Designing an Instrument for Measuring Religious Capital Using the Position Generator Model - A Case Study of PhD students of Tarbiat Modarres University

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Abstract

One of the major challenges in the field of religious studies is lack of reliable instruments for measurement. Attempts have been made for filling this gap but religion as a capital has not found any position. Here, we are trying to make a measuring instrument for religious capital according to universal academic facts and methods to be used for measuring of and analysis on PhD students of Tarbiat Modarres University; in this study, at first the instrument was designed; then a relevant questionnaire was filled by a selected sample of PhD students of Tarbiat Modares University. The subjects of study included four groups consisting of students of four departments of economics and management, technical-engineering, humanities and medical sciences. The method for data collection was interview with questionnaire tool and data were analysed via regression statistical method. Results of this study suggest that access to social religious capital resources is higher in men, married people, and students of humanities, management and economy.

Key words: Religious capital, Position generator, social capital, Student

1. Introduction

One means of measuring social capital is the social position generator. This instrument has been globally used in a number of studies for measuring social capital. It may also be used for measuring different kinds of social capitals including religious capital; of course, it needs to be designed so that it can incorporate religion. No position generator instrument has yet been used for measuring religion. This instrument can measure people's relevance to religious positions in society, an entity neglected in investigating religious criteria. Having a criterion for measuring this component of religion can well prepare the ground for various investigations including the study of religion effect on other social variables and vice versa. In this study, we attempt to design an instrument for measuring religious capital on the basis of a universally employed academic method. Accordingly, socio-religious capital among PhD students of Tarbiat Modarres University is measured and then its relation with other variables of the target community is analysed. Throughout this study, an instrument is developed for religious capital; a questionnaire is distributed among PhD students of four faculties of Tarbiat Modarres University and an analysis is then presented accordingly. In this paper, at first research literature is reviewed and methodology is explained; results are then presented and analysed and finally a conclusion is provided.

2. Position Generator: A Theoretical Outlook

Measuring religious capital is one main challenge facing studies about religious capital. In this study, we are to employ position generator model for measuring religious capital. Position generator is an instrument used for measuring social capital at individual level (Lin & Dumin, 1986). This method focuses on the existence of social resources in networks rather than on the ties (Lin & Dumin, 1986; Lin, Fu & Hsung, 2001). This method measures how much access members of networks have to positions (specific prestigious positions) which represents all social resources gained by the prestige of positions in a society (Lin, 2001a). The aim of this instrument is to recognize different resources in one's network. In this method, the amount of access to positions and the strength and depth of the tie one has with owners of those available positions are measured. This instrument shows how much access everyone has to high-prestige positions and how much his network is various and extensive.

In the position generator model, a questionnaire is used in which a list of several positions is given to the respondent asking him whether his family members, friends and acquaintances have such positions. Accordingly, respondent's access to social resources is measured. Using this method is easy and quick and it is possible with this method to design questionnaires for different groups. Of course, for compiling questionnaires, designers should have a clear understanding of the social resources gained by positions and their prestige. In order to separate religious capital from social capital, religious positions are included in questionnaire. These religious positions replace social positions which are measured in social capital; for instance, it is asked whether one knows director of a charity organization or whether he knows a cleric and so on and hence respondent's access to religious resources is measured. It should be noted that the position-generator questionnaire used in this research is based on researches conducted in the Netherlands (Boxman et al, 1991; Moerbeek, 2001; Van Der Gaag, 2004) and Germany (Volker, 1995; Volker & Flap, 1999). These researches include secular positions (jobs and vacancies) in their questionnaires but we design a questionnaire for religious capital asking about jobs which are totally religious positions in order that it might measure religious capital. It is assumed that positions mentioned in our study are good representatives of the whole body of religious positions in the country – the access to which makes it possible for PhD students to develop religious resources. Throughout this questionnaire, the basic question revolves around whether the respondent knows the specified person in relevant positions. "Knowing that person" in this questionnaire denotes that upon encountering him (the owner of position), the respondent could remember his name and may easily converse with him.

Consequently, the respondent is asked to determine if the owner of the position is an acquaintance or a friend or a family member of him. The correct way to interpret these categories of acquaintance, friend and member of family is up to the respondent himself (Van Der Gaag, 2004).

3. *Review of Literature*

The concept of religious capital as a raw idea entered into the terminology of economics more than 40 years ago. There are various viewpoints for defining and explaining religious capital; we refer to some of these viewpoints in the following:

It may be said that of the first thinkers who studied the effects of religious capital were Azzi &Ehrenberg (1975) who analysed the effect of religious human capital on the person (family)'s amount of religious activities. According to them, religious capital increases as one gets older affected by parents, friends, fellows and relatives, through participation in religious rituals or by study and practice. One of the definitions presented for religious capital is that by Stigler and Becker (1977) who defined as religious human capital one's religious background including religious knowledge, familiarity with religious rituals and doctrines and association with religious people. Among other experimental studies, Stark and Fink (2000) modified this definition. They separated the idea of friendship from the concept of religious capital classifying the capital gained through friendship and other social networks as the concept of social capital; they believed that three sources of knowledge, awareness and emotions contribute to development of religious capital.

Bourdieu (1991, quoted from Vater, 2003) believed the religious capital to be the generating ground for all the intellectual perceptions and actions consistent with religious norms of natural and supernatural worlds. Fink and Dougherty (2002) focused on the emotional aspect of religious capital. Skinner and Becker (2006:9) defined religious capital as the practical contribution of faithful groups to the local and national life. Barker (2008) defined religious capital as an explanation for religious commitments and organizational developments in person, family and society. According to Reshetnyak, Salnikova and Myronovych (2012), concept of religious capital was defined as the source of organizational attachment and the abilities of people to make use of religious networks for contacting with others and this capital was considered as social capital. Some thinkers like Baker (2010) considered religious capital in line with social capital.

As can be seen, viewpoints about religious capital has undergone developments in course of time emphasizing in some viewpoints on personal and organizational religious relationships and contacts. On this basis, resource generator as a means of measuring interpersonal communications among the society could also be used in this regard, especially for socio-religious relations. Thus, we attempted to reconstruct this instrument by religious interpersonal relation structure and employ it for measuring socio-religious capital. In this context, few experimental researches have been conducted. Experimental studies have rarely investigated religious capital quantitatively.

An early relevant research is analysis made by Iannaccone (1990) which attempted to assess the effect of religious human capital, time and wealth on religious activities using data published by different sources of survey studies. In this research, some social deeds such as going to church and participating in religious affairs were considered as components of religious capital. Among recent studies, one may refer to research by Ezzati & Agheli (2008) titled "religious capital: its nature, constituent elements and impacts" in which they explained the effect of religious capital on economic development. Sadeghi, Ezzati & Shafi'ee (2013) in their article with the title of "Estimating charity function in Iran" in which they investigate factors influencing charity and charitable behavior according to Islamic doctrines, included in the function a variable termed religious capital which consists in all active Hossenies, mosques, shrines and other religious places. Mahmoudian (2015) examine din his dissertation the effect of religious capital on poverty reduction. In his econometric analysis, he had the whole body of religious places, endowments and payments replace the religious capital variable. None of these studies has used a reliable metrics to measure socio-religious capital.

If we want to look at further investigations related to position-generator topic, more works are there to be reviewed. Position generator question nairesare present in studies by Boxman (1991) in the Netherlands, Moerbeek (2001) in Netherlands, Van Der Gaag (2004) in the Netherlands, Volker (1995) in Germany, Volker and Flap (1999) in Germany and so on. Among more recent instances, we could mention the following ones: Marin & Hampton (2007) in the article named "Simplifying the personal relationship network in name generator as alternative to traditional single and multiple criteria methods" investigated this method and compared it to single and multiple criteria general social surveys and explained the advantages of their name-generator model.

Hlebec & Kogovšek (2009) in their article titled "how to measure social support networks: name generator model vs. relation role approach" stated that the name generator method and relation role approach are most common ways to measure individual social networks. In this article, an experiment was designed in which all factors interacting with the network were included and the two methods were compared. Based on previous studies, several hypotheses were formulated and tested.

Data were collected on a sample of 683 respondents from students of social sciences department and faculty of arts in Ljubljana in October and November 2008. The results showed that in general, the difference between frequency distribution of responses in the two methods was not considerable and support tools for both methods were similar; however, there could be seen big difference between intelligence support and work support. Difference between relations was strong and for the category of "no-one" this difference was higher. The difference among first choices was a bit bigger. Scattering of relation role approach was a little more than that of name generator approach. Van Der Gaag, Appelhof & Weber (2012) in the article titled "response to ambiguities about position generator for measuring social capital" stating that position generator is a welcomed measuring tool for social capital, tried to respond to uncertainties around capabilities of this method through analyzing measuring instruments of the social capital by this method and analyzing and comparing them. In this study, they also addressed this issue that this method is based on this assumption that friends are not useful only because of the job benefits but they have extensive social benefits for the individual. They presented suggestions for expanding the application of this approach.

Najarzadeh, Soleimani & Reed (2014), in an article named "measuring social capital by using position generator model (a case study of Iran's elite)"used position generator method to measure social capital of the elite. The method wasfor measuring one's access to social resources and advantages of social networking of each individual. Using data obtained from questionnaires distributed among the national elite, individual access to social capital resources was measured. Then, the upper and lower levels of social capital were separated and analyzed. The results of this study indicated that within the sample under study, access to social capital was higher among men, married people, PhD degree holders and those educated in engineering fields. At it can be seen, studies dealing with measuring social capital, have presented well-defined concepts of religious capital theoretically; however, due to data shortage, they could not present a good variable or instrument for measuring religious capital. On this basis, more extensive investigations are to be done in this field so as to obtain an appropriate instrument. Within the present study, we mean by religious capital, the individual religious capital that represents the amount of access that a respondent has to the available religious capital resources. It can be said that speaking about the religious social capital in this way is innovative and original and so far there has not been used any position-generator or the like for measuring and analyzing social capital.

4. Methodology, Questionnaire, and Research Data

In this study, data was collected using questionnaire tool. The data was analyzed by statistical analysis methods. The statistical population of the study consisted of PhD students of Tarbiat Modarres University. Here, a case study was carried out on the students of four faculties including humanities, medical sciences, technical and engineering, management and economics. Based on the confidence level of %99, the sample size had to be at least 486. Thus, it was tried to be at least 500. The population size was limited. Some individuals were inaccessible. Accordingly, the questionnaire was distributed among all of the students. It was followed-up so as to have at least 500 respondents to meet the criterion. In the analysis of the results, responses were coded as follows: (0) no one, (1) familiar one, (2) friend, and (3) family member. With this incremental ranking of relations, only stronger relations were coded. That is, if the respondent selected both familiar one and friend options, the latter option (code 2) would be taken as the criterion of the analysis of the results. If he selected both friend and family member options, again, the latter would be his response. In measuring descriptive statistics, SPSS was used. The analysis of the relations was done by OLS method and E views econometrics software. In studying gender and major factors, dummy variables (codes 0 and 1) were given. The examination and estimation of these models and correlation coefficient and regression coefficients were among analyses carried out. Variables like age, gender, and field of study were explanatory variables. Religious capital was dependent variable.

4.1. How to Design a Measuring Instrument

As said before, our questionnaire was of position generator type. It included 20 questions. In the process of its formulation, the items were indigenized based on the conditions of Iran. To examine validity, the questionnaire was submitted to ten faculty members and elites of humanities. Finally, 20 jobs (positions) were selected among the existing ones and included in the ultimate questionnaire. This questionnaire was distributed among 20 PhD students. The final copy of the questionnaire was kept after removing some ambiguities. In this section of the questionnaire, it was assumed that this set of jobs is a suitable representative of all religious jobs exiting in Iran – having access to which makes it possible for PhD students to create religious resources. The general question of this questionnaire was whether the respondent knew anyone in any of these jobs. The term "knowing anyone" meant that if the respondent faced with an individual (the owner of the position), he (the respondent) would remember him and easily talk to him. Then, the responding person was asked to say whether the respective person (the owner of the position) is among familiar people or his friends and (or) family members. It was up to the respondent to accurately interpret this classification and distinction between the familiar and family members (Van Der Gaag, 2004).

In the analysis of the results, responses were coded as follows: (0) no one, (1) familiar one, (2) friend, and (3) family member. With this incremental ranking of relations, only stronger relations were coded. That is, if the respondent selected both familiar one and friend options, the latter option (code 2) would be taken as the criterion of the analysis of the results. If he selected both friend and family member options, again, the latter would be his response.

4.2. Survey

First, the characteristics of the statistical sample and the various aspects of the questionnaire were explained here. Then, the questionnaire data regarding socio-religious capital was analyzed (using position generator tool). Consequently, results were presented and the effect of some exogenous variables on socio-religious capital was examined, too. The statistical population of this research consisted of PhD students of Tarbiat Modarres University. To enhance the homogeneity of the students and for a better analysis, cluster sampling was carried out on the students. To do so, four faculties were selected including the students of humanities and medical sciences whose knowledge was in two fields of humanities and natural sciences as well as faculties of management and economics, and technical and engineering whose knowledge was in two more technical fields of humanities and non-humanities. They were about 1400. They would be at least 500. Thus, the questionnaire was distributed among 700 out of these students. Finally, 550 questionnaires were returned. Out of them, incomplete questionnaires and those with incompatible responses were omitted. Finally, 515 questionnaires were reviewed. Table 1 presents the respondents' characteristics. As seen, %42 of the respondents was men and over %57 women. About %64 were single and %36 married. Most of them (%98) had a PhD degree. A few (%2) had a postdoctoral degree. They mostly studied humanities (%35) and medicine (%27). Regarding age, they were between 23 and 55 (mean age=30).

4.3. Questionnaire

Our questionnaire was composed of two sections: the first included the respondents' general characteristics. It was mentioned in the questionnaire that this part is optional. Over %90 of the respondents avoided mentioning their names. Yet, they had good cooperation in other responses. The second section included the position generator questions. The position generator questionnaire was based on the research carried out in the Netherlands (Boxman et al., 1991; Moerbeek, 2001; Van Der Gaag, 2004) and Germany (Volker, 1995; Volker & Flap, 1999). It was used for social capital. Yet, we replaced its questions and developed a special questionnaire for socio-religious capital. To measure socio-religious capital, this section included 20 questions. In this section of the questionnaire, it was assumed that this set of positions was a good representative of all religious positions in Iran. They provided PhD students with access to religious resources. The basic question, here, was if the respondent knew anyone in each of these positions.

5. Analysis of Results

5.1. Estimating Socio-Religious Capital with Position Generator

Table 2 presents the summary of the responses to the position generator section. The statistical sample is PhD students. Thus, they have further access to some positions. They also have a stronger connection with high-prestige positions. As seen in Table 2, Maximum 'yes' response (%60) was to 'knowing someone who could answer religious questions'. Minimum 'yes' response (%9) was to knowing a principal (or directorate or board of trustees or founder member) of a religious school (*hawza*=seminary)'. In other words, there was maximum access to someone who is able to answer religious questions and minimum to a principal of a religious school (hawza).

On the other hand, mean responses can be examined. It can show the state of the relation between the respondents and the position. (These responses are normalized so that 0 means no relation and 1 means so high relations). Results are presented in Table 3. The deepest relation with the respondents and the owners of the positions was respectively in someone who can answer religious questions, the talaba of hawza (religious sciences student) and a member of mosque trustees' body (strong ties). The weakest links turned out to be respectively with Marja', a cleric who is parliament member or minister and principal (or faculty or board of trustees or founders member) of a religious school (hawza) (weak ties). Based on studies, weak ties are useful for functional actions (the actions whose main function is to obtain direct socio-economic benefits). On the other hand, strong ties are useful for declarative actions (the actions whose main function is to share benefits and establish the sense of cooperation).

5.2. Prestige of Religious Positions

To present the results of the survey in figures, the prestige of the positions must be measured. There is no ranking of the prestige of religious positions. Thus, this prestige was examined by another questionnaire here. To do so, a religious positions questionnaire was developed. It was submitted to 11 elites of social sciences and humanities. They were asked to write the credit and prestige of these positions in front of them. Mean position score was considered the position prestige (Table 4). As seen, the owner of the religious goods store with mean score 6has the lowest prestige. Marja' with mean score 16.83 has the highest prestige (min and max ranks are 1 and 20).

Although the mean score is between 1 and 20, the positions can be divided into three parts including low prestige (mean score= 1 to 8), medium prestige (mean score= 8 to 13), and high prestige (mean score= 13 to 20). The final column of the table indicates each position prestige. As seen, there are three positions in the first section, 12 in the second, and 5 in the third.

5.3. High-Prestige and Low-Prestige Socio-Religious Capital

Religious capital can be measured by the results of the position generator and prestige setting questionnaires. Two "high prestige social capital" and "low prestige social capital" concepts can be applied for measuring an individual's social capital. These two can also be used for religious capital (because religious capital is also like social capital). That is, with two "high prestige socio-religious capital" and "low prestige socio-religious capital" concepts and characterizing them, it is possible to measure socio-religious capital. These two indices are obtained respectively from summing up "the positions of high prestige section to which the respondent has access" and "the positions of low prestige section to which the respondent has access". On the other hand, in many studies, "total available prestige" concept is used as the main index and scale of social capital. Total available prestige is the measure of social capital size. It measures cumulative prestige for all accessed positions for each person separately (Flap & De Graaf, 1986; Hsung & Hwang, 1992).

This index can also be used for religious capital.The reliability of these indices was examined by Cronbach's alpha coefficient using SPSS. Table 5 presents the values of these coefficients for the following indices: high prestige socio-religious capital, low prestige socio-religious capital, and total socio-religious capital (total available prestige). Based on Cronbach's alpha coefficients analysis, the research tool reliability coefficients are between 0.7 and 0.925. It can be said that the tool has good reliability. The omission of each of the positions (questions) reduces reliability. Table 6 shows the results of three socio-religious capital scales obtained. As seen, the level of high prestige socio-religious capital is higher than that of low prestige socio-religious capital.

Table 7 shows maximum and minimum access to high and low prestige religious positions. As seen, %61 has access at least to one high prestige religious position and %52 to at least one low prestige religious position. There are also %3 with access to all high prestige religious positions and %5 to all low prestige religious positions (three positions). High access to high prestige religious positions further stem from the characteristics of the statistical population of this study. Most PhD students work in high prestige positions or are in relation with them. Thus, they must have further access to these positions. As evident in the table, a little percentage of respondents has access to all high prestige religious positions. This is lower than the access to all low prestige religious positions. A reason can be the fact that one of the high prestige positions is Marja'. There is a limited number of Maraje'.

This special position requires a respondent self. In responses, only 52 respondents had access to this position.

With this data, the level of the socio-religious capital of these subgroups of PhD students can be obtained. Table 8 shows a summary of the results of the subgroups. As seen in the table, men have more access to religious positions (high prestige and low prestige). However, there is a little difference in the level of low socio-religious capital in men and women. Generally, men have higher socio-religious capital. On the other hand, married people have higher socio-religious capital (high prestige, low prestige, and total prestige) as compared to the single ones. Hawza students (tollab) have higher socio-religious capital than others. Those who are a member of elite organization have access to high prestige religious positions. Their low prestige socio-religious capital level is lower than others. Yet, socio-religious capital level is higher in elites as compared to others. Regarding the field of study, the students of humanities have maximum socio-religious capital (high prestige, low prestige, and total prestige). There is a little difference between the students of humanities, management, and economics regarding the level of low prestige socio-religious capital. The level of high prestige socio-religious capital is the same between the students of technical and engineering and medicine. There is a little difference between them regarding the level of low prestige socio-religious capital. In general, the students of medicine have the lowest level of socio-religious capital.

In conclusion, it can be said that the result of the position generator shows that having access to religious capital resources is more extensive among men, married individuals, hawza students (tollab), elites, and the students of humanities.

5.4. The Relationship between Some Traits of Respondents and Religious Capital

Here, we examine the effect of some of the respondents' characteristics in the position of exogenous variables on socio-religious capital regarding two high prestige and low prestige socio-religious capital. To do so, in each part of socio-religious capital, four regression models are defined. In these models, the effect of the exogenous variables (gender, age, marital status, field of study, being a hawza student, and a member of elite organization) on each part of the capital is measured. The statistical population includes PhD students in four educational departments (humanities, medical sciences, technical and engineering, management and economics). The effect of each department along with other exogenous variables on each part of the religious capital is examined. Here, we first examine the effect of the respondents' characteristics on high prestige socio-religious capital. In all models, HRC indicates high prestige socio-religious capital, and MW, SP, AG, HS, and EL respectively show gender, marital status, age, being a hawza student, and a member of elite organization. C(1) and C(7) are the coefficients of the models. In the dummy variable gender (MW), 0 indicates women and 1 indicates men. Regarding marital status variable (SP), 0 indicates being single and 1 being married. Regarding the variable being a hawza student (HS), 0 indicates not being a hawza student and 1 a hawza student. Regarding being a member of elite organization, 0 indicates not being a member and 1 being a member.

Model 1

Variable HU indicates humanities. This dummy variable is defined as follows: if the respondent studies humanities, it is 1. Otherwise, it is 0.

Following results are obtained from estimating this model in E-VIEWS using OLS. Based on this estimation, studying humanities improves the access to high prestige socio-religious capital. It has a significant effect (confidence level=%95) on this part of socio-religious capital. All variables have a positive effect on having access to high prestige socio-religious capital. The effect of age and marital status are high and that of being a hawza student is low. R2 and adjusted R2 are also 0.17 and 0.16. A reason why R2 is small is that the data is sectional and based on the questionnaire.

Model 2

Variable EN represents technical and engineering department. This dummy variable is defined as follows: if the respondent is studying a technical and engineering field, it is 1. Otherwise, it is 0. Following results are obtained from estimating this model. Based on this estimation, studying a technical and engineering field has a negative significant (confidence level=%95) effect on the access to high prestige socio-religious capital. Other variables have a positive significant effect on having access to this part of the socio-religious capital.

Model 3

Variable MS represents the department of medical sciences. This dummy variable is defined as follows: if the respondent studies medicine, it is 1. Otherwise, it is 0. Following results are obtained from estimating this model. Based on this estimation, studying medicine has a negative significant (confidence level=%95) effect on the access to high prestige socio-religious capital. Other variables have a positive significant effect on having access to this part of the socio-religious capital.

Model 4

Variable ME represents management and economics fields. This dummy variable is defined as follows: if the respondent studies management and economics, it is 1. Otherwise, it is 0. Following results are obtained from estimating this model. Based on this estimation, studying management and economics has no significant (confidence level=%95) effect on the access to high prestige socio-religious capital. Other variables have a positive significant effect on having access to this part of the socio-religious capital. From the examination of the fourth model, we conclude that, out of four fields of study, humanities have a positive effect on high prestige socio-religious capital. Again, men, married people, and older individuals have further access to high prestige socio-religious capital. Hawza students and elites have also further access to this part of the capital. Now, we examine the effect of some of the respondents' characteristics in terms of exogenous variables on low prestige socio-religious capital. Here, again, we have four separate models to evaluate the effect of each educational department along with other variables on this part of the socio-religious capital. In all models, LRC shows low prestige socio-religious capital.

Model 5

Following results are obtained from estimating this model in E-VIEWS using OLS method.
As evident from the table, studying humanities improves the access to low prestige socio-religious capital. The effect of the membership in national elite organization and that of age is not significant. Being married and gender variables have also a positive effect on this part of the capital. Being a hawza student has a positive significant effect on this part of socio-religious capital.

Model 6

Following results are obtained from estimating this model in E-VIEWS using OLS method.
Studying a technical and engineering field and membership in national elite organization has a negative effect on having access to low prestige socio-religious capital. The effect of the membership in national elite organization is not significant. Other variables have a positive effect on this part of the capital. The effect of age is not significant.

Model 7

Following results are obtained from estimating this model in E-VIEWS using OLS method.
Studying medicine and membership in national elite organization have negative effect on having access to low prestige socio-religious capital. The effect of membership in national elite organization is not significant. The positive effect of gender, being married, and age is not significant. Being a hawza student has a great effect on this part of socio-religious capital.

Model 8

Following results are obtained from estimating this model in E-VIEWS using OLS method.

Studying management and economics and membership in national elite organization have positive significant effect on having access to low prestige socio-religious capital. The effect of membership in national elite organization is not significant. The positive effect of gender, being married, and age is not significant. Being a hawza student has a great effect on this part of socio-religious capital. Based on this examination, we conclude that the students of humanities and management and economics as well as students of hawza have further access to low prestige socio-religious capital. Again, the effect of being a member of elite organization and that of age on this access is not significant. Men have higher access to low prestige socio-religious positions. Also, being married has a positive effect on this part of socio-religious capital.

6. Conclusion

In this study, we tried to design a measurement tool for religious capital based on a scientific method applied in the world. Using this tool, we also intended to measure and analyze socio-religious capital among Tarbiat Modarres PhD students. In this study, socio-religious capital measure was designed. Respective questionnaires were filled out by PhD students from four faculties of this university. The analysis was done based on the designed tool.

Based on what is mentioned in theoretical outlook, this tool can be evaluated. As seen, results of this study also show that this tool (questionnaire) can identify differences between the respondents. Reliability test also approved the significance of its questions. Accordingly, the questions mentioned in the questionnaire to measure socio-religious capital are acceptable. This tool can also function as an index of religious differences among the students of various educational departments under study. These results can show that the developed tool, at least, have the qualities required for measuring socio-religious capital. Its validity is approved. Accordingly, this tool can be used for studying the relationship between religion and other social variables. It can remove the existing flaws in this area to some extent. This tool can also be examined and analyzed in comparison with the similar tool (position generator) to measure social capital.

Out of four fields of study, educating in humanities has a positive effect of high prestige socio-religious capital. Again, men have further access to high prestige socio-religious capital. Married people have further access to both parts of this capital. This access increases with the age. Hawza students have further access to both parts of this capital. The members of elite organization have also greater access to high prestige and lower access to low prestige socio-religious capital.

Results of the estimating regressions of the two parts also show that studying humanities has a positive effect on both parts. Studying technical and engineering and medicine has a negative effect on both parts. Again, studying management and economics has a negative effect on high prestige and a positive effect on low prestige parts of this capital. Being a hawza student has a positive effect on both parts. This positive effect is higher in having access to low prestige religious positions. Age and membership in national elite organization have positive effect on the access to high prestige and no effect on the access to low prestige parts of the socio-religious capital. Being male has a positive effect on both parts. Age and being married both have positive effect on the high prestige part. Their effect on low prestige part is not accepted.

Accordingly, the designed tool is compatible with theoretical expectations. It can be used in positions where socio-religious capital can be measured by the relations between humans and where we take it to be more functional. Among the results of this study which may have a policy making implication is that socio-religious capital is lower with the students of technical and engineering and medicine. If we intend to increase this capital, we must further invest with these groups of students.

Table 1: Traits of the statistical sample

NO.	Feature	Trait	Number	Percent
1	Gender	Female	297	57.67%
		Male	218	42.33%
2	Martial status	Single	331	64.3%
		Married	184	35.7%
3	Faculty	Humanities	178	34.6%
		Medical sciences	138	26.8%
		Management & Economy	100	19.4%
		Technical –Engineering	99	19.2%
4	Elite Institute membership	Yes	62	12%
		No	453	88%
5	Religious school student	Yes	21	4.1%
		No	494	95.9%
6	Home Type	Home owner	227	44.08%
		Others	288	55.92%
7	Job 1	State job	131	25.4%
		Unemployed or non-provincial	384	74.6%
8	Job 2	Academic	156	30.3%
		Non-Academic or Unemployed	359	69.7%
9	Duration	Day-time	505	98.1%
		Night-time	10	1.9%
10	Job state	Tehran	126	24.5%
		Others or Unemployed	389	75.5%

Table 2: Summary of results of position generator questionnaire regarding socio-religious capital

No.	Do you know someone in these positions?	Number of yes answers		Number of people you know					
				Acquaintance		Friend		Family member	
		number	percent	number	Percent	number	percent	number	Percent
1	Marja	52	10.1%	48	9.3%	-	-	4	0.8%
2	Senior cleric	163	31.7%	110	21.4%	30	5,8%	23	4.5%
	Parliamentarian or minister cleric	55	10.8%	38	7.4%	15	2.9%	2	0.4%
	Governmental organization administer cleric	112	21.7%	63	12.2%	35	6,8%	14	2.7%
5	Head or member of a Marja office	64	12.5%	41	8%	17	3.3%	6	1.2%
6	Minster of a charity institute	134	26%	78	15.1%	32	6.2%	24	4.7%
7	Minister of a religious group	154	29.9%	76	14.8%	49	9.5%	29	5.6%
8	Manager of Hosinia, Mahdia, Fatimia, Zinabia, Holy Shrine of Imam's Sons	154	29.9%	92	17.9%	30	5.8%	32	6.2%
9	Manager of a religious loan institute	96	18.6%	57	11.1%	11	2.1%	28	5.4%
10	Mosque liturgist	192	37.3%	143	27.8%	33	6.4%	16	3.1%
11	Friday prayer liturgist	74	14.4%	57	11.1%	14	2.7%	3	0.6%
12	Mosque ministry member	178	34.6%	101	19.6%	19	3.7%	58	11.3%
13	Hajj or pilgrimage caravan minister	174	33.7%	97	18.8%	38	7.4%	39	7.6%
14	Owner of a religious store	61	11.9%	42	8.2%	11	2.1%	8	1.6%
15	Author of religious book	128	24.8%	95	18.4%	21	4.1%	12	2.3%
16	Someone with knowledge to answer religious questions	309	60%	118	22.9%	69	13.4%	122	23.7%
17	Religious school Student	256	49.7%	122	23.7%	92	17.9%	42	8.2%
18	Cleric who is also a professor	212	41.2%	160	31.1%	36	7%	16	3.1%
19	First circle member of a marja's family	58	11.3%	25	4.9%	12	2.3%	21	4.1%
20	Minister of a religious school	48	9.3%	23	4.5%	16	3.1%	9	1.7%

Table 3: Amount of PhD students links with religious position holders

No.	Position	link	No.	Position	Link
1	Marja	0.11	11	Friday prayer liturgist	0.18
2	A senior cleric	0.46	12	Mosque ministry member	0.6
3	Parliamentarian or minister cleric	0.14	13	Hajj or pilgrimage caravan minister	0.56
4	Governmental organization administer cleric	0.33	14	Owner of a religious store	0.17
5	Head or member of a Marja office	0.18	15	Religious book author	0.33
6	Minster of a charity institute	0.41	16	Someone with knowledge to answer religious questions	1
7	Minister of a religious group	0.5	17	Religious school Student	0.83
8	Manager of Hosinia, Mahdia, Fatimia, Zinabia, Holy Shrine of Imam's Sons	0.48	18	Cleric who is also a professor	0.54
9	Manager of a religious loan institute	0.31	19	First circle member of a marja's family	0.21
10	Mosque liturgist	0.49	20	Minister of a religious school	0.15

Table 4: Religious positions prestige ranking

No.	Position	Average point	Prestige Rank	Section
1	Owner of a religious store	6	1	1
2	Hajj or pilgrimage caravan minister	6.33	2	1
3	Mosque ministry member	7	3	1
4	Head or member of a Marja office	9	4	2
5	Minister of a religious group	9.66	5	2
6	Manager of Hosinia, Mahdia, Fatimia, Zinabia, Holy Shrine of Imam's Sons	9.66	6	2
7	Minister of a religious school	10	7	2
8	First circle member of a marja's family	10.66	8	2
9	Governmental organization administer cleric	10.66	9	2
10	Religious school Student	11	10	2
11	Someone with knowledge to answer religious questions	11	11	2
12	Mosque liturgist	11	12	2
13	Friday prayer liturgist	11.66	13	2
14	Parliamentarian or minister cleric	12.33	14	2
15	Manager of a religious loan institute	12.33	15	2
16	Religious book author	14.33	16	2
17	Minster of a charity institute	14.66	17	3
18	Cleric who is also a professor	14.66	18	3
19	A senior cleric	15.33	19	3
20	Marja	16.66	20	3

Table 5: The reliability of indices based on Cronbach' alpha

No.	Index	Cronbach'Alpha coefficient	Standardized Cronbach'Alpha coefficient	Number of positions
1	High prestige socio-religious capital	0.75	0.75	5
2	Low prestige socio-religious capital	0.96	0.97	3
3	Social socio-religious capital (total available prestige)	0.72	0.72	20

Table 6: Results of three index parts of socio-religious capital

No.	Index	Average	Standard Deviation	Conversion coefficient*
1	High prestige socio-religious capital	1.87	2.37	1.26
2	Low prestige socio-religious capital	1.34	1.75	1.30
3	Social socio-religious capital (total available prestige)	8.29	8.35	1

*Conversion coefficient is defined as Standard Deviation divided by average.

Table 7: Minimum and maximum accessibility of high prestige and low prestige religious positions

No.	Accessibility		High prestige religious positions	Low prestige religious positions
1	People with access to at least one position	Number	315	271
		Percent	61%	52%
2	People with access to all the positions	Number	16	26
		Percent	5%	3.1%

Table 8: The average of socio-religious capital among sub-groups of PhD students

NO.	Trait		Number	Average of high prestige religious capital	Average of low prestige religious capital	Average of total religious capital
1	Gender	Male	218	2.41	1.59	10.01
		Female	297	1.48	1.15	7.02
2	Marital status	Single	331	1.45	1.18	6.78
		Married	184	2.63	1.62	11
3	Being a religious school student	Yes	21	3.57	2.57	16.09
		No	494	1.8	1.28	7.95
4	Elite Institute membership	Yes	62	2.51	1.25	10.88
		No	453	1.78	1.35	7.93
5	Studying major	Humanities	178	2.79	1.65	11.57
		Medical Science	138	1.28	0.95	5.93
		Management and Economics	100	1.64	1.68	7.24
		Technical-Engineering	99	1.28	0.97	6.7

Table 9: Results of estimating model 1. The effect of being a student of humanities on high-prestige socio-religious capital

Explanatory variable	Coefficient	t statistic	alpha
Intercept	-0.999	-1.60	0.11
MW	0.404	1.98	0.05
SP	0.775	3.66	0.00
AG	0.063	2.96	0.00
HS	0.773	1.54	0.12
R2	0.178	–	–
F	17.15	–	0.00
Durbin Watson statistic	1.97	–	–

Table 10: Results of estimating model 2. The effect of being a technical-engineering student on high prestige socio-religious capital

Explanatory variable	Coefficient	t Statistic	Alpha
Intercept	-0.555	-0.86	0.38
MW	0.573	2.76	0.01
SP	0.799	3.69	0.00
AG	0.064	2.92	0.00
HS	1.165	2.29	0.02
EL	0.764	2.498	0.01
EN	-0.732	2.50	0.00
R2	0.137	–	–
F	12.38	–	0.00
Durbin Watson statistic	1.88	–	–

Table 11: Results of estimating model 3. The effect of being a medical science student on the high prestige socio-religious capital

Explanatory variable	Coefficient	t Statistic	Alpha
intercept	-0.657	-1.03	0.30
MW	0.450	2.13	0.03
SP	0.734	3.35	0.00
AG	0.070	3.22	0.00
HS	1.184	2.32	0.02
EL	0.786	2.56	0.01
MS	-0.612	2.66	0.01
R2	0.135	–	–
F	12.11	–	0.00
Durbin Watson statistic	1.88	–	–

Table 12: Results of estimating model 4. The effect of being a student of management and economics on the high prestige socio-religious capital

Explanatory variable	Coefficient	t Statistic	Alpha
intercept	-0.661	-1.02	0.31
MW	0.530	2.53	0.01
SP	0.856	3.87	0.00
AG	0.064	2.93	0.00
HS	1.169	2.26	0.02
EL	0.650	2.10	0.04
ME	-0.237	-0.92	0.36
R2	0.125	–	–
F	10.95	–	0.00
Durbin Watson statistic	1.86	–	–

Table 13: Results of estimating model 5. The effect of being a student of humanities on the low prestige socio-religious capital

Explanatory variable	Coefficient	t Statistic	Alpha
Intercept	0.778	1.58	0.11
MW	0.277	1.72	0.09
SP	0.285	1.71	0.09
AG	0.0067	0.40	0.69
HS	0.956	2.41	0.02
EL	-0.066	-0.28	0.77
HU	0.328	2.00	0.05
R2	0.117	–	–
F	4.25	–	0.00
Durbin Watson statistic	2.02	–	–

Table 14: Results of estimating model 6. The effect of being a technical-engineering student on the low prestige socio-religious capital

Explanatory variable	Coefficient	t Statistic	Alpha
Intercept	0.959	1.94	0.05
MW	0.334	2.08	0.04
SP	0.285	1.71	0.09
AG	0.0062	0.37	0.71
HS	1.045	2.67	0.01
EL	-0.054	-0.23	0.82
EN	-0.423	-2.187	0.03
R2	0.119	–	–
F	4.38	–	0.00
Durbin Watson statistic	2.03	–	–

Table 15: Results of estimating model 7. The effect of being a medical science student on the low prestige socio-religious capital

Explanatory variable	Coefficient	t Statistic	Alpha
Intercept	0.906	1.85	0.07
MW	0.256	1.58	0.11
SP	0.240	1.42	0.16
AG	0.0104	0.62	0.54
HS	1.052	2.69	0.01
EL	-0.034	-0.144	0.88
MS	-0.402	-2.27	0.02
R2	0.120	–	–
F	4.44	–	0.00
Durbin Watson statistic	2.03	–	–

Table 16: Results of estimating model 8. The effect of being a student of management and economics on the low prestige socio-religious capital

Explanatory variable	Coefficient	t Statistic	Alpha
intercept	0.673	1.36	0.17
MW	0.322	2.01	0.04
SP	0.235	1.39	0.16
AG	0.0105	0.63	0.53
HS	1.183	3.00	0.00
EL	-0.023	-0.096	0.92
ME	0.459	2.33	0.02
R2	0.130	–	–
F	2.03	–	0.00
Durbin Watson statistic	1.88	–	–

References

Sadeghi, H.; Ezzati, M; and Shafii, A (2013) charity function estimation in Iran; economic researches quarterly (stable development and growth), year 13, No.2, summer, Pages 61 to 84.

Ezzati, M.; Agheli, L (2008) religious capital: essence, ingredients and effects; first Islamic economy and economy development congress, Ferdowsi University of Mashhad.

Mahmoudian, M. (2013) religious capital effect on poverty in Iran, Islamic economy master degree thesis, economy science university.

Boxman, E., De Graaf, P.M., Flap, H.D. (1991) the impact of social and human capital on the income attainment of Dutch managers. Social Networks 13:51-73.

Flap, H., De Graaf, N.D. (1986) Social capital and attained occupational status. Netherlands Journal of Sociology 22:145-161.

Hlebec, Valentina and Kogovšek, Tina, and Coenders,Germà (2009) Measurement Quality of Social Support Survey Measurement Instruments, Metodološkizvezki, Vol. 9, No. 1, 2012, 1-24

Hsung, R., M. and Y. C. Hwang (1992) Social resurces and Petty Bourgeoisie (Chinese text). The Workship on Taiwanese small-sized home workshop. Tipei: Institute of ethnology,academiaSinsa.

Lin, N. (2001a) Social capital: a theory of social structure and action, Cambridge: Cambridge University Press.

Lin, N. (2001b) Building a network theory of social capital. In: Lin, N., Cook, K.; Burt, R.S. (eds.) \Social capital: theory and research, New York: Aldine De Gruyter.

Lin, N. & Dumin, M. (1986) Access to Occupations through Social Ties. Social Networks 8:365-385.

Lin, N. & Fu, Y. & Hsung, R. (2001) The Position Generator: measurement techniques for social capital. In: Lin, N. & Cook, K. & Burt, R.S. (eds.) Social capital: theory and research, New York: Aldine De Gruyter.

Marin, Alexandra & Hampton, Keith N. (2007) Simplifying the Personal Network Name Generator Alternatives to Traditional Multiple and Single Name Generators1, Field Methods 19(2), 163-193

Moerbeek, H. (2001) Friends and foes in the occupational career. Nijmegen: Ph.D dissertation.

Najarzadeh, Reza &Soleimani, Mohmammad& Reed, Michael (2014) Measuring Social Capital Using the Position Generator Model (A Case Study ofElite Individuals in Tehran Province- Iran), International Journal of Humanities and Social Science Vol. 4, No. 11; September 2014, 165-177.

Van Der Gaag, M. & Snijders, P. J. (2004) the measurement of individual social capital. Ph.D dissertation

Van der Gaag, Martin &Appelhof, Gert Jan & Webber, Martin (2012) Ambiguities in responses to the Position Generator. Published in Italian as van der Gaag, M.P.J.; Appelhof, G.J. & Webber, M. (2012) Ambiguitànellerisposte al position generator. Sociologia e PoliticheSociali, 15(2): 113-141

Volker, B. (1995) should auld acquaintance be forgot? Institutions of Communism, the Transition to Capitalism and Personal Networks: The Case of East Germany. Amsterdam: Ph.D dissertation.

Volker, B., Flap, H. (1999) getting ahead in the GDR: social capital and status attainment under communism. ActaSociologica 41(1):17-34.

Barker, Michelle (2008) the role of religious capital in relating religion and economic development. Third Sector Review, 14 (1). pp. 1-8.

Reshetnyak, Olena, Salnikova, Svetlana and Myronovych, Dmytro (2012) Religious capital and religious participation in New Eastern Europe, httpesnuir.eenu.edu.uabitstream123456789124914Religious.pdf

Baker, Joseph O. (2010) Social Sources of the Spirit: Connecting Rational Choice and Interactive Ritual, Sociology of Religion, 71(4): 432-456

Fink.R, Dougherty. K (2002), the Effects of Professional Training: The Social and Religious Capital Acquired in Seminaries, Journal for the Scientific Study of Religion41:1,103-120,

Iannaccone, Laurence R(1990), "Religious Practice: A Human Capital Approach." ." Journal for the Scientific Study of Religion 29:297-314

Stark, Rodney and Roger Finke (2000), Acts of Faith: Explaining the Human Side of Religion. Berkeley, CA: University of California Press.

Verter, Bradford. 2003. "Spiritual Capital: Theorizing Religion with Bourdieu Against Bourdieu" Sociological Theory. 21:150-174

Azzi, Corry and Ehrenger; Ronald G. (1975) Household Allocation of Timeand Church Attendance; J. Polit. Econ., 83: pp. 27-56 .

Stigler, George J. and Becker, Gary S. (1977) De Gustibus Non EstDisputandum; Amer. Econ. Rev., 67: 2, pp. 76-90