Existence of non-profit organizations in the United States of America

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Abstract

I use data from the General Social Survey, the National Center for Charitable Statistics (NCCS) the Census and the Fraser Institute, among others, to test different theories that attempt to explain why individuals demand (goods and services from) nonprofit organizations and/or choose to create nonprofit organizations and extends the analysis by incorporating the relevance of different institutional forms of the state that may influence such choice. This Paper investigates the links between institutional conditions and the existence of non-profit organizations in the United States of America. I find partial support for the institutional argument for the existence of nonprofit organizations in the United States.

Key Words Industrial Organization, Non Profit Organization and Public Enterprise, Non Profit Institutions, NGOs
JEL classifications: L, L3, L31
1. Introduction

According to the Urban Institute, there were around 300,000 public charities reporting to the IRS in 2004. The average number of charities per 10,000 inhabitants was 12.5 including Washington D.C. and 11.4 excluding the nation’s capital\(^1\). Moreover, between 1994 and 2004, the number of reporting non-profit organizations that completed IRS Forms 990 grew by a modest 25 percent. In contrast, the number of public charities that were registered with the IRS, as well as the number that filed a Form 990, grew at more than twice that rate.

The coefficient of variation (33%) shows a significant dispersion of the number of non-profit organizations around its mean in the United States. What economic and institutional factors explain this dispersion? This is the main topic of this Paper.

In other words, what are the supply and demand conditions that affect the number of non-profit organizations across different states? Are problems arising from market and public failures the cause for the existence of such organizations (Weisbrod, 1975; Hansmann, 1980)? Are there institutional differences across the US States that justify the above-cited dispersion?

The importance of different institutional forms on nonprofit organizations has been documented in previous work (Barrios, 2010Paper) with respect to participation in voluntary organizations and in Salamon et.al (1996, 2000) for various countries. Salamon et.al find that the size of the nonprofit sector depends on the importance of government expenditures in social welfare and on the ideological bent of the State (see empirical discussion). Here I focus not in a set of countries but in States of one country,

\(^1\) The District of Columbia is clearly an outsider within the United States.
the United States. In addition, the main focus of this Paper is not on participation in voluntary organizations but on the size of the nonprofit sector.

In general, the study of the factors that determine the existence of nonprofit organizations is important for several reasons. First, nonprofit organizations are regarded as important for development. The World Bank states: “Once ignored as a relevant economic institution, non-governmental organizations are seen today as an important mechanism to “improve the institutional capacity of the state” by “bringing popular voice into policymaking” (World Development Report, 1997). Moreover, nonprofit organizations are increasingly recognized as key actors in the provision of social capital within a society (ECLAC, 2005). In turn, social capital has been incorporated (for example, in neoclassical production functions) as a factor that widens production possibilities for given amounts of material inputs, thus potentially increasing welfare for given prices and preferences.

Second, nonprofit organizations are considered by many as viable institutions that operate between the state and the market to solve relevant economic and political problems, such as environmental problems (Salamon et al. 2000).

Last but not least, nonprofit organizations may show advantages over public and private organizations to solve economic problems that have to do with the supply of public and private goods in the presence of public and market failures, such as problems of asymmetric information (Weisbrod, 1975).

This Paper empirically tests different theories that attempt to explain why individuals demand (goods and services from) non-profit organizations and/or choose to create nonprofit organizations and extends the analysis by incorporating the relevance of different institutional forms of the state that may influence such choice. This Paper

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Non-governmental organizations are regarded as being closer to popular demands, as being more capable of adequately responding to those demands, and as having greater ability to mobilize human and material resources (ECLAC, 2005)
investigates the links between institutional conditions and the existence of non-profit organizations in the United States of America.

The nonprofit sector is heterogeneous and gathers different type of organizations such as Arts, Health and Education organizations. These organizations may not respond equally to identical incentives and institutional factors. My Paper segregates the general nonprofit sector into 7 sub-sectors, and investigates whether institutional factors are important on individual choice and can help understand the variation across States.

This Paper builds a reduced form model of supply and demand to demonstrate that the number of non-profit organizations (as a proxy for their existence) across US states is affected no only by the choice of individuals based on economic variables such as income inequality, but also by different institutional forms, such as the level of state corruption, trust on others, and the size of Government. My approach is to consider how different variables may be affecting both demand for and supply of nonprofit organizations across the United States of America.

My investigation finds partial support for the public failure theory of the existence of nonprofit organizations, especially with respect to racial heterogeneity. Diversity in the form of income inequality does not seem to have effects on the size on the nonprofit sector. On the other hand, higher incomes are associated with a relative larger nonprofit sector, failing to support the market failure hypothesis, while supporting supply related theories.

My investigation also finds support for the importance that some institutional forms may have on the number of nonprofit organizations across American States. Social trust is associated with a larger size of the nonprofit sector, probably reflecting the fact that higher levels of trust make individuals interact more. On the other hand,
government transfers appear to crowd out nonprofits on average, while corruption does not have significant influence on the nonprofit sector.

My investigation also highlights differences among different types of nonprofit organizations. In some cases, the specific results on each type contradict the results of the general case, suggesting important idiosyncratic characteristics.

2. Research Problem

The American non-profit sector has evolved to become a large and diversified economic sector, comprising almost 1.5 million organizations, employing more than 16 million paid workers and more than 60 million of volunteers, earning revenues of more than 1.4 billion, and holding close to 3 trillion dollars in assets. Moreover, the sector accounts for more than 5% of US GDP, and for 8.3% of all wages and salaries paid in the United States. In 2005, individuals, corporations, and foundations gave $260 billion in charitable contributions to non-profits and 29 percent of Americans volunteered through a formal organization (Urban Institute, Non Profit Almanac, 2007).

The sector is not homogeneous and spans a wide range of organizations, small associations to large institutions such as hospitals, charitable institutions and universities. However, most if not all of these organizations are concentrated in social activities such as education, religion, health, human services, and arts and sciences.³

Scholars working within the Economics profession have attempted to explain the growth and existence of non-profit organizations as social solutions to the problem of market and public failures. Weisbrod (1975) suggests that non-profits are the consequence of government failure to adequately supply public goods, while Hansman

³ In the United States, the vast majority of are registered with the IRS as 501 © (3) “public charities”.

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(1980) argues that they arise due to asymmetries of information between customers and suppliers, as well as between donors and managers. Salamon et.al (1999), on the other hand, assign particular importance to social and political conditions.

None of the above lines of research with the exception of Salamon et.al (see next), have incorporated the effect of political institutions in their analyses.

This Paper attempts to fill this gap by incorporating the political institutions such as the level of corruption, trust on others and measures of government effectiveness and size as relevant reasons to explain why the number of non-profit organizations varies across the States of the United States. This Paper takes advantage of the availability of longitudinal data on economic, institutional, and social conditions in the US which enables to innovate over past studies (e.g. Onder, 2006).

3. Literature Review

This section analyzes different variables that may affect the choice for nonprofit organizations and builds a reduced form model of demand for and supply of nonprofit organizations. I identify key variables affecting demand and/or supply, including the potential effects of different institutional forms. The section concludes by formulating the hypotheses to be tested empirically.

First, individuals choose to create non-profit organizations (or demand goods and services produced by nonprofit organizations) when governments cannot make accurate estimations of consumers tastes when deciding how much of a public good to supply. Governments choose to supply public goods based on the preferences of the median voter, while business firms may not be willing to supply those goods due to the
well known characteristics of public goods. This situation leads to the existence of unsatisfied consumers (Weisbrod, 1975, 1977).

In order to obtain those public goods and services under-satisfied consumers may turn to nonprofit organizations. This has two effects on nonprofits: first, it increases demand for a given number of nonprofits, and second it may lead individuals to create non-profit organizations if demand is not satisfied by the existing number of nonprofits to overcome this “public failure” problem and obtain the desired amount of goods and services. In other words, heterogeneous societies may show larger demand for public goods to nonprofit organizations and a larger supply of them. Consequently, non-profit organizations are more likely to exist in relatively diverse, more heterogeneous, states where the preferences of consumers are more difficult to determine.

Second, the relative importance of non-profit organizations is affected by market failures, namely, asymmetries of information (Hansmann, 1980). Difficulties for consumers in assessing product quality, in building incentive compatible mechanisms in labor and credit markets, and in monitoring the final use of donations are examples of contract failures due to information problems. Under these conditions, business firms may charge higher prices for lower-quality products. Because non-profit firms do not distribute profits⁴, they may be considered more “trustworthy” than business firms. Hansmann has dubbed this view of non-profits as the “trust hypothesis” for the existence of non-profit organizations (Hansmann, 1980, 1987)

Income levels and education seem to affect the extent and importance of market failures, thus the number and scope of non-profits. Wealthier and more educated individuals are in better position to evaluate the characteristics of the products they

⁴ The are legally constrained by the ”non-distribution constraint
purchase (Ben-Ner and Van Hoomissen, 1991). It follows that, from the demand side, higher income and better education should decrease the relative importance of non-profits because the likelihood of contract failures is diminished.

These demand-related variables of nonprofit organizations focus their explanations for their existence on heterogeneity of preferences and on the fact that stakeholders should trust nonprofit organizations more than they trust for profits because the non-distribution constraint on profits that the former face may reduce the problem of asymmetric information. But problems of heterogeneity and information are problems for which different institutional arrangements provide different solutions.

Institutional forms such as capacity of government to assess and/or meet consumer preferences for public goods is important and affects the extent of public failures.. For example, if public officials are not willing to meet people’s preferences in favor of special interests, dissatisfied consumers will try to obtain those goods trough nonprofits, provided that business firms do not find incentives to produce public goods.

That is to say, corruption is an institutional form that matters. That is, although public officials may be effective in assessing preferences for public goods, they may be more interested in satisfying special interests rather than social interests. This is the case of corrupt governments. In other words, state corruption should be (positively) associated with the number and scope of non-profits.

Institutions such as trust in other individuals or in other organizations should affect the existence of non-profits because these should lose some of their competitive advantage over business firms. If people trust other people more or other organizations more, then non-profits lose some of their potential competitive advantage relative to business firms.
On the other hand, altruistic preferences and ideology are determinants of why people may wish to create nonprofit organizations (Rose-Ackerman, 1996). Individuals, who do not pursue profits but wish to help other individuals, may do so through nonprofit organizations. The Church has created schools as nonprofit organizations to transmit Christian beliefs to those who attend Christian schools. Moreover, individuals who wish social recognition (but not just profits) by helping others may become donors or founders of nonprofits in order to achieve their objectives (Ben-Ner and Van Hoomissen, 1991).

Wealthier individuals may, sometimes, feel that they need to contribute to society by making donations to nonprofit organizations or by creating nonprofit organizations themselves. In this sense, income has an additional supply-side effect that runs counter to the negative demand-side effect outlined above. The results of my econometric study will shed light on what effect is stronger for the United States: the negative demand effect or the positive supply effect.

These supply-side variables may also be affected by different institutional arrangements. These institutional arrangements should affect the willingness of individuals to create nonprofit organizations as means to supply goods and services in the marketplace. In this sense, a weaker institutional environment, e.g. a more corrupt government, may create positive incentives to create non profit organizations because individuals may regard nonprofit organizations as substitutes for political problems. In other words, more corrupt governments may increase the need to create nonprofit organizations which may satisfy social needs to counter the private interests of public officials.
Governments are sometimes interested in nonprofits as a means to achieve social goals (Weisbrod, 1975). Governments may create institutional forms such as grant tax privileges and even subsidize the creation of nonprofits to decentralize and even privatize some of their activities. In this sense, the effect of this institution would be to encourage the existence of nonprofit organizations.

On the other hand, trust on others constitute institutional forms that may positively affect the supply of non-profits, since trust should be a condition to create voluntary organizations, that is, to create nonprofit organizations to supply public and private goods. Individuals may feel more inclined to create social connections with other individuals in order to build nonprofit organizations to meet certain social needs such as special education for children, environmental concerns, services needed by the elderly and others.

A third body of literature examines the relation between specific structures of governance and incentives for the growth of nonprofit organizations. According to these theories, the nonprofit sector would be larger in liberal and corporatist states than it would be in statist and social democratic forms of government, where government structure leaves fewer openings for nonprofit organizations (Salamon et al, 1995).

A slightly different approach points out that governments can act as supporters of nonprofit organizations, in which case the relation between them may not be competitive but cooperative. That is, larger amounts of government expenditures may be associated with a larger size of the nonprofit sector (Salamon et al, 1995, 2000).

Although this line of research comes close to evaluating the relation between institutions and the nonprofit sector, the concept of political institutions used in this body of work (statist, social democratic) is not directly applied to one country, in this

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Private, nonprofit organizations are more flexible, stay closer to targeted stakeholders and may be more transparent than public offices to achieve certain social objects.
case, the United States, or even to different States within the United States. The concept of institutions relevant to my study is a different one, and focuses on state characteristics beyond those general categories.

Nevertheless, Salamon et al. consider as an explanatory variable the size of government expenditure. This variable may be different across states, and may contribute to explain the dispersion in the number of nonprofit organizations across American states, and I will use it in my Paper as a test for this theory. In essence, Salamon et al. postulate a positive relation among the size of government and the size of the non-profit sector.

In addition, some socio-political theories or participation (Barrios, this volume) also argue for a crowding-out effect of government expenditures on participation: the larger the government, the more economic security it gives to individuals and the less these individuals wish to engage in social activities through participation in voluntary organizations. This negative effect will be tested in this Paper, noting that the dependent variable is now the number of non-profit organizations instead of participation. I think this change constitutes an interesting extension for the above theory.

3.1. New Hypotheses

The section above explains why the size of the nonprofit sector depends not only on stakeholder’s characteristics, market failures and government policies, but also on the nature of the state economic institutions. I further develop those arguments and formulate the hypotheses to be tested in my empirical analysis.

My hypotheses about the demand-related variables with respect to nonprofit organizations conclude that the number of nonprofit organizations will be affected by
the existence and relevance of public failures, market failures, and also affected by institutional forms such as Corruption and Trust, and the extent of government expenses in the forms of transfers.

First, demand for nonprofit organizations is affected by the presence of public failures in the supply of public goods. Demand for public goods depends on the characteristics of the population (Weisbrod, 1975, James, 1987): more heterogeneous societies imply heterogeneity of preferences for goods and services. In other words, people have different preferences for the same type of public goods and services (such as education and health).

Because of public goods characteristics, private, for profit firms do not supply public goods. How do governments determine the amounts to be supplied and to be charged for the provision of public goods? Weisbrod (1975) argues that governments determine the amount of public goods to be supplied based on the preferences of the median voter. Because of heterogeneity of preferences, this form of supply of public goods creates a host of unsatisfied consumers who will turn to private nonprofit organizations to satisfy their preferences.

Higher income and wealth inequality, ethnic fractionalization as well as differences in education are variables that signal higher heterogeneity, because differences in these variables imply diversity of preferences.

The diversity of preferences implied by this heterogeneity makes the occurrence of public failures more likely, all of which induces more demand for nonprofit organizations. Accordingly, my first hypothesis states:

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6 Public goods are mostly non-rival and non-excludable.
Public Failure Hypothesis: More heterogeneous states should show a larger number of nonprofit organizations

What type of institutions may affect the relevance of heterogeneity on the demand for nonprofit organizations? One way to think about this is to try to find institutions that directly affect the diversity of preferences by reducing heterogeneity in wealth, religion, ethnicity and education.

I take a different approach. I choose institutions that are related to the willingness of public officials to supply public goods according to individual preferences. The level of corruption can be used as a proxy to measure the willingness to supply public goods not only to powerful individuals. A

I postulate that when corruption increases, this hurts public effectiveness and increases the need for nonprofit organizations. This hypothesis is based on the intuition that the better the capacity of government, given people’s preferences, the better will such government determine the amount of public services to be supplied and the price to be charged to a given population. Accordingly, the scope for public failures and the need for other type of organization (i.e. non-profit organizations) to supply public goods will be diminished. It follows that:

Institutional Hypothesis I: An increase in corruption force is associated with a higher number of nonprofit organizations.

Market failures produced by information asymmetries are crucial to understand the existence of non-profit organizations. Demand for non-profits is affected by this type of failure. Less educated and poorer individuals may increase the likelihood of
informational problems among consumers (donors) and producers, while technological progress in telecommunications (measured as the number of high speed lines for Internet access for example) may reduce informational problems and diminish the need for non-profits (Ben-Ner, 2004). It follows that:

Market Failure I: Higher levels of education and wealth reduce the need for nonprofit organizations.

Market Failure II: Higher number speed lines for Internet Access reduce the need for nonprofit organizations.

Market failures are affected by institutions. An institutional possibility to reduce market failures arises from the literature on norms and rules of behavior: trust. Based on the General Social Survey data, I consider subjective indicators of trust on others. Higher levels of trust imply that consumers and donors feel more confident on what they are told about the quality of the goods or services they wish to buy or donate, for a given price. Higher levels of trust then should be associated with less need for nonprofit organizations to fix this type of market failure.

Institutional Hypothesis II: Higher levels of trust reduce the number of nonprofit organizations across States

Finally, the crowding out theory outlined elsewhere (Barrios, 2010) postulates that government expenses have a negative effect on nonprofit organizations because individuals will face less incentives to interact with other individuals (in this case by
joining common projects through nonprofit organizations) if they feel safer with respect to their economic situation. Higher government expenditures act as an economic security variable for individuals. This line of reasoning follows Tocqueville and Fukuyama. I here postulate the hypothesis derived from such theory.

Institutional Hypothesis III: Larger Governments crowd out nonprofit organizations.

Supply related variables can be represented by arguing that the number of nonprofit organizations should be affected by wealthier individuals, the amount of government transfers, the level of corruption, and by the extent that individuals think other persons are honest, that is, they trust other individuals.

Salamon et.al., based on the Social Origin theory, argue that higher government expenditures should lead to an increase in the size of the nonprofit sector. They arrive to that conclusion based on the intuition that larger governments can act as supporters of non profit organizations, rather that being competitors. The reason for this intuition is that the support of governments may create positive incentives for individuals to create nonprofit organizations.

Institutional Hypothesis IV: A larger amount of government expenditures should increase the number of nonprofit organizations.
Second, on the supply side, Corruption has a role to play too. Nonprofit organizations are created (that is, “supplied”) either by individuals or by governments because of the presence of private and public failures within market economies.

These factors tend to be more relevant when the institutional context is weak, that is relatively more corrupt. More corrupt environments create positive incentives for individuals to fund and support non-profit organizations to substitute for public provision of some social services basic education to excluded, more disadvantaged children.

Institutional features such as the level or the perception of corruption potentially affect incentives to create non-profit organizations. That is, corruption negatively affect the possibility that companies respect their obligations (contracts) and the quality of contract enforcement and contribute to increase the chance for business firms to take advantage of information asymmetries and charge higher prices for equivalent quality. I will consider a measure of corruption based on information on federal corruption convictions in each American state, which is supplied by the Department of Justice of the United States of America. It follows that:

Institutional Hypothesis V: States showing higher levels of corruption show larger non-profit sectors.

Finally, as mentioned above, higher levels of Trust on others are associated with a larger number of nonprofit organizations leading to:

Institutional Hypothesis VI: States showing indicators of more trust on others should have larger nonprofit sectors
A summary of the theories and the hypotheses developed so far follows in Table 1:

Table 1. Summary of Hypotheses. Dependent Variable: Size of the Non-profit Sector

<table>
<thead>
<tr>
<th>Explanatory variable</th>
<th>Expected effect on number of nonprofits</th>
<th>Associated Theory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diversity</td>
<td>Positive</td>
<td>Demand/Public Failure</td>
</tr>
<tr>
<td>Income and wealth inequality</td>
<td>Positive</td>
<td>Demand/Public Failure</td>
</tr>
<tr>
<td>Institutional Factor I: Corruption</td>
<td>Negative</td>
<td>Demand/Public Failure</td>
</tr>
<tr>
<td>Institutional Factor II: Trust</td>
<td>Negative</td>
<td>Demand/Market Failure</td>
</tr>
<tr>
<td>Institutional Factor III: Transfers</td>
<td>Negative</td>
<td>Demand/Crowding Out</td>
</tr>
<tr>
<td>Level of Education</td>
<td>Negative</td>
<td>Demand/Market Failure</td>
</tr>
<tr>
<td>Level of Wealth</td>
<td>Negative</td>
<td>Supply/Market Failure</td>
</tr>
<tr>
<td>Institutional Factor IV: Trust</td>
<td>Positive</td>
<td>Supply/Market Failure</td>
</tr>
<tr>
<td>Institutional Factor V: Transfers</td>
<td>Positive</td>
<td>Social Origins</td>
</tr>
<tr>
<td>Institutional Factor VI: Corruption</td>
<td>Positive</td>
<td>Supply/Market Failure</td>
</tr>
</tbody>
</table>

4. Empirical Studies

In a study covering 22 developed and less developed countries Salamon and Anheier (1996, 2000) evaluate the public (heterogeneity) failure theories (Weisbrod, 1975), the market failure theories (Hansmann, 1980) and the Supply-related theories of non-profit organizations.

They also find that that the level of social welfare spending as a share of gross domestic product is negatively correlated with the size of the non-profit sector.

This result does not support the Hypothesis derived from the Social Origins theory of Salamon et.al which postulates a positive relationship between social welfare spending and the size of the non-profit sector. In other words, this result may indicate that nonprofit organizations and the State may not be complements but substitutes.

The market failure (Hansman, 1980) hypothesis is summarized in a negative relation between the level of trust and the size of the non-profit sector. Salamon et.al. test the validity of their theory using data available from the World Values Survey (World Values Study Group, 1994) relating to trust in business. The data provide little support to this theory: the slope of the line relating level of trust to the size of the nonprofit sector is nearly flat, indicating no meaningful relationship between the two variables.

They find strong support for “Social Origins” theory of the nonprofit sector: for example, countries that fall into the “Statist”\(^7\) category (Japan) all show low social public spending and small non-profit sector. The support for their Social Origins Theory is summarized in their Table 2:

<table>
<thead>
<tr>
<th>Government Social Welfare Spending</th>
<th>Size of Nonprofit Sector</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Small</td>
</tr>
</tbody>
</table>

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\(^7\) Countries where the States exercises power on its own behalf, or on behalf of business and economic elites, but with a fair degree of autonomy, and where limited government social welfare protection does not translate into high levels of nonprofit action. Salamon and Anheier (2000) extend the sample of countries to 22 and later on to 36. The basic conclusions remain.
Table 2. Models of Third Sector Regime

<table>
<thead>
<tr>
<th>Size of Nonprofit Sector</th>
<th>Liberal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>Statist</td>
</tr>
<tr>
<td>Japan</td>
<td>U.S., UK</td>
</tr>
<tr>
<td>Social Democratic</td>
<td>Corporatist</td>
</tr>
<tr>
<td>High</td>
<td>Sweden, Italy</td>
</tr>
<tr>
<td></td>
<td>Germany, France</td>
</tr>
</tbody>
</table>

The work of Salamon et.al suggests that Institutional factors affect the size and scope of the nonprofit sector.

Salamon and Anheier (1996)\(^8\) study has a very limited number of observations: only 7 countries. In consequence, their findings cannot be used to approve or disapprove any of the theories presented. The authors present scatter diagrams showing simple correlations between the dependent variable associated with each theory and the size of the non-profit sector\(^9\). Nevertheless, since they consider they postulate that the size of government welfare spending as a relevant variable to explain the size of the nonprofit sector, I will consider this variable in my analysis, taking advantage of the fact that I focus on one country where the discrimination among political categories is not possible, allowing me to control for this variable and to perform a better test of the effect of social welfare spending.

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\(^8\) This study attempt to link the different hypothesis to what they assume to be the most relevant sector affected within the non-profit sector (e.g., education, health, ). They also study the implications of the theory for the different funding sources of the non-profit sector and its most relevant sub-sector.

\(^9\) The size of the non-profit sector is measured as the relation between full-time equivalent nonprofit employment and total non-agricultural employment.
Carmen Marcuello (1998) studies the determinants of the non-profit size for Catalonia, a Spanish region. Following the work of Ben-Ner and Van Hoomissen (1991,1992) above, she tests for the importance of demand heterogeneity, the size of Government and the size of the business sector both over the overall size of the nonprofit sector and over its main components (Culture, Education and Welfare Services). Her universe consists of 15,691 non-profit organizations located over the 40 counties of the region of Catalonia, Spain, in 1991. She takes the number of non-profit organizations per 1000 inhabitants as the dependent variable.

She concludes that market size, social cohesion, and unemployment have significant and positive effects on the size of the non-profit sector in Catalonia, while income and education have opposite effects. Finally, total government expenditures are associated with a larger non-profit sector.


My empirical strategy for examining the determinants of the size of the nonprofit sector consists on performing a pooled cross-section time series analysis. In this Section I define the variables to be used in the regression and cite the sources of data. My study will be based on a data for 50 States of the United States of America for the period between 1998 and 2005. Based on the above analysis, the empirical model to analyze the determinants of non-profit organizations is shown below.

\[ \text{NumberNPO}_i = \alpha_0 + \alpha_1 \text{diversity}_i + \alpha_2 \text{education}_i + \alpha_3 \text{wealth}_i + \alpha_4 \text{communications}_i + \alpha_5 \text{altruism}_i + \alpha_6 \text{govexpend}_i + \alpha_7 \text{confidence}_i + \alpha_8 \text{trust}_i + \alpha_9 \text{goveffic} + \alpha_{10} \text{corruption}_i + u_i \]

\[ \text{NumberNPO}_i = \alpha_0 + \alpha_1 \text{diversity}_i + \alpha_2 \text{education}_i + \alpha_3 \text{wealth}_i + \alpha_4 \text{communications}_i + \alpha_5 \text{altruism}_i + \alpha_6 \text{govexpend}_i + \alpha_7 \text{confidence}_i + \alpha_8 \text{trust}_i + \alpha_9 \text{goveffic} + \alpha_{10} \text{corruption}_i + u_i \]

\[ \text{NumberNPO}_i = \alpha_0 + \alpha_1 \text{diversity}_i + \alpha_2 \text{education}_i + \alpha_3 \text{wealth}_i + \alpha_4 \text{communications}_i + \alpha_5 \text{altruism}_i + \alpha_6 \text{govexpend}_i + \alpha_7 \text{confidence}_i + \alpha_8 \text{trust}_i + \alpha_9 \text{goveffic} + \alpha_{10} \text{corruption}_i + u_i \]

\[ \text{NumberNPO}_i = \alpha_0 + \alpha_1 \text{diversity}_i + \alpha_2 \text{education}_i + \alpha_3 \text{wealth}_i + \alpha_4 \text{communications}_i + \alpha_5 \text{altruism}_i + \alpha_6 \text{govexpend}_i + \alpha_7 \text{confidence}_i + \alpha_8 \text{trust}_i + \alpha_9 \text{goveffic} + \alpha_{10} \text{corruption}_i + u_i \]

\[ \text{NumberNPO}_i = \alpha_0 + \alpha_1 \text{diversity}_i + \alpha_2 \text{education}_i + \alpha_3 \text{wealth}_i + \alpha_4 \text{communications}_i + \alpha_5 \text{altruism}_i + \alpha_6 \text{govexpend}_i + \alpha_7 \text{confidence}_i + \alpha_8 \text{trust}_i + \alpha_9 \text{goveffic} + \alpha_{10} \text{corruption}_i + u_i \]

10 Following Ben-Ner and Van Hoomissen, Marcuello divides the goods and services supplied by non-profits in “collective goods” and “trust goods”. The latter includes goods and services for which there is an asymmetric information problem while the former include pure public goods.

11 Measures of Heterogeneity include market size, population characteristics, social cohesion, and income distribution. Measures of Government importance include total social expenditure and expenditure in education.
Expected signs are shown in the following table:

<table>
<thead>
<tr>
<th>Explanatory variable</th>
<th>Measure</th>
<th>Expected effect</th>
<th>Factor</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diversity</td>
<td>Percent of Whites</td>
<td>Positive</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Income inequality</td>
<td>Gini Coefficient</td>
<td>Positive</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>Percent enrolled in Secondary</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>education</td>
<td>Negative</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Income</td>
<td>Income per capita</td>
<td>Positive/Negative</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trust</td>
<td>Trust on others</td>
<td>Negative/Positive</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Government Transfers to</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Government Size</td>
<td>GDP</td>
<td>Positive/Negative</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corruption</td>
<td>Number of convictions</td>
<td>Positive/Negative</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

There is a potential endogeneity problem with this set-up. For example, higher government expenditures may increase the number of nonprofit organizations, but also it can happen that because there are more nonprofit organizations, government spends more on them by granting tax privileges or directly by subsidizing them, totally or in part. This problem or reverse causation is not addressed in this Paper, but it should be considered in future works.

The following table shows the statistical characteristics of the variables considered in the analysis

<table>
<thead>
<tr>
<th>Variable</th>
<th>Obs</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>number_of_nonprofits</td>
<td>408</td>
<td>7.232274</td>
<td>7.53672</td>
<td>0.6504139</td>
<td>40.94451</td>
</tr>
<tr>
<td>Whites (%)</td>
<td>408</td>
<td>.8289935</td>
<td>0.1365457</td>
<td>0.2674738</td>
<td>0.983892</td>
</tr>
</tbody>
</table>
Table 4. Statistical Characteristics of Selected Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>social_trust</td>
<td>384</td>
<td>26.86815</td>
<td>3.545636</td>
<td>19.37229</td>
<td>35.54</td>
</tr>
<tr>
<td>gini_income</td>
<td>408</td>
<td>0.4290568</td>
<td>0.0711719</td>
<td>.343</td>
<td>0.6716816</td>
</tr>
<tr>
<td>Education</td>
<td>408</td>
<td>85.49578</td>
<td>3.964922</td>
<td>75.1</td>
<td>92.8</td>
</tr>
<tr>
<td>Transfers</td>
<td>400</td>
<td>8.343458</td>
<td>1.007225</td>
<td>3.19524</td>
<td>9.881678</td>
</tr>
<tr>
<td>Corruption</td>
<td>408</td>
<td>0.8197314</td>
<td>1.927131</td>
<td>0</td>
<td>13.89893</td>
</tr>
<tr>
<td>Personal Income</td>
<td>408</td>
<td>28765.92</td>
<td>4675.946</td>
<td>20364.04</td>
<td>48724.77</td>
</tr>
<tr>
<td>High speed_lines</td>
<td>338</td>
<td>466448.7</td>
<td>778534.1</td>
<td>934</td>
<td>7325304</td>
</tr>
</tbody>
</table>

In addition, Table 4a shows the correlation among the variables. Visual inspection of the results indicates that the independent variables show low correlation among them.

Table 4ª. Correlation Matrix

<table>
<thead>
<tr>
<th></th>
<th>Social Trust</th>
<th>Gini Income</th>
<th>Education</th>
<th>Transfers</th>
<th>Corruption</th>
<th>Income</th>
<th>Speed Lines</th>
</tr>
</thead>
<tbody>
<tr>
<td>social_trust</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>gini_income</td>
<td>-0.0983</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>0.1821</td>
<td>0.0002</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transfers</td>
<td>-0.0731</td>
<td>0.0139</td>
<td>-0.1171</td>
<td>1.0000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>corruption</td>
<td>-0.0090</td>
<td>0.0570</td>
<td>0.0551</td>
<td>0.0350</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Income</td>
<td>0.3059</td>
<td>0.0572</td>
<td>0.2802</td>
<td>0.0745</td>
<td>-0.1328</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>speed_lines</td>
<td>-0.1182</td>
<td>0.3434</td>
<td>-0.0881</td>
<td>0.2175</td>
<td>0.2481</td>
<td>0.0224</td>
<td>1.000</td>
</tr>
</tbody>
</table>

The size of the American nonprofit sector for each state is measured as number of nonprofit organizations per 1000 individuals. Data comes from the National Center
for Charitable Statistics (NCCS)\textsuperscript{12}. This section of the NCCS data bank draws on the report on the number and finances of all registered non-profits in section 501(c) of the Internal Revenue Service. In Section 501(c) the United States Internal Revenue provides a list of 28 types of nonprofit organizations that are exempt from some federal income taxes. The report is built with data coming from the Internal Revenue Service, Exempt Organizations Business Master File. As can be seen in Table 4, the number of nonprofit organizations shows a considerable dispersion around its mean during the sample period, 1998-2005.

As mentioned above, my empirical strategy considers the total number of nonprofit organizations as the dependent variable. However, the NCCS allows gathering non-profit organizations into 12 broad categories, or into 26 major categories, or into 655 subcategories. Taking advantage of this possibility, I also test for potential differences within the nonprofit sector. I choose to use 8 of the 12 broad categories since using subcategories would make the analysis difficult to handle in terms of the clarity of the potential conclusions.

The eight categories of organizations are those that belong to the following sectors: arts, education, health, the environment, international, mutual benefit, public benefit, and human services. I have excluded hospital, higher education, religious and unknown categories. The first two are included in the broader categories of health and education (the NCCS seems to show these for expositional purposes), while religious organizations are of different nature and their existence may not be necessarily associated with public and market failures and with how much the state spends relative to GDP. The unknown category is marginal.

\footnotesize{\textsuperscript{12} Please see: http://www.nccsdataweb.urban.org/tablewiz/tw_bmf.php}
Arts organizations are private nonprofit organizations whose primary purpose is to promote appreciation for and enjoyment and understanding of the visual, performing, folk, and media arts; the humanities; history and historical events; and/or communications. Education non-profit organizations span from those attempting to influence public policy to those technical organizations supplying specific educational services. Human service organizations are linked to issues such as crime, employment, public safety, recreations, sports, and youth development. Mutual (Membership) benefit organizations deal with specific issues such as retirement funds and insurance for its members: examples are the YMCA Retirement Fund and the Yale University Retiree Health Benefit Plan. Finally, organizations included under the Public Benefit category include those related to civil rights, social action, community improvement, social science, and philanthropy.

The following graph shows the kernel density estimate for the number of nonprofits organizations per 1000 individuals for each state.
We can observe that there is an important concentration of nonprofits at around 2.5 nonprofit per individual, on average. However, the average number of nonprofits is 7.26, suggesting that there is a small number of states with a large number of nonprofits. For example, North Dakota has more than 40 organizations per 1000 individuals, while Nebraska, Alabama, and Iowa have 26, 25, and 24 organizations per 1000 individuals, respectively. On the other side, Alaska, Illinois, New Hampshire and New Mexico show the lowest number of average nonprofits: 0.98; 1.07; 1.48.

A proxy for variables that may produce Government failures consists of an index of diversity which now measures the racial or ethnic composition of each of the American states: the percent of white residents as calculated by the U.S. Census Bureau. Other measures of diversity considered by other authors (Alesina and La Ferrara, 2000) include language and religious diversity. To my knowledge, there is no measure of language diversity within the United States, and in any case, one would assume that there is no such evident language diversity in one western country, at least. On the other hand, since I have excluded religious organizations from my analysis, I do not consider any measure of religious preferences within the United States. When diversity is considered as the percent of white individuals in the population, an increase of diversity means that the percent of whites decreases. The data shows little dispersion little dispersion around the mean. There are two states with high relative diversity: Hawaii (less than 35%), and the District of Columbia (less than 35%). The rest of the States show percents of whites over 65%. According to this measure, a higher percent of whites represent lower diversity, leading to less non-profit organizations according to
the Public failure theory of nonprofit organizations. The kernel distribution is skewed to the right, meaning that many states are located on the high scores, or that a vast majority of them are ranked high in terms of economic freedom. In other words, according to the Fraser Institute, most of them have relatively low transfers with respect to the size of their economies.

Proxies for variables associated with market failures, income and education, are measured using indicators from the US census, which provides information on per capita income for each State (as a measure of development and wealth) and on education of state populations. Education is measured as the percent (times 100) of total population 25 years and over with High School diploma or Higher. The United States appear to be a quite homogeneous country in terms of education, at least for those with at least a High School diploma: almost all the population fits within two standard deviations from the mean. Income is measured as mean personal income in current dollars.

All incomes below the mean are less than two standard deviations from it, meaning that the distribution is skewed to the right. There are high income states the incomes of which are far above the mean. Examples are Connecticut, Delaware, and Maine. Interestingly, all of these states have less than average number of nonprofit organizations per 1000 individuals. States with incomes lower than the average, like Indiana and Iowa have impressive numbers of nonprofits per 1000 individuals, well above the average (19.78 and 24.24 respectively). North Dakota, with a personal income level of 30,626 dollars (a little above the average of 28,765), shows the highest average number of nonprofit organizations during the 1998-2005 period: 85,723

Improvements in communications are measured by the number of speed lines by State of over than 200 kbps in at least one direction. The Data comes from the Federal
Communications Commission, Various Reports, and can be accessed at http://finder.geocommons.com/source/Federal%20Communications%20Commission.

Unfortunately, full data on high speed lines for each of the States is available only after 2000, which means that our sample is reduced by missing values in two years out of 8 years, that is, more than one hundred observations\textsuperscript{13}. The inclusion of this variable (not shown) does not improve the fit of the estimated regression and does not change the significance of any variables on the regression. Moreover, the estimated parameter associated with high speed lines is not significantly different from zero y 7 out of 9 regressions. I therefore drop this variable from the analysis. Nevertheless, further study is needed to evaluate the importance of this variable, since it represents a potential channel by which market imperfections such as asymmetries of information are influenced.

The Fraser Institute builds an indicator that ranks States according to the amount of Government expenditures as a percent of Gross Domestic Product. It measures Government size by considering three indicators: Government expenditures over Gross Domestic Product, Government Transfers as a percent of GDP and Payments to Social Security as a percent of GDP. To test for the Social Origins theory of the nonprofit sector and the crowding out theory, I consider the indicator that measures Government Transfers to Gross Domestic Product as my indicator for government size. Transfers and subsidies include transfers to persons and businesses such as welfare payments, grants, agricultural assistance, food-stamp payments (US), housing assistance,

To construct the index, which runs from 1(minimum economic freedom) to 10 (highest economic freedom), each observation of the variable is transformed into a number from zero to 10 using the following formula: $(V_{\text{max}} - V_i)/(V_{\text{max}} - V_{\text{min}}) \times$

\textsuperscript{13} Some data is also available for 1999 but does not cover all the states.
10, where $V_{\text{max}}$ is the largest value found within a component, $V_{\text{min}}$ is the smallest, and $V_i$

is the observation to be transformed. For each component, the calculation included all data for all years to allow comparisons over time. As said, higher values of this indicator represent more economic freedom, e.g. lower participation of the Government in the economy. That is, more economic freedom for the private for profit sector and, accordingly, less support for nonprofit organizations on the supply side if the Salamon et.al hypothesis is correct. On the other hand, if higher values of this index are associated with larger nonprofit sectors across states, that would represent support for the crowding out hypothesis.

In measuring Trust I follow Bjørnskov (2008) in his study of Social Trust in the United States. Bjornskov uses the DDB Needham Lifestyles Surveys to measure average Social Trust for the 1970s, 1980s and 1990s for 48 American States. My period of study lies between 1998 and 2005. The DDB Needham Lifestyle Survey ask individuals to rate the degree to which they agree with the statement that “Most people are honest” and build a ranking from 1 to 6 (most agree)\textsuperscript{14}. In order to obtain measures of Social Trust for my reference period I consider Bjornskov average estimates for the 1990s as representative of 1998. I then consider the average measures of Social Trust from the General Social Survey for the United States for 2000, 2002, 2004, and 2006. I take the percentage change in Social Trust for those years and apply it to 1998 measures from Bjornskov to obtain state measures for each of the years considered in this Paper. This estimation leaves the relative structure of Trust across states unchanged with respect to 1998.

\textsuperscript{14} Some studies have shown that the World Value Surveys trust question is closely related to actual honest behavior (Knack, 2001), (Uslander, 2002) and others cited in Bjørnskov (2008).
I take this approach for two reasons: first, I cannot access the DDB Needham Lifestyles Survey data and second, the General Social Survey is performed every two years and does not consider each American State: it segregates the data across predefined regions (South Atlantic, West, ).

Finally, Corruption is measured as the number of federal convictions per state per 100,000 individuals and for each of the years of the sample. I follow Glaeser (2004) in his study of Corruption in America. The data comes from the “Report to Congress on the Activities and Operations of the Public Integrity Section” edited by the Justice Department of the United States. I collect information on the number of federal, state, and local public officials convicted of a corruption-related crime for each of the years of the sample. I then divide the number of convictions by state population for each of the years to build state conviction rate per 100,000 individuals. There are clearly four states that stand out as high-corruption states: New York, Virginia, Alabama and the District of Columbia. Most of the states show rates of corruption of less than 1 per 100,000 individuals in each of the eight years covered by my data.

6. Results

Table 5 below shows the results of the panel robust regression on the size of nonprofit organizations across American States. Robust regression analysis takes account of potential problems of outliers and heteroscedasticity. Out of a total number of 408 observations (51 States times 8 years), after considering missing values, the number of observations comes down to 384. Ordinary least squares may be biased when fixed effects are present in longitudinal data, as is well known. In order to analyze if there are omitted variables that may be constant during the sample period, I run panel
regressions controlling for fixed effects, which in this case would be each of the 51 states considered.

Table 5. Results of Robust Panel Regression. Dependent Variable: Size of the nonprofit Sector

|                | Coef  | Std. Err. | t     | P>|t| | 95% Conf. Interval |
|----------------|-------|-----------|-------|-----|-------------------|
| whites         | .4163996 | .2460007 | 1.69  | 0.091*** | -.0675332 to .9003324 |
| social_trust   | .1290866 | .0653364 | 1.98  | 0.049**  | .0005567 to .2576165 |
| gini_income    | .3642326 | .3844787 | 0.95  | 0.344    | -.3921141 to 1.120579 |
| education      | .1016941 | .0273794 | 3.71  | 0.000*   | .0478334 to .1555547 |
| Transfers      | -.2226253 | .1387041 | 1.61  | 0.109*** | -.4954841 to .0502335 |
| corruption     | -.0034924 | .0952032 | 0.04  | 0.971    | -.1907762 to .1837914 |
| Income         | .0001754 | .0000265 | 6.61  | 0.000*   | .0001232 to .0002276 |
| _cons          | -8.661.723 | 278.025  | 3.12  | 0.002    | -1.413.103 to -3.192.414 |

The results show no support for the public failure argument for the existence of nonprofit organizations. Being a less diversified state in terms of having a more homogenous (white) population increases the number of nonprofit organizations, which is exactly the opposite as what Weisbrod (1975) suggested. The effect of percent of whites is statistically significant at acceptable levels and shows a positive coefficient. Recall that the indicator represents the percent of whites in the population: a higher indicator means more whites in the state, which translates into a more homogeneous
population. In this sense, governments may have lesser problems assessing people’s preferences to supply public goods. If governments do not supply public goods, it may be due to some institutional factor, such as corruption. In numbers, the magnitude of the effect is not as large as can be thought: a one percent increase in whites produces almost half a unit decrease in nonprofit organizations per 100,000 inhabitants. Finally, the effect of income inequality is not statistically significant in terms of changes in the number of nonprofit organizations.

The market failure demand-related hypothesis for the existence of nonprofit organizations is not supported by the data. Rather, the supply-related effect seems to be predominant over the demand effect. Personal income has a positive and significant effect on the number of nonprofits. This means that richer states should have larger a number of nonprofits, after controlling for the other factors. In other words, the relation points into the direction that those richer individuals may be willing to create nonprofit organizations but that wealth does not seem to have a strong effect as a reducer of market failures. Income here is measured in current dollars. Although statistically significant, however, the effect of income appears to be small in terms of the increase in units of nonprofit organization due to a change in one dollar of income. The coefficient of income is 0.0001754 units of change of nonprofits per 100,000 inhabitants, which means that income has to have important increases for the number of nonprofits to actually change significantly.

Education, on the other hand, also has a significant positive effect on the number of nonprofit organizations. The presence of fixed effects is more relevant here. Taking account of these fixed state effects, which are negative, the effect of education goes from being not significantly different from zero to significantly positive when compared to the results from simple OLS regression (not shown). The data reveals a potential
supply-related effect of education. The theory argues for a negative demand effect by which more educated people should be able to minimize market failures arising from asymmetric information. By being more educated then, the incentive to demand goods from nonprofit organizations because individuals should trust them more diminishes and the number of nonprofits should not decrease. On the contrary, a supply-related effect argues for a positive relation, since more educated individuals should be more informed and concerned with issues such as the environment, social welfare and health care for children and the elderly, for example. If the latter situation is more important than the former, then more education should lead to more nonprofits, instead of less. This is what the sign of the coefficient on education appears to be capturing: a stronger supply effect.

Some types of institutional forms considered in this Paper matter for the existence of nonprofit organizations. First, higher levels of social trust are associated with a larger number of nonprofits across the American States. Recall that trust is a variable that may show demand-related positive effects on the size of the nonprofit sector, as it potentially increases trust among consumers and suppliers of goods and services. In this sense, it helps reduce information asymmetries, a form of market failures, and potentially leading individuals to demand goods and services from business firms more. But on the other hand, as some literature on participation suggests, higher levels or trust may create positive incentive for peoples to participate in and create nonprofits as forms of social interaction and to solve more general problems like pollution. This supply-related effect seems to be dominating the demand-market failure effect of Hansamann (1980). Higher levels of honesty (a proxy for trust in this Paper) increase the number of nonprofits. that influence the demand for goods and services from nonprofits organizations.
The size of the government in terms of transfer to the private sector, social benefits, subsidies and other transfers has a negative effect, although hardly significant. This effect appears to support the crowding out theory of Fukuyama and others and does not lend support for the crowding in theory of Salamon et.al.. On average, government and nonprofit sector appear to be substitutes in place of complements.

Finally, corruption does no appear to influence the existence of nonprofit organizations in the United States between 1998 and 2005. Since corruption also has theoretical negative demand-related and positive supply-related influences, it is not possible to evaluate with this information if the two effects are canceling each other or some other relation between the two effects.

6.1 Disaggregating the nonprofit sector in the United States

I have considered 8 different categories of nonprofit organizations in order to study possible idiosyncratic characteristics of each sector that may be lost in the general analysis when all the categories of nonprofits are lumped together. For expositional convenience, the following table compares the sign and level of significance resulted from the 8 panel regressions corresponding to each category of nonprofits with the signs and significance of the general case. Appendix 2 offers the detailed information on the results of each regression. In each sectoral regression, only the number of corresponding nonprofit organizations per 100,000 individuals is considered as the dependent variable. The independent variables remain the same.
Across variables, being a more homogenous state (a higher percentage of whites) loses significance in all the sectors with respect to average. It appears that lumping the sectors together decreases the likelihood of public failures. However, in none of the sector the coefficient is significantly different from zero. In other words, it seems that the positive and counterintuitive effect of racial heterogeneity on the average is no more than an artificial conclusion drawn from the gathering of the data of different states. The effect turns negative for nonprofits on the International sector, but it is not statistically significant.

The significant positive effect of the perception of honesty on average remains positive in each of the 8 sectors considered, with the exception, again, of International nonprofits. In each sector but the latter, it appears the trust continues to influence the supply related aspect of individuals, who wish to create more nonprofits if they believe people can be trusted. The effect loses significance though, for some sectors, namely,
education, environment, international, and mutual benefit sectors. Again, the situation of nonprofits dealing with international issues turns out to be negative, but not significant.

The case of income inequality, one of the proxies for potential public failures, is interesting. The effect is positive but not significant, on average. In other words, inequality of income as a measure of diversity does not appear to influence the demand for nonprofit organizations due to potential public failures in the supply of public goods. This situation, however, changes for two types of nonprofits, arts and health organizations, for which the effect is effectively positive and significant at acceptable levels (in this case 10%). It is well known that the supply and demand of products such as theater shows and museums expositions as well as that of health related products such as research in medicine show characteristics of public goods: private business firms may not be willing to produce them because they cannot appropriate the full benefits. In this sense, then, it is intuitively reasonable to think that individuals may turn to nonprofit organizations to obtain those goods and services. In fact, the case of arts, museums and health organizations are more often than not, examples that the literature puts as examples of sectors where nonprofits take the role of government due to public and market imperfections (Weisbrod, 1975, Glaeser, 2002). In two other sectors, Mutual and Public Benefit, the effect turns to be negative, but not significantly different from zero.

On average, more educated individuals are willing to create nonprofit organizations: it was the supply related effect dominating over the demand related (minimization of market failures) related effect. The same situation repeats for all types of organizations but two: Mutual Benefit and International organizations. The effects on
both, though negative in the case of the latter, lack statistical significance. But it signals potential differences across sectors that should be subject of future research.

Government transfers as a share of Gross Domestic Product lacks statistical significance for each and all the sectors, with the exception of the “average” sector. This situation is similar to the relevance of racial heterogeneity above, that is, the significant crowding out effect seems to be an artificial effect produced only by the automatic gathering of different nonprofit organizations. But a conclusion that government transfers crowd out nonprofits probably would not seem real to the individuals who are interested in participating in nonprofit organizations.

The not significant effect of Corruption observed at the aggregate replicates for each type of organizations, and again, in neither of them the effect is significantly different from zero. Corruption, then, an institutional form of the state, does not seem to affect the existence of nonprofit organizations. Probably there are negative demand and positive supply related effects that are offsetting each other. Further analysis would be useful to understand the correct effect of corruption.

The average positive effect of income levels replicate to all sectors, with the significant exception of Mutual Benefit organizations, for which the effect is significantly negative. This effect can be associated with the demand-related argument that wealthier individuals are in better position to assess the quality of goods and services supplied in the market, minimizing the relevance of information asymmetries and as a consequence, the need to demand goods from nonprofit organizations. Mutual benefit (or membership organizations) is organizations dealing with insurance and retirement plans of their membership. Wealthier individuals may wish to contract other, private, plans offered by business firms because they have the means to assess the
quality of those products offered by for-profit firms. So the wealth of individuals may be playing the role in minimizing market failures

7. Discussion and Improvements

This Paper has attempted to test theories that justify the existence of nonprofit organizations and has incorporated the importance of different institutional forms on such existence. I have not found support to Weisbrod’s hypothesis that more heterogeneous societies should show a larger nonprofit sector. The measures used to evaluate his hypothesis were the percent of whites in each state and inequality of income. Other measures of diversity have been used in different cross country studies, such as ethnic, language and religious diversity, for example in Alesina and La Ferrara (2000). Surely, the conclusions of this Paper with respect to diversity can be improved by incorporating other measures of diversity such as the ones mentioned. The states of the United States are, with some minor, exceptions, populated by a majority of white women and men. On the other hand, Marcuello (year) has argued that inequality of income does not represent a true measure of heterogeneity because it does not represent wealth.

Second, the theory that asserts that market failures in the forms of information asymmetries should lead to a larger nonprofit sector and that higher incomes reduce such asymmetries does not find support across American States. Better educated individuals who may also assess the quality of goods and services better, are not associated with a smaller nonprofit sector in the United States of America. The same can be said about wealthier individuals. The net effect appears to be supply-side, affecting the willingness of more educated and richer persons to create nonprofits. Here,
it is impossible to detect the magnitude of either effect, only suggest that the net effect supports the supply hypothesis. Again, further studies could improve in measures of education (considering for example, highly educated individuals) and different types of wealth besides income, such as property.

Some types of institutional forms affect the size of the nonprofit sector. Social trust does have a significant and positive effect on average but in some sectors that positive and significant effect disappears. Social trust here has been measured by an indicator reflecting the perception of individuals about the honesty of other individuals. This measure is not a trust measure, although correlated, as some authors have proved. However, the need to find a more accurate measure for social trust should be one improvement to test the results of this Paper. The importance of trust as a variable that may reduce market failures is apparently diminished by the data, although it would be interesting to investigate what happens in each of the different sectors, where the overall effect seems to be insignificant. One way of improving our understanding about the effect of trust would be to obtain information from the General Social Survey. This Paper has not considered this information in detail because the GSS is done every two years, and that would have reduced the number of observations significantly. Moreover, the GSS does not provide information at the state level, but only at a regional level. However, it would be possible to perform a different analysis for a longer period using the GSS which would allow to consider different measures of trust.

Government transfers do not significantly contribute to explain the existence of nonprofit organizations. Recall the theories involved: the crowding out theory of Fukuyama and others, and the crowding in theory of Salamon and others. As stressed above, the potential endogeneity problem here relates to the fact that although larger government transfers may be explaining the number of nonprofits, the existence of more
nonprofits may require larger subsidies or tax privileges on the part of the Government. One aspect that needs to be improved in my opinion is the measure used to represent Government transfers. One can improve by computing specific tax rebates or direct subsidies or any other financial support to nonprofits by the each state Government. I have not been able to obtain that specific information, which would represent an improvement over the results obtained in this Paper.

Finally, corruption does not affect the existence of nonprofit organizations. Individuals do not regard the number of convictions of public officials in each state as a factor that would determine whether they would buy goods and services from nonprofits or that they would be willing to participate or create nonprofit organizations. One would argue about the appropriateness of the number of convictions to measure corruption. In his work, Glaser ranks the 10 most corrupt states along the ten least corrupt states and concludes that the ranking fits well with “our preconceived notions about the areas of the United States that are more corrupt”. He also mentions that this measure has advantages over survey-based measures of corruption, perhaps because survey-based measures are subjective measures (my adding). Further work on the role of Institutions would be to build new measures such as measures of Regulatory Quality, Transparency in business operations, and of Government effectiveness.

On a more general perspective, although important for future research, is the fact that this Paper has built a reduced form model of factors that may affect the demand and supply of nonprofit organizations. In that it has shed light on important aspect of supply and demand but has not delve with specific, individual preferences about nonprofits that would allow to build a complete economic model. An attempt to build such model would require to collect information from surveys, for example, about the willingness of individuals to pay more or less for goods supplied by nonprofits vis a vis business firms,
or to assess whether individuals expect governments to supply certain goods and services and if the government does not, whether individuals demand those goods from nonprofits or create nonprofits to supply those goods and services.

But in essence, this Paper has contributed to the literature on nonprofit organizations by introducing specific institutions to the analysis of the existence of such organizations. Since nonprofit organizations are regarded as important vehicles for development, as mentioned in the introduction, the role of institutions appears to be an important aspect to be studied in more detailed. I am sure this Paper lays down new avenues for future improvement of our understanding of nonprofit organizations and development.
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