

Religion and Entrepreneurship

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Abstract

The study is geared to investigate the relationship between religious factors and entrepreneurship with the growing consensus that religion plays an important role in various social and economic outcomes, yet little is known about specific mechanisms and channels through which religion affects economic development. One key component of development is the growth of entrepreneurship. This essay examines whether level of entrepreneurship across the U.S. counties can be explained by religiosity and religious diversity. Two variables were used to proxy the entrepreneurial potentials of counties: the share of self-employment in the total employment, and the annual growth rate of small firms in each county. Religious adherence rates for each of county are used as a measure of religiosity level, and religious diversity is calculated considering five main religious denominations: Roman Catholic, Evangelical Protestant, Mainline Protestant, Orthodox and the others. Using spatial econometric methods, the researcher found that religious factors are not beneficial for entrepreneurship within the borders of a county, but they positively affect neighboring localities' entrepreneurial potential. Also there is a small variation of effects among different denominations.

Keywords: Entrepreneur, County, Economics, Values, Interest, Religiosity, Religious diversity, etc.

Introduction

The teachings of most of religions have general or detailed rules and frameworks for different aspects of the adherents' lives, including the economic aspect. Besides teachings and rules, religions as an informal institution in any society, directly or indirectly affect the economic output through various social channels. For instance the creation of networks among members of a religious group will change the rule of game.

The study focused on the relationship between religious factors and one dimension of economic behavior of individuals. Particularly entrepreneurial behavior is the matter of concern here. Put in short form, the study is geared to test if religiosity and religious diversity have any effect on the level of entrepreneurship. The analysis is for the counties in the United States.

There are only a small number of studies that investigates a similar question. But they are all in a different scale or implementing different variables. Anderson, Drakopoulou-Dod and Scott (2000) explore the role of religion in the formation of enterprise culture in Britain during the 1980s. The authors underscore that, despite the confrontation of the Church and economic conventional view back in 1980s, religion supported the entrepreneurial culture. Dodd and Gotsis (2007) view the same relationship using survey data in the U.S. Audretsch, Boente and Tamvada, (2007) examined the influence of different religions on propensity to become an entrepreneur in India. Using individual level survey data, they find Christians and Muslims tend to present higher propensity to become entrepreneur, as opposed to Buddhists and Hindus. Carswell and Rolland (2007) approach a similar question as the current paper and use survey data in New Zealand. They show that increase in the religiosity and religious diversity of New Zealand society has not affected entrepreneurship negatively.

The study of religion in the realm of social sciences, particularly economics, is relatively a new phenomenon. However some claim Weber's *the Protestant Ethic and the Spirit of Capitalism*, in 1905, was the first to identify economic role of faith. Lannaccone (1998) even argues that Adam Smith was the one who started the modern study of economics of religion. Anderson (1988) investigates the aspects of *Wealth of Nations* in which the economics of religion is highlighted. In any case, the importance of religion as an informal institution in different parts of social lives of individuals has been attracting attention of economists for a while. This increase in research examining the economic functions of religion was accompanied by a new trend in quantitative studies. Those studies started to grow rapidly after a paper titled "Religion and Economic Growth" by Barro and McCleary in 2003. The authors analyze the influence of religious participation and beliefs on a country's rate of economic growth. They find that some aspects of beliefs, i.e. belief in heaven and hell, are positively associated with economic growth while religious service attendance negatively impacts the growth.

The current paper is trying to seek out a slightly different part of religiosity's importance. Entrepreneurship is increasingly being recognized as a primary engine of economic growth and development. What entrepreneurs do is crucial to the dynamics of any society by which they combine the existing resources and innovative ideas to create new economic goods and services and ultimately new jobs. In short, entrepreneurs are the link between the new ideas and economic growth and development. Do the faith and religious practice of people impact their entrepreneurial behavior? Is there any connection between the level of religiosity and the entrepreneurial activities? Logically at the beginning we need to define these two concepts, entrepreneurship and religiosity. Secondly, this question can be answered or analyzed at different layers. For example at one level, the story can be the relationship between religious values of an individual and his creative and innovative character. So it would be an absolute micro level analysis that can be very well categorized in other field of social or human sciences. On another level, those questions can be in an aggregated level of a group of individuals. Here, rather than micro analysis, the study examined the topic in the social level. In another word, the research examined if the importance of religion in a society has any effect

on entrepreneurial behavior of members of that society and ultimately the level of entrepreneurship.

Besides the ultimate objective of this paper which is to investigate the relationship between religious factors and entrepreneurship, the spatial behaviors of those variables are examined as well. The impact of entrepreneurship and religious factor in one county on entrepreneurship level of the neighboring counties was ascertained. For measuring religiosity, like some previous studies, data from the Association of Religion Data Archives (ARDA) was utilized. This was from Religious Congregations and Membership Study in year 2000.

Literature Review

The consensus of the studies in the literature of economics of religion is that religion affects economic performance and its impact happens through different yet highly related channels. Such channel is the essence of religious teaching and principles.

Anderson (1988) refers to Adam Smith's *theory of moral sentiments* and points out that religious belief provides strong incentives to follow moral restraints such as trust, honesty, benevolence, and restraint from violence that have an effect on civil society. Iannaccone (1995) points out that all religions work to instill certain values, morals, and behavioral frameworks in their followers and those values, beliefs, and morals are recognized in most aspects of human behavior. Anderson points out another similar argument that the belief or the fear of god leads adherents to abide by "a kind of internal moral enforcement mechanism" (1988:1069). This is what sometime referred to as "supernatural monitoring" or "God is watching you", which leads adherents to be trustworthy, truthful, honest, and ethical claims that religious people are discouraged from engaging in activities such as divorce, abortion, non-payment of debt, and illegitimate births, treating those activities as sinful. All of those indirectly point to the impact that belief in the religions' principles would have on the behavior and ultimately on the economic activity and performance. A similar literature has been documented on the importance of religion in economic and social outcomes in the US. Lipford McCormick and Tollison (1993) study the impact of church membership (using US state level data) on abortion, divorce, murder, illegitimate births and crime and underscore that church has a negative effect on most of those variables.

Another part of the literature emphasizes the idea of social interaction and social networks. Membership in a religious group would lead to the formation of a network. The network can be the source of accumulation of what is called "social capital". There are studies that show higher religious adherence that also lead to higher social capital in a community or locality. Putnam (1993) argues that trust, and therefore social capital, is higher in societies that have dense networks of civic engagement. Those networks include neighborhood associations, sports clubs, choral societies, and political parties. Religious institutions and religious service attendance are often cited as sources of social capital as well (Putnam, 2000; Smidt, 1999; Greeley, 1997; Wuthnow, 1997; Tolbert, Lyson and Twin, 1998). This form of capital has been viewed as a vehicle for improving individuals' well-being and for discouraging free riding and shirking. Several papers examined the effect of

religion on human capital and income (Fan, 2008; Sander, 2002; Steen, 1996; and Tomes, 1984).

An alternative analysis to the above is that religious adherence or participation that requires additional sources in terms of time and other resources that leads to negative relationship between religious activities and economic growth. Some other studies put this in the form of opportunity cost of time in the individual level decision making indicating that higher rate of attendance increases the opportunity cost (Azzi and Ehrenberg, 1975; Lipford and Tollison, 2003).

Heath, Waters and Watson (1995) study the effects of religion on the level of income using the U.S. state level data. More importantly, they analyzed the effects of various denominations categorized as Jewish, Roman Catholic, liberal and fundamentalist Protestant and underscore that Jewish membership is positively associated with state per capita income, liberal Protestantism is not associated with state per capita income and Roman Catholicism and fundamentalist Protestantism are inversely associated with state per capita income. Crain and Lee (1999) examine the relation between church membership and per capita income growth in state-level in the U.S. and intone that there was no evidence of significant effect. Religious diversity or polarization has also received attention in this literature (Montalvoa and Reynal-Querol, 2005; Lipford and Tollison, 2003). The original argument dating back to Adam Smith is that established (a state-funded and protected monopoly) churches tend to be sagging in enforcing the moral virtues of followers (Hull and Bold, 1998). In other words, greater diversity of religion in a country or region promotes higher competition resulting in higher quality religion. Lannaccone (1998) cites empirical evidence to support Smith's claim that concentrated religious markets result in lower levels of religious participation. An underlying point related to present research is that a monopolized religious market may contribute to negative economic growth. Hull and Bold (1998) argue that empirical findings to support Smith's claim may not be applicable to the US since competition between established and non-established churches is not comparable to competition among non-established churches, even if concentration is high in a market of non-established churches. A related argument is that religious fractionalization, similar to ethnic fractionalization, has a negative effect on economic development. From a social capital perspective, religiously fragmented societies have less social capital, leading to less-trusting societies. An alternative point of view is that greater diversity in the form of a "melting pot" can enhance economic well-being in a society (1998:1-19).

The other part of the related literature to the current research includes various studies examining entrepreneurship. Since entrepreneurship is a multidimensional concept and there is no general agreement on an economic theory of entrepreneurship, previous studies have defined and used the term in different ways. Beginning with Schumpeter (1934) an "entrepreneur" is an individual with innovative ideas, utilizing new combinations of means of production. Kirzner (1979) emphasized the entrepreneur as an enthusiast in discovering opportunities to make profit. Knight (1921) described an entrepreneur as an individual who is willing to take risks in performing economic functions, while others (McClelland, 1965; Kihlstrom and Laffont, 1979) argue that an entrepreneur is a person with

certain unique psychological characteristics. Although these concepts have contributed greatly to the understanding of entrepreneurship, a universally accepted explanation or measure of the concept has not yet been found. Hence, previous studies have used different concepts according to the purpose of the study, the theory applied, and the availability of information needed for empirical research.

Theoretical Argument

The association between religion and the level of entrepreneurial activity can be looked into from different angles. In this paper both religious factors and entrepreneurship are aggregated for the county level analysis. Therefore although the theoretical reasoning behind the empirical study is based on individual behavior analysis, the result should be discussed and adjusted in the aggregate level.

As mentioned in previous sections, religions provide moral and ethical foundation for their adherents encouraging them to behave in a specific way. Thereby economic behavior might be directly influenced by the impact on traits and attitudes, and indirectly by promoting factors which themselves influence economic outcomes. Religion also may influence economic results through its institutional sources. Public commitment to a religious organization, attendance to religious services, signals the acceptance of religious ethical code of conduct. This creates incentives among possible transaction partners to use religion as a signal for specific characteristics of a person and teaching of religion as second under the influence of the socio-religious network that they are a part of (Tomes, 1984). Although both of the two venues of impact seem strong and relevant, yet expecting a particular sign or significance for the relationship between religiosity and entrepreneurship is difficult.

The other religious factor that is included in the analysis is the religious fractionalization. As discussed in the literature review section, social, cultural and religious diversity have impacts on different economic parameters. Entrepreneurship level, if in the general form could be seen as the density of innovative activities in one locality, could effect and be affected by religious plurality. The idea is that as the society gets more diverse, it becomes a better platform for different enterprise plans to grow. In the same vein entrepreneurs would be attracted to more diverse societies so that they can start up their business with a hope of having more chance to expand due to the diverse market they have. On the other hand, along with the literature of fractionalization, religious diversity can negatively affect the economic performance. The rationale behind this assertion mainly originated from the idea of increasing probability of conflict or instability due to ethno-lingual or religious fractionalization (Easterly and Levine, 1997; Alesina, Baqir and Easterly, 1999; Alesina and La Ferrara, 2000). This line of reasoning is more valid when the focus is national level rather than the small community analysis. Therefore, overall for the current paper it is expected to have a positive correlation between religious diversity and entrepreneurship.

For the dependent variable, entrepreneurship, there are three main categories of theories: personality theories, economic rational theories and socio-cultural theories. In personality theory, the psychological and special personal traits are the main force that make individuals prone to behaving as entrepreneurs (Brockhaus, 1982). Economic rational theory considers entrepreneurs as rational

agents who scan the market and choose the niche that will help them to maximize their return.

The socio-cultural theories posit that propensity to entrepreneurship has been based on nationality, race, culture and religion (Aldrich and Zimmer, 1986). In reality entrepreneurship is a mixed result of all those ideas which are highly related to each other. In this study the two economic and socio-cultural theories are more emphasized. The general hypothesis is that, there is a significant relationship between religious factors and entrepreneurship in counties of the U.S. In other word, religiosity and religious diversity are significant explanatory variables for entrepreneurial potential. By the theoretical basis presented here one had expected to see a positive effect of religious diversity on entrepreneurship; however sign of religiosity coefficient seems unclear. Besides this part of hypothesis, the paper investigates the spatial behavior of the main variables as well. Basically two questions were posed: does entrepreneurship in one county have any impact on entrepreneurship in the neighboring counties? Also, do religious factors in one county affect the entrepreneurship in neighbors?

Why there should be such spatial relation to begin with? The broad answer to this question is, in analyzing social or economic variables in small scale, e.g. counties; spatial dependence is an inevitable fact. Only in the labor sector that discussion could be that there are different types of mobility's that change and make the analysis more complicated. There are residences of one county who may go to a church which is located in the neighboring county or they may work in another county. All those factors cause a realistic suspicion toward spatial dependence.

Variables and Data

Measuring entrepreneurship and religiosity is a critical task to accomplish as in the literature there is no consensus on the approaches. This problem comes down to the single issue of how to define each of the two concepts. In this section the definition and the variables employed in the paper are described.

As explained in the theoretical section, entrepreneurship can be viewed from completely different perspectives. In this study, two different variables are constructed to proxy what can partially capture entrepreneurial potential at county level. It is stated "partially", because coming up with one single measure showing the entrepreneurship of a society or a locality is quite an impossible task to accomplish. That is why the two measures are considered in order to tackle different aspects of the dependent concept (entrepreneurship).

Religiosity also, as the main religious factor included in the paper, is difficult to quantify. In the studies concerning the religious variables in aggregate level there are different measures used. Usually the level of attendance (to religious services) and general (religious) adherence rate are taken into consideration. Attendance rates are constructed by the surveys that are delivered in individual level. The variables and the data sources used in the study are further explained. The idea of using self-employment as a proxy for entrepreneurship has been challenged and criticized in the literature but overall it can be claimed as one of the typical determinants (Parker, 2004). Low Jason and Stephan (2005) define two measures for entrepreneurial potential. One is the indicator of the "breadth" of entrepreneurship and the other is the measure of its "depth". Share of self-employment (non-farm

proprietors) from total non-farm employment is the variable for capturing the breadth of entrepreneurial potential and the average income of non-farm proprietors in the accounted county is the indicator of depth of entrepreneurship. The first measure refers to the concentration of entrepreneurs and basically shows how rich a county is as far as entrepreneurial activities. On the other hand, depth variable would account for the amount of wealth that entrepreneurs generate and therefore could lead to continuous growth in the number of entrepreneurs. The first measure in Low et al. (2005), share of self-employment, is used as a proxy for entrepreneurship. The data of proprietors are from Bureau of Economic Analysis (BEA) over the time range of years 2000 to 2010.

The second measure is average annual growth rate of firms with less than 500 employees. There are different definitions for small businesses depending on the structure of the firm, the support it receives from the public agencies or the size of its employment. For the size of employment also there are different categorizations. The study assumed less than 500 employees as small firm and using the data from Statistics of U.S. Businesses (SUSB) for year 2000 to 2009, the annual growth rate of those in counties was constructed.

The limitation of empirical studies on capturing entrepreneurship activities always exists. The study stressed that those variables with the witness of the existing literature, are good proxies for showing a large portion of entrepreneurial potential of the counties.

Religious Factors: Religiosity and Religious Diversity

In the quantitative research related to the topic of religion, measuring the religiosity level has always been an issue. Different studies have been employing different proxies and using various data sets available. Almost all of the various studies used the data from the World Value Survey (WVS) and utilize some questions regarding the belief in life after death or religious denominations to measure the religiosity. Studies concentrated on the U.S. however mostly employ the data available through the Association of Religion Data Archives (ARDA) or General Social Survey (GSS). The study deployed church membership and religious adherence percentage from Religious Congregations and Membership Studies provided by ARDA and the 14 main explanatory variables for religiosity.

The main variable is the percentage of population who are members of religious congregations. This is from year 2000 survey dataset. The individual adherence rate of main groups; Mainline, Evangelical, and Catholic denominations are just added to investigate and account for any possible individual impact. They are not in the core attention of the hypothesis but as a side issue.

Choosing religious adherence percentage as the main proxy for level of religiosity was based on two reasons, first, past literature Azzi and Erenberg (1975); Lipford and Tollison (2003); and Gruber, 2005) deploy the measure in different levels of national or cross countries of studies. Second was availability of data with specified location has been a limitation.

For the other religious variable, religious diversity, a relatively common measure of fractionalization is used. Gini-Simpson index as shown below represents the plurality or diversity. It simply determines the probability that two random entities selected from a population would represent the same type.

$$dc = I - \sum_{i=1}^{i=M} \left(\frac{Lci}{Lc} \right)_2^2$$

where, Lcj is the number of individuals in county C that belongs to religion (denomination) i. Lc is the total population of county C. So as is higher and closer to 1, county C shows higher level of denominational plurality. This measure here mostly captures the diversity among Christianity's different main denominations. Mainline, Evangelical, Catholic, Orthodox and others are the main groups used to calculate the fractionalization index.

Regional Characteristics

Owner-occupied homes and median housing values in counties are considered as control variables. Homeownership and higher housing values significantly enhance proprietors' ability to secure finance they need (Robson, 1998). Therefore it is expected that higher percentage of homeownership and higher housing value would be associated with higher entrepreneurial potential.

It is expected that counties with higher level of connectivity to the transportation network show a higher level of entrepreneurship. So a dummy variable accounting for access to interstate highways serves as another measure for infrastructure.

Another variable included is the level of natural amenity rank for counties, as measured by climate and a number of related variables, and it is expected, *ceteris paribus*, higher level of amenities to be associated with higher potential for entrepreneurship (McGranahan, 1999). This index takes values between 1 to 7 and the higher the better natural amenities representing county has. Furthermore, rural-urban continuum code is used in the regressions as another control variable. Ranging from 1 to 9, this code shows the continuum of metro to rural counties. The higher the code is, the more rural feature (less population and less adjacency to metro area) it has.

Conclusions

The import of the study can be summarized in different parts. First, the research question of this paper for the scale of counties in the U.S has not been investigated before. So it is a new dimension to be added to the literature of economics of religion in the scale of regional studies. Secondly, the argument of spatial dependence and spatial behavior, to the knowledge of author is a new approach in the literature of both entrepreneurship and economics of religion.

The study examined religious adherence rate and religious diversity in the entrepreneurship level in the U.S. counties. Also the spillover effect and the spatial behavior of those variables were in the core of the research question. Variables for measuring entrepreneurship were self-employment rate and growth of small firms. After testing five different specifications of models and reporting the results, it turned out that the Spatial Durbin Model (SDM) was the most appropriate. In this model, not only the spatial behavior of entrepreneurship would be considered, but also the effects over the borders for religious factors were accounted for.

The results indicated that religiosity is not beneficial for self-employment rate and growth of small firms in the same locality. But it has positive effects on neighboring counties' entrepreneurial potential. The effect over the borders of

counties (indirect effect) exceeds the direct effect; therefore the total impacts of religious factors were positive.

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