4940 (0.252, 1.96)*	/
Language	4.3055 (1.355, 3.18)***	2.7797 (1.796, 1.55)
Religion	<i>-1.3698</i> (1.275, -1.07)	/
N	38	38
R²adj.	0.7191	0.4543
SEE	1.8812	2.4558
F-stat. (Prob.)	16.78 (0.00000)	11.27 (0.00002)

30 ** means $p < 0.01$; * means $p < 0.05$; one-tailed test.

31 Standard errors and t-values are in parentheses. T-values include White heteroscedasticity-consistent standard errors (*** means $p < 0.01$; ** means $p < 0.05$; * means $p < 0.10$). Regression coefficients that are not in line with theoretical predictions are presented in italics.

It is worth noting that the results of the analysis substantially differentiate when different measurements of non-profit sector size are used as the dependent variable. If non-profit sector workforce is used as the dependent variable, the results provide support for the majority of explanatory variables included in the model, except for the variables describing ethnic fragmentation, religious fragmentation and poverty, where regression coefficients are not statistically significant.³² The adjusted R^2 value even suggests that the selected six explanatory variables explain almost three quarters of the variation in the size of non-profit sector among 38 analysed countries.

As expected, the effect of gross domestic product *per capita* on the non-profit sector workforce is positive and statistically significant, indicating that supply-side factors such as the availability of the sources to the sector positively contribute to the socio-economic importance and development of the sector. Besides, the effect of the variable describing linguistic fragmentation of society, a measurement of demand heterogeneity, supports the idea that diversity in society positively contributes to the size of non-profit sector, which obviously acts as place where different needs of various (cultural) groups in pluralistic societies are met. Similarly, the effect of income inequality in society and the effect of the level of democracy are also statistically significant, although the direction of effect is not line with theoretical predictions. Finally, the positive and (marginally) statistically significant effect of the government transfer expenditure on the non-profit sector workforce is also revealed, which somewhat supports the validity of the interdependence theory.³³

In contrast, the analysis has indicated that the modelling of variations in non-profit sector expenditures is substantially more difficult. In fact, the majority of explanatory variables have very low t-values and large standard errors and only three explanatory variables (income inequality, wealth and language) have statistical foundations to be included in the model. They help explain approximately half of the variance in non-profit expenditures among countries and only one variable (wealth) is statistically significant.

Given the fact that data on the size of the non-profit sector obtained from CNP (2004) is not collected on any periodical basis as it is a result of a single cross-national study, this limits

32 This may be due to the potential problem associated with multicollinearity since a relatively high pair-wise correlation between variables describing ethnic and linguistic fragmentation can be observed (although this correlation is not excessively high). In fact, the variables of ethnic fragmentation and poverty have even been excluded from the model since the statistical test proved they tend to be redundant variables (according to Chi-square test) deflating adjusted R^2 . Since the main goal of the analysis is assessing how well the model predicts cross-country variations in the size of the non-profit sector, the issue of multicollinearity should not be seen as a problem that needs to be addressed further. For more on this issue see Gujarati (2003).

33 This is rather surprising, especially considering the possibility of governmental crowding-out effect on non-profit sector activities. Salamon and Sokolowski (2001) have also expected that effect, although they did not find empirical support for the effect. Similarly, Matsunaga, Yamauchi and Okuyama (2010) have revealed the rather mixed effect of governmental health and education expenditures on the size of the non-profit sector. This indicates that the effect of the variable is inconclusive both in a theoretical and empirical context which is also evident from the theoretical framework of social origins theory. In this case, the statistical effect is positive, although this does not mean that the validity of the crowding-out hypothesis or the existence of various non-profit sector regimes derived from the social origins theory are rejected *per se*.

the possibility of using combined cross-sectional and time-series data. Yet the advantages of using pooled data are clear. Taking this into consideration, the data on the size of the sector, that is sector employment and expenditures, is taken in two distinct dimensions of the non-profit sector, enabling the delivery of the pooled data regression analysis and also increasing the size of the sample to 76.³⁴ Since both measurements should represent potential dimensions of the sector and also vary across countries, this should add to the estimation efficiency.³⁵ For this purpose, table 5 below presents the results of the pooled data regression analysis. Since it is to be expected that two “sub-dimensions” of the sector should have something in common and in the context of the main purpose of the study - gaining insight into factors that cause cross-national variations in the non-profit sector size - a pooling model is analysed.³⁶

Table 5
Pooled Data Regression Analysis³⁷

Dependent var. Explanatory var.	Size of the non-profit sector (Pooled regression)
Constant	-4.9098 (2.449, -2.01)**
Income inequality	0.1022 (0.049, 2.10)**
Democracy	-0.0651 (0.0616, -1.06)
Wealth	0.3363 (0.042, 8.03)***
Transfers	0.3860 (0.312, 1.24)
Ethnics	-2.5201 (2.517, -1.00)
Language	4.5499 (2.307, 1.97)*
N	76
R2adj.	0.5898
SEE	2.2019
F-stat. (Prob.)	18.98 (0.00000)
Durbin-Watson d	2.27

34 Consequently, degrees of freedom are also increased.

35 The estimated model is described as: non-profit sector size_{ij}=a_{ij}+b₁*X_{1ij}+..+b_n*X_{nij}+e_{ij}, where i is 38, as there are 38 countries in the sample, and j=2, as there are two dimensions of the non-profit sector taken into account.

36 In this case, the regression of the dependent variable is on a single intercept and explanatory variables. Since it is reasonable to expect that both dimensions of the sector have something in common, in particular with regard to theories addressed in this paper, the regression assuming variations in all coefficients is not presented since it would go also beyond the purpose of the paper, which is concentrated more on the explanations of the variations of the sector size rather than on evaluating potentially different effects of explanatory variables on selected dimensions of the sector. Moreover, this approach has also been exposed in Matsunaga, Yamauchi and Okuyama (2010).

37 Standard errors and t-values are in parentheses. T-values include White CS standard errors and covariances (*** means p<0.01; ** means p<0.05; * means p<0.10).

As the results of the pooling model indicated, approximately three fifths of the variance in the size of the non-profit sector could be explained with six explanatory variables.³⁸ Interestingly, the signs (and to some extent also the magnitude) of the regression coefficients are more or less the same as in the cross-section analysis (in particular when compared to the second column of Table 4), although in the case of pooled regression, the Religion variable has been excluded from the model whereas the Ethnic variable remains in the model.³⁹ When comparing the results obtained from the cross-section and pooled data regression analysis, the effect of variables of Wealth, Language and Income inequality should be exposed. Those three variables have sound statistical support in both analyses and more interestingly, they represent three different approaches in non-profit sector research: resource dependence, demand heterogeneity (government failure) and supply-side heterogeneity theory. This also indicates that particularly the resource dependence theory and demand heterogeneity theory can be empirically validated.⁴⁰ Interestingly, the Poverty variable is excluded from both cross-sectional as well as pooled data models due to very low t-values of regression coefficients, indicating problems with finding support for market failure argument.

7. Concluding reflections

Findings presented in the study are generally consistent with most of the discussed theoretical concepts. Interestingly, six explanatory variables used in the multiple regression model explain almost three quarters of the variation in the size of the non-profit sector workforce among 38 countries in the sample. This should not be neglected, especially if we take in mind that cross-sectional data is used. Similarly, six explanatory variables also explain almost three fifths of the variation in the size of the non-profit sector when using pooled data, meaning that sector expenditures and workforce are in fact taken as two dimensions of the sector. The empirical findings support the propositions of the resource dependence theory as well as the demand heterogeneity (government failure) theory. This compares favourably to the findings of Ben-Ner and van Hoomissen (1992), Corbin (1999) or Grønbjerg and Paarlberg (2001), who have examined the validity of first theory, and Weisbrod (1988) or Matsunaga, Yamauchi and Okuyama (2010), who have examined the validity of second theory. These findings tend to promote the role of wealth and heterogeneity in sector

38 Adjusted R^2 is lower than in the cross-section regression model with sector workforce as dependent variable. Besides, if the variation of all regression coefficients is taken into account, the obtained results indicate that majority of differential slope coefficients are statistically insignificant, which should lower the doubt on the ability to pool data in the study.

39 Yet, the direction of the variable effect on the size of the sector is not according to theoretical predictions, although this effect is not statistically significant. The elimination method is the same as at the analysis presented in Table 4.

40 Nevertheless, the direction of the supply-side heterogeneity effect is not in line with theoretical predictions, at least not in this sample of countries.

development. Similarly noteworthy is also the positive effect⁴¹ of government transfer expenditure on the variations in the size of the non-profit sector, which is in line with findings of Bielefeld (2000) or Salamon and Sokolowski (2001) and in this case tends to favour the propositions of the interdependence theory. In contrast, although correlation coefficients tend to have expected direction regarding the relationship between size of the non-profit sector and poverty as well as income inequality, the regression analysis is not able to support the validity of the market failure and supply-side heterogeneity theory. In this context, the real problem of the analysis is the lack of internationally comparable data on the size of the non-profit sector, both from the cross-country and particularly from the time frame perspective⁴² which disables the analysis from being performed in a greater sample. This would allow us to obtain more accurate estimates. Nevertheless, since this study is more exploratory in nature, it should be seen as a basis for additional research on the macro and micro factors causing cross-county variations in the size of the non-profit sector.

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41 Although this effect is not statistically significant in all instances.

42 Data obtained from CNP (2004) exists only in cross-sectional form, as it is the result of a study which focused on obtaining cross-nationally comparable data on sector expenditures and workforce.

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