DEMAND AND SUPPLY SIDE VIEW ON THE FACTORS AFFECTING SIZE OF NON-PROFIT ECONOMY

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Abstract

This paper empirically investigates various factors affecting variations in the size of the non-profit sector by using cross-country data in the sample of selected countries. Namely, the available data on sector employment (workforce) indicate substantial variations in the size of the sector among countries, although certain problems exist with the measurement of the sector size, whicha are mostly related to its diversity. The existing literature can provide several theories, hypotheses and concepts that could potentially help to explain those differences; the outcome of those approaches is the extrapolation of various demand and supply side factors that affect cross-country differences in the size of the sector. The exploratory approach taken in the paper is focused on combining the effect of those factors for the purpose of their empirical verification. The results indicate that supply side factors tend to be more important in explaining differences in the size of the sector among countries.

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1   INTRODUCTION

The non-profit economy (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 activities etc.[1] The main cause for the existence of the non-profit sector is the provision of certain public, or more precisely, quasi-public or common goods and services, which means that non-profit sector is technically not part of the government sector. Namely, the non-profit sector activities rely primarily on the ideas of individualism and pluralism, rather than on ideas of equality and justice, which are prevailing in the government sector. This means that in practice the non-profit organisations try to avoid delivering universal and compulsory public goods and services as does the government sector, but rather those quasi-public goods and services that are determined by the willingness of individuals, businesses, governments, and other institutions to cooperate with non-profit organisations for the purpose of their mission and goals achievement (Hodginkson and Weitzman, 1996).

The non-profit sector emerged due to the several reasons, such as the existence of both market and government failure in the provision of certain goods and services to citizens, the emergence of pluralism and individual freedom in modern societies, and the increased pressures on solidarity among people (see readings in Ott, 2001). 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. Consequently, the existing literature and empirical evidence generally supports the thesis that there has been a substantial growth in the number of non-profit organisations and in socio-economic importance of the non-profit sector in recent decades (see Salamon, 1994; Weisbrod, 1998; Hammack, 2001 etc.).[2] Nevertheless, substantial variations exist in the size of the non-profit sec-

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[1] The data presented in the John Hopkins Comparative Nonprofit Sector Project (2004) have revealed that, on average, two-thirds of all non-profit paid employment is concentrated in education, health, and social services, which are classical welfare services. Thus, this sector does not include only non-governmental organisations (NGOs).

[2] Salamon et.al. (2007) have reported that these organisations should, on average, account

tor across countries. 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 the sample of 38 countries for which the data on the size of the sector could be obtained.[3]

2   THE DEFINITION AND THE SIZE OF THE NON-PROFIT ECONOMY

2.1   DEFINITION OF THE NON-PROFIT SECTOR

Salamon and Anheier (1997) have defined the non-profit economy or non-profit sector as collection of entities/organisations that have five characteristics: institutionalisation, separation from government, self-governance, non-profit distribution and certain degree of voluntarism. This structural-operational definition particularly emphasises non-governmental and independent nature of non-profit sector organisations.[4] Salamon et.al. (2007) have revealed a distinctive economic structure of the sector, which is associated with substantial labour intensity and mobilisation of volunteer effort. This means that functioning of the sector is based on the existence of so-called economies of grants, which include voluntary "donations" of time, money and other resources. This enables the sector to operate in almost all areas of social life, often quite independently of the current political and economic conditions (Ott, 2001).

Namely, the essence of the non-profit sector is that it receives operating resources from many different sources. Recently observed trends, which can be also elaborated from the data extracted from the John Hopkins Comparative Nonprofit Sector Project (2004), have revealed that user fees and other sources from commercial activities are increasingly replacing governmental funding that prevailed in last few decades, while private philanthropy has become relatively

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for approximately 5 % of GDP.

[3] This issue has also been discussed in Pevcin (2011).

[4] See also Handbook on Non-Profit Institutions in the System of National Accounts (2003).

quite negligible.[5] This has occurred predominantly due to the significant pressures for larger commercialisation of the activities of non-profit organisations in recent decades, which have been caused predominantly by changes in the system and the amount of budgetary and grant financing.

2.2   SECTOR LABELS

Since this is a very diverse sector, numerous alternative terms for defining it are used both in theory and in practice. Indeed, Lorentzen (2010) has recognised that four most commonly used labels for this sector are non-profit, third, voluntary and civil sector (society). He has though admitted that the choice of the sector label seems to be accidental, which means that labels are usually used as synonyms. He has argued that voluntary label was the first one to emerge as the result of the ideological struggle between associations and the state in the times of industrialisation in the nineteenth century. Nevertheless, all three other most commonly used labels emerged much later. For instance, third sector label emerged in 1970's as the sector was seen as potential alternative to the expanding state and market-based welfare. In contrast, civil society label gained ground in 1980's as this sector was associated with new evolutionism and the need for an autonomous civil sphere outside the state, which was particularly relevant in totalitarian regimes as well as in the circumstances of state-controlled reforms. Similarly, non-profit label also gained ground in 1980's, and was aimed at describing the sector as the one with existing non-distribution constraints and differentiated demand as the form of distinction from government and business (for-profit) sector.[6]

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[5]If the value of volunteer work is taken into account, the relative importance of private philatrophy increases, although it is still smaller that value of user fees and governmental financing. More on this see Salamon et.al. (2007).

[6]Nevertheless, although several labels exist, often used as synonyms, the paper uses the label non-profit, which is more often used in economic and political literature.

2.3   SOCIO-ECONOMIC IMPORTANCE OF THE NON-PROFIT SECTOR

The non-profit sector currently represents important part of economical, political and social environment of almost all developed countries. In particular, the growth in socio-economic importance of the sector has been very intensive in the last few decades. Salamon (1994) has labelled that process as »associational revolution«. He has stressed that this growth occurred because non-profit sector actually increasingly complements government and markets in the provision of important services, especially in health, education and social fields. Since those services are often funded or subsidised by government, this actually means that government indirectly promotes the growing importance of non-profit organisations in the society. Some authors (see, e.g. Anheier, 2000) have even argued that actually the introduction of the New Public Management initiative, which among others promoted the ideas of "lean government" with privatisation and commercialisation of certain governmental functions, contributed to the growth of the non-profit sector.

Weisbrod (1998) has also pointed out that the trend of growth in scale and scope of the non-profit sector exists, although he has stressed that the main reason for the growth is to be found in rising heterogeneity of population, caused by larger human migrations and information flows. Namely, increased heterogeneity of modern societies causes that the preferences and needs of citizens more and more differ, which decreases demand for universal public goods and services but increases demand for "quasi-public" goods and services with more individualistic and pluralistic characteristics. Similarly, Hammack (2001) has also observed the same trend of rising socio-economic importance of non-profit sector, although he has argued that the growth had occurred predominantly because individuals, businesses and other institutions had gained greater independence from the government. Besides, he has also argued that increased incomes of the individuals and families had allowed them to increase demand on the educational, health care, cultural and social services that non-profit organisations tend to provide.

2.4   VARIATIONS IN THE SIZE OF THE NON-PROFIT SECTOR

The existing literature generally supports the thesis that there has been a growth in the size of the non-profit sector in recent decades, even if different measures of the size are used.[7] Nevertheless, substantial differences exist in the development and relative socio-economic importance of non-profit sector among countries, even among developed ones. This can also be extracted from the cross-national data on the size of the non-profit sector published in the John Hopkins Comparative Nonprofit Sector Project (2004).[8] For instance, as it can be observed from table 1, the size of the non-profit sector, if measured with the share of its workforce in economically active population, seems to be larger 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 for political system and government to dominate civil society. For instance, this experience can be observed in post-socialist countries or in some Asian and African countries, where the size of the non-profit sector is still relatively smaller than in compared industrial countries. In particular, Civicus (2006) has reported that in post-socialist countries one of the major factors affecting smaller extent of non-profit economy is the legacy of socialism, as rather negative attitude towards voluntary work has been observed in those countries. The argument is that the citizens in those countries strongly associate this type of work with the socialist era, during which people were often 'coerced into volunteering' for state-controlled organisations.

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[7] It should be noted that the size of non-profit sector is usually measured with sector employment, expenditure and revenue size, extent of volunteering, membership, number of entities etc. It needs to be stressed that economic approaches typically concentrate on the extent of employment in the sector, its revenues or expenditures (see Anheier, 2000).

[8] It should be stressed that the lack of internationally comparable data exists, which can be attributed, among others, to large diversity of activities that non-profit organisations perform and large diversity of organisational forms of non-profit organisations.

TABLE 1 Size of the non-profit sector in selected countries[9]

Country	Workforce (% of economically active population)	Country	Workforce (% of economically active population)
Argentina	4,8	Japan	4,2
Australia	6,3	Kenya	2,1
Austria	4,9	Mexico	0,4
Belgium	10,9	Morocco	1,5
Brazil	1,6	Netherlands	14,4
Canada	12,1	Norway	7,2
Chile	5,2	Pakistan	1,0
Colombia	2,4	Peru	2,5
Czech Rep.	2,0	Philippines	1,9
Denmark	6,8	Poland	0,8
Egypt	2,8	Portugal	4,2
Finland	5,3	Romania	0,8
France	7,6	Slovakia	0,8
Germany	5,9	South Africa	3,4
Hungary	1,1	South Korea	2,4
India	1,4	Spain	4,3
Ireland	10,4	Sweden	7,1
Israel	8,0	Unit. Kingdom	8,5
Italy	3,8	United States	9,8

Source: The John Hopkins Comparative Nonprofit Sector Project (2004)

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

3 THEORY AND EMPIRICS ON THE NON-PROFIT SECTOR SIZE

3.1 MAIN THEORIES ON THE NON-PROFIT SECTOR

Theories on the development and growth of the non-profit sector are multidisciplinary and interdisciplinary in their nature, since they have been developed by economists, political scientists, psychologists, sociologists, historians etc. This has caused that no unified theory exists, which would be able to explain differences in the development of the non-profit sector among countries (Worth, 2009). The existing hypotheses, concepts and theories can be separated between demand 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 for-profit and government sector. In contrast, supply side approaches usually contemplate that size of the non-profit sector is related to the extent of resources available to the sector, which should, among others, depend also on the wealth of certain society (Grønbjerg and Paarlberg, 2001).

Among typical demand side oriented approaches, failure theories are one of the most influential ones. These theories are very economic in their nature; they state that 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, typical example being the costs of obtaining information or costs of pooling the resources to achieve common goals etc. Similarly, 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 unable to competently evaluate the quality and quantity of services they are receiving. This argument extents transaction costs to informational asymmetries.[10]   Finally,

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[10] Market and contract failure arguments are sometimes labelled as trust theory (see Hansmann, 1996; Anheier, 2000). Namely, imperfections in market relationship and informational asymmetry can cause that providers are able to exploit market position and ignorance of buy-

government failure argument contemplates that the need for non-profit sector emerges, when governments fail to correct market failures, thereby making the space for non-profit organisations to fulfil the unsatisfied needs. It is worth noting, that usually certain political and structural reasons exist that prevent government from fulfilling the unsatisfied needs; one of them is the nature of government to respond to the needs and demands of majority. This means that in diverse societies the problem of achieving universal agreement on goods and services provided by government exists.[11]

Hence, government failure argument has been also addressed in heterogeneity theory (see Weisbrod, 1998), which argues that the relative importance of non-profit sector is related to the increased heterogeneity of modern societies. Namely, heterogeneity causes that the preferences and needs of citizens more and more differ, thereby increasing demand for "public" goods and services with more individualistic and pluralistic characteristics. The conclusion is that countries with more homogeneous demand should have relatively smaller non-profit sector than countries with more heterogeneous demand.

However, the existing literature stresses that it is necessary to differentiate two distinct features of heterogeneity: socio-economic (supply side) heterogeneity and cultural (demand side) heterogeneity. Cultural aspect of heterogeneity is actually in line with Weisbrod's preposition of the positive affect of heterogeneity on the size of non-profit sector. The cultural heterogeneity of society could be described with ethnic, linguistic and religious fragmentation of population. In

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ers to maximise their interest (Grønbjerg, 1998). Because non-profit sector organisations have less incentives and possibilities to exploit buyers' ignorance, they are usually more trusted in providing certain goods and services, which are characterised by large market imperfections or the existence of important informational asymmetries (e.g., education, counselling etc.).

[11]It is worth noting that theory of the commons (Lohmann, 1992), an interdisciplinary approach to non-profit sector analysis, actually contradicts failure theories. Namely, this theory argues that non-profit sector actually produces common goods, which are goods that, unlike private goods, cannot be consumed by individuals, but they also do not, unlike public goods, benefit to all people. These goods actually benefit to all members of the particular commons but not to those beyond. This theory states that non-profit organisations do not make up failures of market or government, but they produce third kind of goods (common goods). More on the analysis and description of common goods see Worth (2009).

contrast, the effect of socio-economic heterogeneity on the size of the non-profit sector should be opposite. The idea is that the resources available to non-profit organisations are more easily attainable in more socially homogeneous societies, where also larger social cohesion exists. This means that also the frequency of social interactions tends to be larger in those societies (Corbin, 1999).

In contrast, political theories of the non-profit sector have stressed that non-profit sector activities could be viewed as private form of public policy implementation, 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). In fact, Salamon (1987) has argued, in line with supply side approach, that government provides substantial financial resources to non-profit sector that in turn delivers the services, thereby replacing governmental provision. These are actually foundations of the so-called interdependence theory that claims the government is a partner to non-profit organisations in the production of quasi-public goods, which means that complementary role of non-profit sector and government exists when dealing with market and government failures.[12] Similarly, the resource dependence approach, initiated by Pfeffer and Salancik (1978), actually argues that resources available to the non-profit sector depend on the wealth of certain society (as the prerequisite for ability to contribute funds), as well as on the amount of government spending (as one of the most important revenue sources for non-profit organisations).[13]

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[12] This government – non-profit relationship has also been addressed in social origins theory (Salamon and Anheier, 1998), which argues that the size of non-profit sector is an outcome of power relations among different social classes and key social institutions. This indicates that no uniform relationship between size of the governmental social (welfare) spending and the size of the non-profit sector exists, since different non-profit regime types are proposed: statist, social-democratic, liberal and corporatist type (Salamon and Sokolowski, 2001). Moreover, Kabalo (2009) has even suggested that fifth non-profit regime exists, related to power relations between social classes in decolonised and newly emerged states.

[13] See also selected readings in Ott (2001) on this topic.

3.2   PREVIOUS EMPIRICAL RESEARCH ON THE NON-PROFIT SECTOR SIZE

Several empirical studies have been performed so far that have tried to investigate determinants of non-profit sector growth and development. However, lack of studies exists that are focused on the determinants of cross-country variations in the size of non-profit sector. Namely, the existing studies are usually country specific, as for instance Corbin (1999) for metropolitan areas in the United States, Grønbjerg and Paarlberg (2001) for selected counties in the United States, or Luksetich (2008) for selected non-profit organisations in the United States etc.

Besides, the majority of studies investigate predominantly the reasons for the emergence and growth of the non-profit sector or are focused on verification of particular theories. For instance, positive relationship between income and availability of sources for non-profit sector has been suggested by several authors, both directly (e.g., Corbin, 1999) or indirectly (Grønbjerg and Paarlberg, 2001). The latter authors have also revealed that the size of the non-profit sector is more sensitive to opportunity structures created by community social and political conditions, which means supply side factors should be more important in determining the size of the non-profit sector.[14] Similarly, Luksetich (2008) has found out positive and statistically significant relationship between governmental grants and the number of the non-profit organisations in the United States.[15]

One of the few cross-country empirical researches has been performed by Salamon and Sokolowski (2001) for 24 selected countries. They have pointed out the positive relationship between governmental social spending and the amount of volunteer participation, although they have expected negative relationship due

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[14]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.

[15]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.

to the »crowding-out effect«. Following, they have supported the validity of interdependence theory and dismissed the validity of government failure theory. Nevertheless, this research has been upgraded by Matsunaga, Yamauchi and Okuyama (2010), although they have argued more in favour of the government failure theory.

Nevertheless, there is a clear lack of cross-country oriented studies, potential factor being the lack of internationally comparable data. The approach taken in this study is to combine the experience of the existing studies and develop a cross-section econometric model, where the size of the non-profit sector, measured with the share of the employment in the sector, tries to be explained with relevant economic, social, cultural and political factors. Consequently, the concepts and ideas of relevant non-profit theories are combined in order to develop the 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 cross-country variation in the size of the non-profit sector could be explained with the selected explanatory variables. Following, data and methodology of research are presented.

4   RESEARCH DESIGN AND FINDINGS

4.1   RESEARCH DESIGN, DATA AND METHODOLOGY

The purpose of the study is to identify and empirically verify the effect of potential factors, derived from the theories, hypotheses or concepts discussed above, on the cross-country differences in the size of the non-profit sector. The empirical analysis is performed in the sample of 38 countries.[16] It needs to be stressed

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

again that this is exploratory study, which tries to share some insight into potential factors shaping differences in the size of the sector among countries, and particularly, how much variation could be explained with those factors.[17] The non-profit sector workforce as percent of the economically active population (NPWF) is used as dependent variable. As already noted the data for this variable are derived from The John Hopkins Comparative Nonprofit Sector Project (2004) and refer to the collecting period of 1995-1999, except for the Portugal, Canada, Chile and Denmark, where data refer to the years 2002, 2003 and 2004 respectively.

Among the explanatory variables several economic, social, cultural and political variables are used in the analysis. First explanatory variable describes supply-side heterogeneity of society of the society, which could be measured with the level of income inequality in society. Therefore, Gini index (GINI) is used as a proxy for income inequality in society. 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 larger values of the index indicate larger income inequality in society. Source of data for these measures is Human Development Report (2009) and relates to the period 1992-2007.

Second explanatory variable describes the level of the 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 non-profit sector in larger in more democratic countries. Source of data for these measures is index of democracy (DEM) taken from Vanhanen (2000). This index tries to measure democracy with competition and participation, where the larger value of index denotes larger democracy. The data relate to year 2000, since they are taken from dataset version 2.0.

Third explanatory variable relates to resource dependence hypothesis, which contemplates that the development of the non-profit sector is related to the

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[17]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 on issues related to data quality.

availability of resources to the sector. Variable real gross domestic product per capita in 1.000 purchasing power parity USD (GDPC) is used as a measure of wealth of the society. Source of data for these measures is Freedom in the World Report (2002) and relate to year 2000.

Fourth explanatory variable used in the analysis relates to interdependence and government failure hypotheses. This variable describes the size of government transfer expenditures in GDP (TEXP). This variable describes the amount of governmental welfare related spending; the study would like to portray, whether this spending promotes or crowds out non-profit sector (social) activities. The data for this variable are taken from the Gwartney and Lawson (2009) dataset and relate to the year 2000. The existing data in the dataset have been modified for the purpose of the analysis. Initial ratings (originally denoted V_j) for each country have been reversed by the formula $10\text{-}V_j$. This modification should enable countries having larger governmental transfer expenditure ratio also having larger values of explanatory variable, so the relation between size of government and size of non-profit sector could be directly tested.

Finally, in relation to demand side heterogeneity, three explanatory variables are used that describe ethnic (EF), linguistic (LF) and religious (RF) fragmentation of society. All three indexes are computed as one minus the Herfindahl index of ethnic, linguistic or religious group shares, where ethnic fragmentation considers not only linguistic, but also racial and physical characteristics, which are omitted if only linguistic fragmentation is taken into consideration.[18] Source of data for these measures is Alesina et.al. (2003).

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[18] This distinction is particularly important for Latin American countries, which tend to be linguistically more homogenous than ethnically. In contrast, linguistic fragmentation has larger tendency to reflect also ethnic fragmentation in European countries. More on the reasons for separation of two measurements of fragmentation see Alesina et.al. (2003). Still, some extent of correlation between these two measures should be expected.

Table 2. Descriptive statistics

Variable	Mean	Standard Deviation
NPWF	4,7526	3,54925
GINI	36,6289	9,62454
DEM	26,3437	11,62630
GDPC	15,4825	9,24677
TEXP	3,9574	2,21297
EF	0,3006	0,2407
LF	0,2791	0,27203
RF	0,4137	0,23561

Source: Authors caclulation

Descriptive statistics is presented in table 2. The mean share of non-profit sector workforce in economically active population for selected 38 countries is approximately 4,75%; maximum value having Netherlands (14,4%) and minimum value having Mexico (0,4%). The mean value of Gini index is approximately 36; minimum value having Denmark at 24,7 and maximum value having Colombia at 58,5 (largest income inequality in the sample). The mean value of Vanhanen's index of democracy is approximately 26, the minimum value having Pakistan and the maximum value having Italy, whereas the mean value of GDP per capita in the sample is approximately 15.500 PPP USD, the minimum value having Kenya at just slightly above 1.000 USD and the maximum value having United States at almost 32.000 USD. The mean value of the governmental transfer expenditure variable is approximately 3,96, the minimum value of variable having Pakistan and the maximum value having France with the largest extent of governmental transfer expenditure (in GDP) in the sample. The mean value of the ethnic fragmentation of society is 0,30, the minimum value having South Korea at 0,002 and the maximum value having Kenya 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, the minimum and maximum value also having South Korea and Kenya (although in this case at almost 0,89). The mean value for religious fragmentation is approximately 0,41, the minimum value having Morocco at 0,0035 and maximum value having

South Africa at 0,86 as the most religiously fragmented society in the sample.

4.2   MAIN FINDINGS

Results of the empirical analysis, that is correlation and multiple regression analysis, provide support for the most of the explanatory variables used in the model. Bivariate Pearson correlation coefficients are presented in table 3. These correlation coefficients show whether two variables have a perfect linear relationship (value 1) or there is absence of one (value 0). The strongest relationship is between gross domestic product per capita and the share of non-profit sector workforce in economically active population ($r=0,79$; $p<0,01$). The relationship between democracy and third sector workforce is also positive and statistically significant ($r=0,48$; $p<0,01$). This somehow supports the idea that third sector is the result of democratic development of society. The relationship between governmental transfer spending and non-profit sector workforce is also positive and statistically significant, which supports the idea that non-profit sector supplements government in social and welfare policy implementation. Notwithstanding, the relationship between Gini index and non-profit sector workforce is negative, although rather weak and also statistically insignificant. Nevertheless, the sign of coefficient is in line with the idea that social cohesion is associated with larger non-profit sector. The same goes with the relationship between non-profit sector workforce and linguistic/religious fragmentation of society. The relationship is positive in both instances, which is in line with the idea of culturally fragmented societies having larger non-profit sector, although both relationships are rather week and statistically insignificant. Finally, the relationship between ethnic fragmentation and non-profit sector workforce is negative. This is not in line with theoretical predictions, although this relationship is also statistically insignificant.

TABLE 3 Zero-order correlations of variables included in the model[19]

	NPWF	GINI	DEM	GDPC	TEXP	EF	LF	RF
NPWF	1	-0,240	0,482**	0,786**	0,480**	-0,182	0,010	0,217
GINI	-0,240	1	-0,471**	-0,513**	-0,551**	0,578**	0,217	-0,005
DEM	0,482**	-0,471**	1	0,728**	0,818**	-0,571**	-0,307*	0,094
GDPC	0,786**	-0,513**	0,728**	1	0,641**	-0,474**	-0,321*	0,223
TEXP	0,480**	-0,551**	0,818**	0,641**	1	-0,494**	-0,335*	0,020
EF	-0,182	0,578**	-0,571**	-0,474**	-0,494*	1	0,631**	0,149
LF	0,010	0,217	-0,307*	-0,321*	-0,335*	0,631**	1	0,277*
RF	0,217	-0,005	0,094	0,223	0,020	0,149	0,277*	1

Source: Authors caclulation

The results of the ordinary least squares regression analysis (OLS) are presented in table 4. Multiple regression measures the effect each explanatory variable has on the dependent variable while controlling for the effects of all other selected (included) variables. Explanatory variables are listed in the left-hand column, whereas unstandardised and standardised coefficients, standard errors and statistical significance of the coefficients are presented in other columns.

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[19] ** means p<0,01; * means p<0,05; one-tailed test.

TABLE4 Multiple regression analysis[20]

Explanatory variables	Dependent variable NPWF			
	Coefficient	Standard Error	t-value	Sig.
Constant	-50,167	20,526	-20,046	0,049
GINI	0,096	0,037	20,567	0,015
DEM	-0,101	0,048	-20,114	0,042
GDPC	0,418	0,047	80,879	0,000
TEXP	0,494	0,252	10,958	0,059
LF	40,306	10,354	30,178	0,003
RF	-10,370	10,275	-10,074	0,291
N	38		SEE	1,881
$R^2_{ADJ.}$	0,719		F (Sig.)	16,784 (0,000)

Source: Authors caclulation

The results provide support for the majority of explanatory variables included in the model. The exceptions are the variables describing ethnic and religious fragmentation, where regression coefficients are not statistically significant. This may be due to the potential problem associated with multicollinearity, since relatively high pair-wise correlation between variables describing ethnic and linguistic fragmentation can be observed (although this correlation is not excessively high). In fact, variable ethnic fragmentation has been even excluded from the model, since the statistical test proved it is redundant variable deflating adjusted R^2.

Nevertheless, 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. Particularly notable is the effect

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[20] T-values include White heteroscedasticity-consistent standard errors. Several stability tests have also been performed for the model. For instance, the calculated Durbin-Watson d statistics (2,37) does not indicate any positive »correlation« in the residuals. Besides, Ramsey regression specification error test of one fitted term, which is routinely provided by Eviews, suggests that the model should not be mis-specified (p=0,101). Finally, recursive least squares parameter (coefficient) estimates suggest that model is structurally stable.

of the variable gross domestic product per capita, which is even the most important explanatory variable in the model, since it has the largest value of standardised (beta) coefficient (1,09). This indicates that supply-side factors, such as the availability of the sources to the sector, seem to be more important in explaining cross-country differences in the size of non-profit sector. Consequently, the notion that socio-economic importance of the sector is related to the economic development of the society is also strengthened. Besides, the effect of the variable describing linguistic fragmentation of society, a measure 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 socio-economic heterogeneity of society and the effect of the level of democracy in society are also statistically significant. Finally, the positive and statistically significant effect of the government transfer expenditure should also be stressed, as it indicates that non-profit sector basically complements welfare state programmes.[21]

5   CONCLUSION

Findings presented in the study are generally consistent with most of the theoretical concepts discussed. Interestingly, six explanatory variables used in the multiple regression model explain almost three quarters of variation in the size of the non-profit sector among 38 countries in the sample. This should not be neglected, especially if we take in mind that cross-sectional data are used. In particular, gross domestic product per capita has the largest explanatory power in the model, suggesting that resource availability, derived from the wealth of society, is the most significant attribute in explaining cross-country variations in the size of the non-profit sector. This compares favourably to the findings of Ben-Ner and van Hoomissen (1992) or Corbin (1999), and specifically tends to promote the role of wealth in sector development. Similarly noteworthy is also

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[21] Still, the existence of various non-profit sector regimes derived from social origins theory should be rejected per se.

the positive effect 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 tends to imply some sort of partnership or interdependence between government and non-profit sector. Nonetheless, demand side heterogeneity, in particular linguistic fragmentation of society, has also positive effect on the size of the non-profit sector, which is in line with predictions of Weisbrod (1998). Other two measures of demand heterogeneity are not statistically significant and they even have extremely large standard errors, perhaps due to the multicollinearity, so the evidence on their effect is very inconclusive. 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 cross-country as well as from time series perspective, which omits the analysis to be performed in the larger sample of countries. This would enable more accurate estimates and even provide a tool for possible elimination of multicollinearity problem. 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 non-profit sector.

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