Religious Capital Impact on Economic Growth in Iran in the Period of (1986-2011)

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Abstract

There are different viewpoints about the direction and types of Religious effects on economic growth and development. This study has examined the effects of Islamic religious capital on economic growth in Iran in the period of 1365-1390. Therefore, after explanation of religious capital concept and collection of standard and efficient indexes achieved from Islamic doctrines, in order to evaluate this type of capital, the effect of religious capital on Iran economic growth is estimated by using the OLS method and doing regression on the selected growth model. The results show that there is no reason to reject having significant positive or negative effect of religious capital on economic growth in Iran. Another result of this study is to confirm that human force capital has positive effect on economic growth, it is not proved that physical investment positively affect the economic growth in the mentioned period. The reasons which do not confirm the positive effect of physical investment on economic growth are inefficient allocation of resources in the projects and plans, prolongation of projects implementation and instability of economic sphere in Iran. One of the policy recommendation of this study is to extend economic studies in recognition major aspects of Islamic religious capitals and their effects on economic growth in order to increase the utilization capacity from different religious capitals for achieving the goals of Iran economic system.

Key Words: Economic Growth, Religious Capital, Islamic Economy.

Introduction

Economic growth is the major goal for every country in the world, and we have no doubt that investment and capital formation are the prerequisite of economic growth and development. The importance of investment is approved in which that it calls the motivation engine of the economy, and some of the economists of the growth and development believe that absence of funds is the major reason of countries involvement in the vicious circle of poverty.

In the recent decades, different types of capital like human, social, spiritual and religious capital have drawn economists' attention. Giving notice to religious capital in different societies especially in which the majority of the people have one religion in common and obeying special economic framework in approaching to economic growth have special importance in the way while providing accumulated resources in the social capacity of this society, making more transparent the possibility of scientific recognition of what the effects of the different capital branches of the religion in the growth and development channel are. This study is going to answer this question" what kind of relation is there between religious (Islamic) capital and economic growth in Iran?" by analyzing, thinking and extending the

religion capital concept in economic literature. According to Islamic doctrines and thought like avoiding indolence and imposition costs of your life to the others and encouraging to endeavor, working and making Halal income, our hypothesis is having significant positive effect of religious capital on economic growth in Iran.

For this purpose, after defining religious capital, the literature of non-physical capitals effect like religious , social and human capitals effects on economic growth is reviewed and then after introducing the selected growth model, the religious capital effect on Iran economic growth analysis and estimation within the selected growth model by using data of the period 1365-1390 and applying OLS method is done, the estimation results is analyzed and finally the findings and suggestion policies obtained from this study is presented.

The Definition of Religious Capital

There are different definitions for religious capital, some believe that the skills and experiences form by religion (included religious knowledge, getting recognition and information by church and having relation with the coreligionists) are religious capital (Fikne,2003). The macro beliefs which people obey by internal call of their heart without imposing by any external forces are religious capital. The size of this capital is changing by people's adherence to a special religion. The religious capital can resolve some of other capital defects by affecting them transversal and longitudinal, and also causing economic efficiency (Mehregan and Daliri,2010). In this study, religious capital is a storage which its holder can do something that the people who doesn't have it can not do that special task easily. In this study, faith is noticed as an index for examining religious capital.

Reviewing of Former Studies

The new Institutionalizes believe that one of the items that affect long term economic performance of the countries like economic growth more than others are changing in institutions and production technology. They acknowledge that differences among communities institutions cause differences among long term economic performance of these countries. They believe that institutional developments by changing in motivational structure of the individuals affect their selection, in the following affect long term performance of the society and finally can cause more or less production in the long term.

The experience of developing countries show that innovation of new and efficient institutions can increase capital mobility, reduce information cost, distribute the risks, improve projects implementation and finally bring higher long term economic growth.

The new economic literature have noticed to this claims and suggestions and tries to change institutions quality like political system and its changes, the way of defining and implementing possession rules, the way law ruling in the country, . . . to numerical values and insert into the growth models. General evaluation testifies accuracy of this successes and this means that the institutions are determinant and effective item in countries size of economic growth. religious affects social institutions in different ways and changes, fulfill and modify them. For example, religious affects people's attitude and making its new norms, and by its doctrine creates similar institutions and modify opposite institutions, therefore we can not assume insignificant the role of religion in institutional changes and even in creating economic, social and cultural institutions for analyzing economic changes in the societies.

In the economic literature the sum of institutions, performances, experiences, beliefs, values, knowledge, rules and regulations, symbols, realities of physical and nonphysical environments are called religious capital, and the reason of this naming maybe is originating from religion. We have listed some of the studies in the following which have done about religious capital and other non-physical capitals and their effects on economic growth and Development:

Ezzati (2008) in the paper called "the effect of Islamic moral doctrine on economic development" shows that the doctrines like Islamic recommendation and instructions are usually compatible with growth backgrounds. Moral doctrine of trade are extremely agreeing with economic growth and development and also support it.

Mehregan and Daliri (2010) in the paper called "religious capital (morality) role in economic development "by naming attitudes arisen from religion as religious capital tries to analyze this kind of capital effects on economic development indexes in a special conceptual framework and descriptive method. General results of theoretical studies of this research implies that religious attitudes by increasing radius of trust and reducing uncertainty causes decreasing in exchange cost and in this channel can affect the growth, in addition, religious attitudes improve income distribution, therefore, investing in religious capitals can account as one of the growth and development way of the communities.

Mehregan, Sepahbodan e Gharababa and Lorestani (2012) in the paper called "physical, human and social capital accumulation effect on Iran economic growth in the period of (1967-2007)" by using Granger standard causality test method and Error Correction Model have analyzed the relation among the existing variables. The results indicate that in short time period, there are a one-sided relation from physical capital accumulation to human capital accumulation and social capital accumulation and also a one-sided relation from economic growth to social capital accumulation and physical capital accumulation, however, in long-term period there are a one-sided relation from human capital accumulation to social capital accumulation, a bilateral relation between physical and social capitals accumulation and a one-sided relation from economic growth to social capital accumulation.

Herishman (1983) in the paper called "religious dependence and consumption process" have analyzed the relation between following Evangelical, Catholic and Jewish religions and consuming behavior of American citizens which the results show a positive relation. Sud and Nasu (1995) in the paper called "religion and nationality, and exploratory study of religious effect on Japanese and American consumption behavior" have analyzed religious relation between Japanese theology followers and American Evangelical and concluded that their consumption behavior have considerable differences.

Esmalders and colleagues (2004) in the paper called "social capital and economic growth" have analyzed social capital effect on economic growth. The achievements of this study indicate that there is an exchanging relation between consumption and social interactions, and social capital have negative effect on consumption, income and finally economy. However, if interactions with others causes making profit and income, social capital in this situation have positive effect on economy.

Soltam Ghaderi and Wahid (2011) in the paper called "human capital and economic growth" have analyzed the relation between human capital and economic growth of Pakistan by using time-series data of 1978-2007. In this study, adjusted education index in terms of healthy is used instead of human capital in the standard form of Cobb-Douglas function. The results show that there is a long-term positive relation between human capital and economic growth in Pakistan.

Naya and colleagues (2012) in the paper called "human capital and economic growth in Cameron" have analyzed the effect on human capital on economic growth in Cameron in the perios 1970 to 2010. The methodology of this study bases on Mankiw-romer and Weil growth model, and formulated regression model analyze time series by Angel-Granger causality. The results indicate that there is human capital have significant positive effect on economic growth.

Model Presentation and Results Analysis

The production function that we use as basis model of analyzing how direct foreign capital affects economic growth is based on aggregate production function AFP. AFP assumes that in consistent with

"conventional inputs" like labor force and capital which is used in neo-classic production function, "unconventional inputs" also can locate in the model and specify their portion and effects from and on economic growth. AFP general model to estimation is extracting as follow:

$$Y = AK^{\alpha} L^{\beta} \qquad \text{Equation (1)}$$

In order to analyze religious capital indexes (SCHA, SR, ST) effect on economic growth of the countries we assume that the parameter of efficiency factor (A) is a function of religious, human and other capital flows. In the most of recent researches about economic growth, the generalized Solow growth model which includes institutional factor have been used.

In this study, we have used Bleany growth model (1996) in order to analyzing the effect of religious capital index on economic growth which is more comprehensive than other studies and has profited the results of former tasks in this field Lwin and Renelt (1992) and Barow(1991) in generalizing Solow growth model(which included institutional factor like culture, religious, political system and …). The general form of the mentioned pattern is as Follow:

$$g = \alpha + \beta M + \gamma Z + u \qquad \text{Equation (2)}$$

g: Average annual growth in real GDP

M: vector of standard explanatory variables consisting of some selected variables of growth pattern of Lwin and Renelt (1992) and Barow (1991). The titles of some of these variables are: average of investment rate, human capital, population structure and …

Z: vector of variables which introduce in this research

U: residual of the pattern

Used variables introduction and model specification

The model below is the final and analyzed model in this research.

$$GY = C + \alpha GINV + \beta SL + b2HC + b3SR + b4ST + b5SCHA + \varepsilon_t \qquad \text{Equation (3)}$$

Real gross domestic production (GDP), GY: gross domestic products in fixed costs (base year 1383 persian calendar)

Physical capital GINV: the capital stock like most of the researches (Balasubramanyam ,V.N. ,Salisu and D .Sapsford(1996), Kohpiboon ,Archanun (2003), Kazeruni and sojudi and colleagues) have been used from variable of gross fixed capital formation to fixed price(base year 2004 persian calendar).

Active population portion from the whole population SL: this index has been extracted from Central Bank on Iran data and equals to active population divided to the whole population.

Human capital (HC): different standards can be introduced for human capital, some of them are: the whole universities students including national,private,…(Aghai and colleague,2013) , the share of whole universities student from the whole population as a proxy of human capital (Mehregan and colleague, 2011). In this study, in order to consider the effect of demography on the quality of human capital, we have used the second criterion of universities student sharing including national, private and … from the whole population.

The cost of households religious Ceremony(SR): the data of this index have been extracted from annual report of central bank on households cost and the tiny reports of the costs of households religious ceremony.

Paid legal amounts by the households (ST): the data of this index have been extracted from annual report of central bank on households cost and the tiny reports of the costs of Households religious ceremony. It's worth noting that this index is used as a percent of the whole cost of the household.

Alms (SCHA): this index has been extracted from annual report of Imam Khomeni Relief Foundation which is indicating the alms sharing from the whole income of this foundation.

The Results of Model Estimation

Before model estimation, the data should be examined from the stability aspect, in order to this, we have used Augmented Dickey-Fuller Test (ADF) which the results are listed in the following.

Table 1: Analysis of Variables Stability

variable	Value of test stat	The level of probability
GR	-4.526133	0.0020
SR	-3.890720	0.0084
ST	-4.627005	0.0017
SCHA	-2.100887	0.2462
HC	1.762741	0.9993
GINV	-2.999938	0.0520
SL	0.847579	0.7819

Source: Research Achievements

The results show that the GR, SR, ST are stable in the level of 5% and the stability of GINV, SL, HC have been rejected in the level of 5%. Therefore the process of trend debugging to have been used to stabilize the variables which this subject is indicated by adding the word of T to these variables.

Table 2: Analysis of Trend Debugged Variables

variable	Value of test stat	The level of probability
TSCHA	-4.550716	0.0020
THC	-4.148082	0.0070
TGINV	-4.129788	0.0050
TSL	-6.205963	0.0001

Source: Research Achievements

The results of the unit root test (Augmented Dickey-Fuller) indicates that the GINV, SL, HC, SCHA, after trend debugging have been stabled.

Initial Estimation of Model

The results of initial estimation of the model are according to table 3-3 which bases on Ramsey Test(table 1, appendix) totality of the model is significant and correct in the level of 95%. The Durbin- Watson Stat equals to 2.38, which shows there is first order autocorrelation in residual. The AR process (table 2,3 , appendix) is used to modify and resolve the first and second order autocorrelation.

Table 3: The Results of Initial Estimation of Model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.680579	4.745142	-0.143426	0.8883
TGINV	-3.465999	9.668050	-0.358500	0.7262
TSL	14.92104	13.29707	1.122130	0.2838
THC	0.538864	4.640020	0.116134	0.9095
SR	18.39502	8.684824	2.118064	0.0557
ST	-25.31874	15.10438	1.676252-	0.1195
TSCHA	-0.199713	0.119545	-1.670604	0.1507

R-squared	0.541792	Mean dependent var	3.884211
Adjusted R-squared	0.312688	S.D dependent var	2.840826
S.E of regression	2.355167	Durbin-Watson stat	2.383386
Sum square resid	66.56171	Source: Research Achievements	
F-statistic	2.364829		
Prob(F-statistic)	0.096391		

Variance homogeneity analysis One of the outcomes of estimating model while there is variance heterogeneity is however the OLS estimator is unbiased but it doesn't have the least variance. For ensuring the homogeneity of variance we use the White test.

Table 4: White test

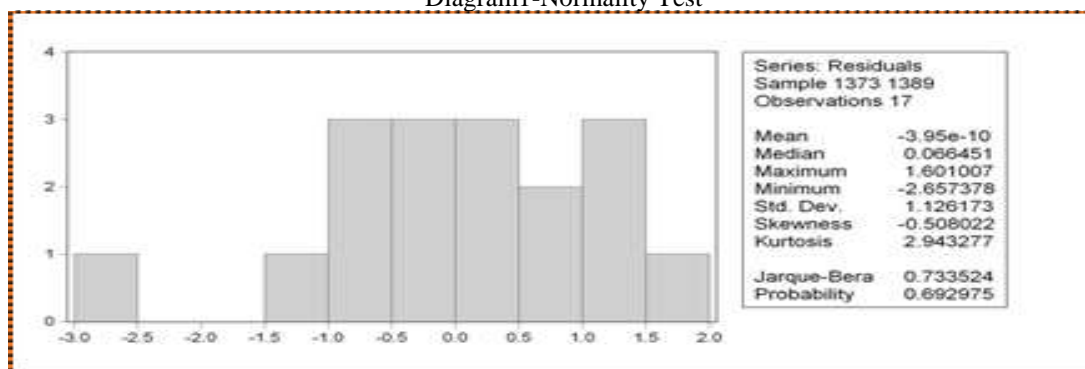|			
F-statistic	1.041681	Prob. F(8,8)	0.4777
Obs*R-squared	8.673529	Prob. Chi-Square(8)	0.3706
Scaled explained SS	1.866306	Prob. Chi-Square(8)	0.9848

Source: Research Achievements

According to table 4-4 The White test shows that there is not the problem of variance heterogeneity in the model.

Analysis of Residual Normality

For analyzing the normality of residual the Jarque-Bera stat has been used and according to diagram below, the mentioned stat equals to 0.73 and by the probability of 0.69 indicating residual normality.

Diagram1-Normality Test

Series: Residuals	
Sample 1373 1389	
Observations 17	
Mean	-3.95e-10
Median	0.066451
Maximum	1.601007
Minimum	-2.657378
Std. Dev.	1.126173
Skewness	-0.508022
Kurtosis	2.943277
Jarque-Bera	0.733524
Probability	0.692975

Source: Research Achievements

Analysis of Irrelevant Variable Login

According to this research achievements (table4 and 5) elimination of variable ST and TSL doesn't have significant on model, so the remain of this variable causes efficiency reduction of other estimators in the model, therefor these two mentioned variables is removed from the model.

The Results of Final Estimation of the Model

According to the examinations, the achieved results by using variables of physical capital (TGINV), human Capital (THC), the cost of religious ceremony of the households(SR), and alms(TSCHA) are as follow:

Table 5 initial estimation of the model

variable	C	TGINV	THC	SR	TSCHA	AR(1)	AR(2)
coefficient	-13.62	-17.67	+9.48	+38.43	−0.37	-1.09	-0.54
prob	0.00	0.03	0.03	0.00	0.00	0.00	0.06

R-squared	0.73	**F-statistic**	4.49
Adjusted R-squared	0.57	**Prob (F-statistic)**	0.02
Durbin-Watson stat	1.93		

Source: Research Achievements

In the Final Estimation of the Model the Followings are Considerable

1. The entire present variables have statistically significant coefficients at the level of 95%.
2. The physical capitals are negative and this means these variables(means growth of portion of gross fixed capital accumulation in gross domestic products) have negative effect on the of gross domestic products.
3. The positive sign of cost of religious ceremony portion from the whole households cost which is one of the religious capital indexes in this study, indicates that increase in the importance of religious rituals and their dependence to these rituals have significant positive effect on economic growth. The effectiveness direction of this component in the same as theoretical discussion and former researches like Askari and Tohidnia (2007), Mehregan and Daliri(2010) and … . Religious capital affect economic growth from different channels e.g. this capital by improving efficiency of other capitals like social, human and (Demori, Daryush and colleague, 2010) … capitals improve economic growth.
4. Donation portion from the private income of Emam Komeini Relief Foundation is another proxy of religious capital index in this study. The negative sign of this variable indicates another aspect of religious capital effect on economic growth. The religious people have more various and extended talents, so their activities doesn't affiliate to solely economic activities.
5. The coefficient of determination (R^2) of the model which represents the explanatory power and goodness coefficient of the model equals to 73% and this means the estimated model could explain 73% growth changes in Iran, although the adjusted coefficient of determination equals to 56%.
6. The F stat equals to 4.49 by the probability of 2% and means the estimated model could significantly explain changes of gross domestic production growth of Iran (dependence variable) the general fitting of the model is significant in the level of 98%.

Conclusion and Providing Suggestion

In this research the effects of religious capital (according to Islamic doctrine) on economic growth of Iran have been analyzed. Experimental data of economy of Iran by OLS method and regression analysis and using selected growth pattern have been investigated which results are as in the following:

Religious capital have positive and negative effects on economy of Iran and both aspect are statically significant, and this indicates that religion has undeniable role at least in economy in Iran according to the subjects of this study, so we shouldn't the importance of this field. Understanding different aspects of religion and its effects is an important issue because each perception on religion in the society have special effects of economy. Therefor the researchers should imply the severity and aspects of this effectiveness in their researches till the policy makers and administrators try to broadcast religion in macro aspects of society in controlled way according to other circumstances and requirements. Proper knowledge to this effectiveness is the only channel that we can hope religious society of Iran approaches adequately and homogeneously in economic and other fields in order to cross the path of excellence consciously and in controlled way.

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