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Determinants of the size of the nonprofit sector

Frederic L. Pryor*

Abstract

Using comparable cross-section data on expenditures and labor force in the nonprofit sector for a sample of 25 nations, I test a series of hypotheses about their determinants. A small number of variables, of which the level of economic development and the role of government, are the most important and can explain over half of the variance in the sample in most cases.

JEL Classification: L3, P5, Z1

Keywords: non-profit sector, government role

1. Introduction

What are nonprofit institutions (NPIs)? Salamon and Anheier (1999) define them according to the following characteristics: The NPIs have an institutional presence and structure; they are institutionally separate from the state; they do not distribute their profits to any person or organization; they are self-governing; their membership is voluntary; and their financing is non-compulsory and comes from grants, fees, and gifts. These institutions may render charitable benefits (either goods, services, or money) to others; or provide health, education, or other services for a fee; or act to benefit those financing the nonprofit as a group of individuals as does, for example, a cooperative seed agency, a trade association, or a sports club.

This short essay explores the major determinants of the size of the nonprofit sector in 25 nations. I measure the size of this sector both by the ratio of NPI expenditures to GDP and also the ratio of the volunteers to these organizations to the total labor force. Such an exercise raises a number of problems.

Up to recently, many nations only reported data in their national accounts on nonprofit institutions serving households (NPISH). Such institutions represent only a narrow range of NPIs and few nations have implemented the proposed auxiliary accounts that would provide a more complete survey. As a result, published official data on other types of NPIs vary greatly in quantity, quality, and definition and are, therefore, difficult to compare.¹ Valuing volunteer services for the NPIs raises additional problems.

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¹ Salamon (2006) is a path-breaking step in standardizing data on the size of the nonprofit sector in many nations.

Classification of the NPIs is not standardized and they can be classified in a variety of ways, by their major sources of finance, such as fees, government, or philanthropy; by the beneficiaries of their activities, such as charities; advocacy and/or political organizations (such as the American Civil Liberties Union or environmental groups) and mutual benefit organizations (such as churches, labor unions, trade organizations, fraternal and membership organizations, or cooperatives). They can also be classified by the focus of their activities, such as social service, culture, education, religion, or international; or by the NPI's relationship to the government (adversarial, complementary, or supplementary) (Young, 2004); or whether these organizations are tax exempt or not.

In section 2 I explore some of the proposed determinants of the size of the nonprofit sector and in the following section I test them. Section 4 briefly explores the relationship between the non-profit sector and altruism by comparing my measures of the NPI with recent estimates of 'charitable giving' by the Charities Aid Foundation. A final section discusses some of the implications of the results.

2. Conjectures about the Determinants of the Size of the Nonprofit Sector

Numerous scholars have attempted to identify the determinants of the size of the nonprofit sector, for example, Weisbrod (1977, 1988); Salamon (1987), and various authors in Powell and Steinberg (2006). With the notable exception of Salamon and Anheimer (1987) and Ben-Nur and Van Hoomissen (1992)², most authors have focused primarily on determinants at a micro level, and, unfortunately, without considerable modification few of these hypotheses proved suitable for the macro-level analysis carried out below. I will briefly summarize the approaches that appear most promising to me for explaining on a macro-level the size of the nonprofit sector.

2.1 The Level of Economic Development

Due to difficulties in organizing, communicating, and traveling, the institutional complexity and density of economic institutions is limited in agricultural societies, we can expect that formal nonprofit institutions will be limited also. Of course, some NPIs may develop, such as informal cooperative ventures, but they are seldom surveyed in a manner to determine their quantitative importance. As the level of economic development rises and the institutional structure of the economy becomes more complex and heterogeneous, it becomes easier to form nonprofit organizations, and, moreover, more resources are available to sustain them. From this supply-side

² The Salamon and Anheimer essay focuses on countries; the Ben-Nur and Van Hoomissen (1992) essay deals only with nonprofits providing particular services in different counties in New York

viewpoint, therefore, we would predict that the relative size of the nonprofit sector would increase as per capita GDP rises.

For the analysis below I use the average per capita GDP from 1995 through 2002, estimated in terms of 2000 U.S. dollars (World Bank, accessed December 2011), as the measure of level of economic development. Empirical experimentation reveals that a higher explanatory value is obtained when the per capita GDP is transformed into its logarithm. This conjecture received considerable confirmation in the analysis below.

2.2 Large-scale poverty

On a worldwide basis roughly two-thirds of employment in the nonprofit sector is concentrated in organizations focusing on education, health, and social services/welfare (Salamon and Anheier, 1999, pp. 6-7), even though only about 30 percent of the clients of human service organizations in the U.S. numbered among the poor (Salamon, 1987, 40). Although none of the sources that I consulted mention national poverty as a possible determinant of NPI activities, a causal linkage seems intuitively and the regressions reported below confirm it in some cases.

Since common measures of income distribution cover both the rich and the poor, I chose to look only at the share of the households (weighted by their size) with incomes less than 50 percent of the median income. Comparable data are calculated by the Luxembourg Income Study (accessed January 2012).

2.3 Past Interrelations between State and Society

Salamon and his colleagues (1988; 2000) have argued that the type of state and its interaction with various societal institutions have been critical determinants of the size and structure of the nonprofit sector. Strong states or those with a corporatist tradition have carried out many of the activities currently undertaken by nonprofits in other countries. We might therefore expect that such countries should have smaller nonprofit sectors; and, conversely, countries with a market-oriented or liberal state should have larger nonprofit sectors.

Following Esping-Andersen (1990), I designate each nation's government as liberal, social democratic, or corporatist/statist, representing each with a dummy variable.³ Then I look for correlation between the type of state and the size of its nonprofit sector. As shown below, this approach has explanatory power.

³ Salamon and Sokolowski (2001) use a fourfold classification of state/society interrelations by distinguishing corporatist and statist governments, but I found it difficult to separate these two types of states. Kobolo (2009) has a more sophisticated analysis that takes into account various social and religious groups, but he focuses only on Israel. Amassing the necessary data for a similar analysis of twenty-five countries would be a multi-year undertaking.

2.4. Complementarity to Governmental Actions

Salamon (1987) argues that the nonprofit sector serves not as a competitor to government but rather agent or a 'third-party government as a complementary. For instance, in the Netherlands most of the schools are administered by Roman Catholic or Protestant groups receiving government funds, a solution that has avoided disputes on what should be taught in religion courses. For this reason, the nonprofit sector in that country appears particularly large. I tried to test this conjecture against two measures, the share of governmental funding of nonprofits using data from Salamon and his colleagues (1998, 2004); and the share of government expenditures on health, education, and welfare in the GDP. The former test confirmed Salamon's hypothesis to a certain degree; the latter test did not receive statistical support.

Several other seemingly reasonable hypotheses that I tested did not prove useful. These included,

a. Economic system and culture

Although all of the nations in my sample have capitalist economic systems, the type of capitalism varies considerably, and the degree to which the nation has a welfare state may have an impact on the nonprofit sector. Drawing upon a principle component analysis of 40 economic institutions in OECD nations, I have isolated four economic systems which are labeled according to their major geographic location, Western European, Southern European, Nordic, and Anglo-Saxon (Pryor, 2010). In the regression analysis they are represented by dummy variables. To these I added 'transition economies' for the Eastern European nations engaged in developing capitalist economies.

Another large-scale principle component analysis of values of relevance to the economy (Pryor, 2007) reveals that the cluster of economic values parallels the economic systems, so that the dummy variable representing the economic system also stands for the cultural values of the nation. Unfortunately, these system/values variables had very little explanatory power.

b. Population Heterogeneity

With greater population heterogeneity it becomes more difficult for governments to supply certain services for all members of the population (Weisbrod, 1977, 1988). Therefore, nonprofits are set up to supply such services to the specific groups neglected by the government. Alternatively, specific groups may wish to compete with the government in supplying certain services that they feel are wanting. I used two measures, fractionalization and segregation of the population, to measure such heterogeneity, both derived from the estimates for many nations of Alesina and Zhuravskaya (2011). Although the fractionalization index showed promise in preliminary tests, in the end neither measure proved useful.

c. Trust

Many believe that NPIs, in contrast to the private sector or the government, do not have incentives to misrepresent their products and services and can supply them more safely or with a higher quality. For hospital services in the U.S., Weisbrod (1977, chap. 8) provides evidence to support this belief as do recent scandals at for-profit colleges in the same country.

Anheier and Salamon (2006) have found a correlation between general interpersonal trust and the number of memberships people have in voluntary associations. Unfortunately, my attempt to link such measures of generalized trust to the size of the nonprofit sector did not prove successful.

d. Miscellaneous conjectures

A number of other variables come to mind as possible determinants of the size of the nonprofit sector. These include the degree to which people have confidence in their government, the average satisfaction that people have in their lives, or their average happiness (all data from Inglehart, *et al.*, accessed January 2012). None of these variables proved to have significant explanatory power. Others have argued that nonprofits arise where religion plays an important role in the society or of market or government-failure (the inherent limitations of these sectors to provide for collective goods) leave certain services unprovided. The data needed to test such ideas are, unfortunately, unavailable.

3. Empirical Tests

My analysis uses cross-section evidence comparing the size of the nonprofit sector in twenty-five nations. I draw upon the only comparable international data, a project of the Johns Hopkins Comparative Nonprofit Sector Project (downloaded December 2011) and administered by the Johns Hopkins Center for Civic Society Studies. This project involved fifty researchers from thirty-eight countries, who were supported by local advisory groups comprising a vast number of other specialists. All teams followed standard definitions and procedures for their estimates. From this data set I have excluded very low-income nations outside of Europe and also those countries where data on religious nonprofit organizations were not available. As a result, most of the nations in the sample are either in Europe or North America, with only a few nations with relatively high incomes from the other continents.

Table 1, Data on Nonprofit Institutions^a

	<u>As a percent of GDP, 1995-2001</u>			<u>As a percent of economically active</u>		
	<u>Giving</u>	<u>Volunteer- ing</u>	<u>All pri- vate phil- anthropy</u>	<u>Paid staff</u>	<u>Volunteers</u>	<u>Total</u>
Argentina	1.09%	1.30%	2.36%	2.93%	1.90%	4.84%
Australia	0.51	1.51	1.99	4.43	1.90	6.33
Austria	0.17	0.61	0.78	3.84	1.07	4.92
Belgium	0.46	1.59	2.01	8.62	2.32	10.93
Brazil	0.29	0.21	0.50	1.43	0.19	1.62
Canada	1.17	1.26	2.40	1.79	0.56	2.36
Czech Repub.	0.27	0.43	0.70	2.73	0.08	2.81
Finland	0.36	2.12	2.43	2.42	2.77	5.25
France	0.32	2.98	3.21	3.70	3.75	7.55
Germany	0.13	2.49	2.56	3.54	2.33	5.89
Hungary	0.63	0.12	0.74	0.94	0.21	1.15
Ireland	0.85	1.20	2.02	8.28	2.15	10.42
Israel	1.34	1.05	2.37	6.61	1.40	8.00
Italy	0.11	0.80	0.91	2.26	1.49	3.76
Japan	0.22	0.61	0.82	3.19	1.02	4.21
Korea	0.18	0.78	0.96	0.26	0.13	0.40
Netherlands	0.49	4.70	4.95	9.21	5.07	14.40
Norway	0.35	3.18	3.42	2.69	4.35	7.20
Poland	0.28	0.11	0.39	0.64	0.17	0.80
Portugal	0.53	0.53	1.05	0.35	0.44	0.79
Romania	0.10	0.45	0.55	0.57	0.24	0.82
Slovakia	0.41	0.04	0.45	1.84	1.59	3.45
South Africa	0.47	0.83	1.29	1.88	0.55	2.43
U.K.	0.84	2.97	3.70	4.84	3.63	8.54
U.S.	0.65	2.18	3.94	6.28	3.49	9.80

a. The data come from the Johns Hopkins Comparative Nonprofit Sector Project (downloaded December 2011). The GDP is adjusted to take into account the value and full-time equivalent amount of volunteering; the economic active is adjusted to take into account the full-time equivalent amount of volunteering. In some cases the sums of the two sub-categories are slightly different from the total

Table 1 presents the data on nonprofits in my sample of nations. The size of the nonprofit sector can be measured in terms of the ratios of their expenditures to the GDP or of their workforce to the economically active population. The first ratio was adjusted to include the value of the voluntary participation; the second, to include the actual work hours of the volunteers, measured in terms of full-time equivalent workers. The six columns in the table are the variables to be explained.

Table 2, Determinants of the Size of the Nonprofit Sector^a

Independent variables	Dependent variables	Regressions with one explanatory variable				Other regressions			
		Coefficients	t statistics	Adj. R ²	Sample size	Coefficients	t statistics	Adj. R ²	Sample size
<u>Nonprofit sector defined in terms of a percent of GDP</u>									
	1. Giving								
Constant		-0.00143**	3.45	-0.0130	25	-0.00974	1.06	0.4510	20
log per capita GDP		0.00068	0.32			0.00119	-0.51		
Corporatist/statist history		-	-			-0.00460**	-3.01		
% pop. < .50 median income		-	-			0.00034	2.08		
	2. Volunteering (estimated value)								
Constant		0.06457**	-3.03	0.3438	25	-0.07305**	-3.14	0.4935	20
log per capita GDP		0.00835**	3.68			0.01022**	4.23		
% pop. < .50 median income		-	-			-0.00081	-1.66		
	3. Total expenditures								
Constant		-0.06906**	-3.08	0.3746	25	-0.03710	-1.22	0.6207	20
log per capita GDP		0.00937**	3.92			0.00755**	2.64		
Corporatist/statist history		-	-			-0.01195**	-2.37		
% pop. < .50 median income		-	-			-0.00074	-0.63		
<u>Nonprofit sector defined in terms of a percent of economically active population</u>									
	4. Paid staff								
Constant		-0.12660**	-2.57	0.2893	25	-0.11007*	-2.06	0.4470	20
log per capita GDP		0.01717**	3.28			0.01398**	2.46		
Social democratic history		-	-			0.02851**	2.36		
% pop < .50 median income		-	-			0.00110	1.01		
	5. Volunteers								
Constant		-0.08729**	-3.46	0.4038	25	-0.10621**	-4.06	0.5953	20
log per capita GDP		0.01116**	4.15			0.01028**	5.03		
Government % of financing		-	-			-0.01383	-0.84		
% pop < .50 median income		-	-			-0.00064	-1.21		
	6. Total workers								
Constant		-0.21562**	-3.34	0.4032	25	-0.11484**	-2.27	0.7223	23
log per capita GDP		0.02854**	4.15			0.18003**	3.32		
Corporatist/statist history		-	-			-0.03178**	-3.26		
Government % of financing		-	-			0.06168*	1.84		

a. ** = statistically significant at the 0.05 level; * = statistically significant at the 0.10 level. The data on nonprofits come from Table 1; data on per capita GDP (PPP), from World Bank (downloaded 2012); data on income inequality from Luxembourg Income Study (2012); fractionalization data from Alesina and Zhuravskaya (2011); and government share of funds (excluding volunteers), from Salamon, Sokolowski, et al. (2004), p. 299. Past corporatist/statist countries include, Argentina, Austria, Brazil, the Czech Republic, Finland, France, Germany, Hungary, Italy, Japan, Korea, Poland, Portugal, Spain, and Slovakia. Past social democratic countries include, Belgium, Israel, Netherlands, and Norway. Past liberal countries include Australia, Canada, Ireland, the U.K. and the U.S.A.

To arrive at the OLS regressions reported in Table 2, I first calculated regressions with per capita income as the only explanatory variable and then added single or groups of other variables, as suggested in the discussion above, to determine the combination that had the greatest explanatory value.

The level of economic development alone proves to have a significant impact on the size of the nonprofit sector. For all but equation 1 (the amount of expended funds or 'giving') the calculated coefficient of the logarithm of the per capita income is statistically significant at the 0.05 level for the size of the NPIs as a percent of the GDP or of the economically active. Moreover, in equations 2 through 6, the logarithm of per capita GDP explains from 28 to 40 percent of the variation of the dependent variable. When more independent variables are added, the sample is slightly smaller (because of lack of data for some explanatory variables), but the adjusted coefficient of determination rises from .44 up to .72.

For two out of three measures of the size of the nonprofit sector, when measured as a share of the GDP, the variable representing the corporatist/statist political arrangement appears statistically significant. The measure of relative poverty within a nation increases the degree of explanatory power of the regression considerably, even though its calculated coefficients are not statistically significant.

When the size of the nonprofit sector is measured as a percent of the economically active population, the explanatory variables are somewhat different for each of the three measures. For the total number of paid staff members, a past history of social-democratic government is statistically significant (and edged out corporatist/statist government), but for the total number workers (both paid and voluntary) in the nonprofit sector, a background of corporatist/statist government was the most important historical variable. In two out of the three measures, adding the government share of total financing of the nonprofit sector considerably raised the explanatory power of the regression, as did adding the relative poverty.

Table 3, Actual and Predicted Size of Total Nonprofit Sector^a

Country	<u>As percent of GDP</u>			<u>As percent of economically active</u>		
	<u>Actual</u>	<u>Predicted</u>	<u>Difference</u>	<u>Actual</u>	<u>Predicted</u>	<u>Difference</u>
Argentina	2.36%			4.84%	2.32%	2.52%
Australia	1.99	2.76%	-0.77%	6.33	7.79	-1.46
Austria	0.78	2.03	-1.25	4.92	5.77	-0.85
Belgium	2.01	3.17	-1.16	10.93	10.40	0.53
Brazil	0.50	-0.23	0.73	1.62	0.98	0.64
Canada	2.40	2.86	-0.46	2.36		
Czech Repub.	0.70	1.16	-0.46	2.81	2.69	0.12
Finland	2.43	2.14	0.29	5.25	4.61	0.64
France	3.21	2.02	1.19	7.55	5.18	2.37
Germany	2.56	2.05	0.51	5.89	5.88	0.01
Hungary	0.74	0.84	-0.10	1.15	1.83	-0.68
Ireland	2.02	2.45	-0.43	10.42	10.21	0.21
Israel	2.37	2.53	-0.16	8.00	9.76	-1.76
Italy	0.91	1.54	-0.63	3.76	4.80	-1.04
Japan	0.82	4.21	6.76	-2.55		
Korea	0.96			0.40	3.17	-2.77
Netherlands	4.95	3.42	1.53	14.40	9.23	5.17
Norway	3.42	3.65	-0.23	7.20	8.44	-1.24
Poland	0.39	0.57	-0.18	0.80	1.39	-0.59
Portugal	1.05			0.79		
Romania	0.55	0.11	0.44	0.82	0.04	0.78
Slovakia	0.45	0.99	-0.54	3.45	2.05	1.40
South Africa	1.29			2.43	4.85	-2.42
U.K.	3.70	2.85	0.85	8.54	8.72	-0.18
U.S.	3.94	3.10	0.84	9.80	8.66	1.14

a. The data come from Table 1; the formulae for making the predictions, from Table 2. A blank cell indicates that data for the explanatory variables in question are not available.

A different perspective can be gained by comparing the actual and predicted sizes of the nonprofit sector. Such data are presented in Table 3 for the two summary measures.

As measured by either the share of the GDP or the share of the economically active, the Netherlands has the largest under-prediction. As noted above, this is because the government has financed education, even while outsourcing most of the actual teaching in its primary and secondary schools to religious organizations. Looking at the measures of the nonprofit sector as a share of GDP, the calculations show that France, the U.K., and the U.S. also show considerably larger nonprofit sectors than predicted. In contrast, the calculated formula predicts larger nonprofit sectors for Austria, Belgium, Australia and Slovakia than these nations actually have. The underlying reasons for these divergences from predicted values are not clear. Neither continent nor the predominant religion do not seem to play a causal role since the various countries are in different continents and since both Roman Catholic and Protestant nations number among those the largest divergences from predicted values.

As measured by share of workers in the nonprofit sector, France and Argentina follow the Netherlands in having nonprofit sectors much larger than predicted, while Japan, Korea, and South Africa have unpredicted smaller nonprofit sectors. We can speculate that special cultural elements, such as the strong emphasis on the extended family, seem most important in understanding the Chinese and Korean cases, while past racial strife may have played an important role in South Africa..

4. The Non-Profit Sector and Altruism

If the size of the NPI is related to the charitable giving of individuals, it is only partly a measure of altruism. This is because the sector depends partly on political factors (both historical and the laws determining the tax treatment of charitable giving) and partly on funds received by the government that are unrelated to the individual motives of the population. Nevertheless we would expect to find a weak relationship.

Although we do not have a reliable measure of 'gross national altruism,' it is useful to compare briefly the size of the NPI to the 'world giving index,' calculated by the Charities Aid Foundation (CAF, 2010, 2011). They calculated this index from data from the Gallup World Poll, which has asked people in over 150 countries if, they have given money to charity; given time to charity (volunteering), and helped a stranger. From these answers the CAF calculates their overall 'index of giving,' which can be considered as a very rough measure of altruism.

Table 4, Alternative Measures of Altruism and Non-profit Activity Measured Against Each Other

	n	Adj R ²
1) NPI/GDP = -0.061** + 0.035* avg giving index + 0.0072** ln(ycap) (0.021) (0.019) (0.0026)	29	.4852
2) Money giving/GDP = -0.015 + 0.00074 avg giving money + 0.0023 ln (ycap) (0,021) (0,01142) (0.0025)	29	-.0172
3) Volunteers/Labor force = -0.081** + 0.012 avg giving time + 0.010** ln (ycap) (0.027) (0.030) (0.003)	29	.3807

*The dependent variables of these OLS regressions re drawn from the Johns Hopkins Comparative Nonprofit Sector project, which are used throughout this essay/ The first dependent variable comes from an average of replies in 2010 and 2011 to the Gallup World Poll and are reported in Charities Aid Foundation (2010, 2011). The average giving index is their average of the percent of people giving money to charity, giving time to charities, and helping a stranger.** = statistically significant at the 0.05 level' * = statistically significant at the 0.10 level.*

In Table 4 I have averaged the Gallup results for 2010 and 2011 and have regressed this measure against the data from the Johns Hopkins Comparative Nonprofit Sector Project (2011) used in the rest of this essay. Holding the logarithm of per capita GDP constant, the results (equation 1) show that the overall totals are, as posited, positively related but only weakly at the 0.10 level. Given the quite different ways in which the components of both measures are calculated, it would seem unlikely that the two major corresponding components of altruism and NPIs are related, and this is shown in equations 2 and 3 in the table.

5. Concluding Observations

On a micro-level, many of the explanations offered for the size of nonprofit sector seem reasonable. On the macro-level the most important determinants, as shown above, vary according to the measure chosen; nevertheless, just a few explanatory variables account for a surprisingly high degree of the variance of the sector size in our sample of twenty-five middle and high income nations.

The regression analysis shows a highly significant relationship between the relative size of NPIs and the level of economic development in most cases. Additionally, the statistical results show that the government plays an important role in determining the overall size of the nonprofit sector. A history of corporatist/statist governments leads to smaller nonprofit sectors since the two sectors supply similar services, while in some cases social democratic governments have had the reverse effect, which seems to reflect different values between nations. In addition, a larger nonprofit sector also arises when the governmental outsources (while still financing) some of its functions to nonprofit institutions, which suggests that such governments see NPIs as providing certain services better than they do. Finally, the distribution of income, as manifested by

the share of the population with incomes less than half of the median suggests that the nonprofits serve an important welfare function.

This analysis has focused primarily on macroeconomic determinants of the nonprofit sector. Attempts to take microeconomic factors into account – particularly the values of the population – did not prove successful. Much remains to be researched before we can gain a full picture of the nonprofit sector.

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