

## How Much Do We Trust: An Experimental Method, the Case Study of Iran

<sup>1</sup>Sahand Ebrahimi Poorfaez, <sup>2</sup>Seyed Mehdi Mirhoseini,  
<sup>1</sup>Maryam Rahimi and <sup>1</sup>Leyla Abbasi

<sup>1</sup>University of Mazandaran, Iran  
<sup>2</sup>Mofid University of Qom, Iran

---

**Abstract:** The purpose of this paper is to investigate the state of trust in Iran as one of the main features of social capital. In order to do so, we have first provided an overall review of the trust state in Iran using the data from World Value Survey (WVS) and Iran's official data banks (Central bank of Iran, Iran Statistical Center, etc). Then we conducted an adjusted trust game to achieve more accurate results. Both the data from official data banks and WVS and the results from the experiment suggest that the state of trust in Iran is significantly low and is experiencing a downward trend. Finally, we show that the amount returned by the trustees is significantly affected by the personality types they are supposed to return the money to.

**JEL Classification:** Z1 • Z13 • Z19

**Key words:** Social Capital • Trust • Experimental Economics • The Trust Game

---

### INTRODUCTION

“It seems that we live an era in which news of breaking the law is increasing...why lying is expanding in our society? Why social trust is decreasing day by day and even in heavy rain nobody dares to give a lift to a stranger? Why transactions are becoming harder by day and why we keep asking for more and more guarantees? Why driving in our cities is this much disturbing?... Is it the behavioral rationality that forces economical man to seek benefit in breaking the laws? Is it the societies that plant distrust and make the public to believe that ‘if you keep being honest you would lose?’”[1].

We began this paper by an excerpt from the introduction of “The Decline Cycles of Morals and Economy” by Renani and Moayedfar (2012) [1] to bold the importance of social capital and its effects on social, economical and political variables. As it can be referred from the excerpt ‘*Is it the behavioral rationality that forces economical man to seek benefit in breaking the laws?*’ the usual classical terms and methods cannot explain the human behavior as accurate as they used to.

Human behavior's complexity is increasing day by day and in order to understand this new complicated two foot intelligent creature we need new and stronger tools.

Human in its nature is a social creature and its behavior cannot be interpreted as an individual. Therefore, human actions gain significance when they are toward another human being.

Social capital is one of these new tools which help us to gain a more accurate explanation about the social interactions between people. There are societies that have vast resources of physical capital. They also have many universities that send out 100s or even maybe 1000s of graduates (human capital) annually. But still these countries are listed as developing and seem to have a long way ahead of them to gain the badge of development. Why is so?

The reason for such a paradox is the fact that physical and human capitals are like bricks that build the wall we call development. But they lack the glue that holds these bricks together, social capital. Just having the facilities and skilled workers doesn't necessarily mean you could achieve the maximum output. The workers in addition to skills must have respect for the working environment and the working rules and etc. They must trust that they would gain the reward they are worth. This trust, respect and etc are that glue or in other words, social capital.

Trust as one of the main features of the social capital has a great importance in the literature concerning the phenomenon of social capital. The more trust between the deferent sides of a transaction are the less the transaction costs (a cost incurred in making an economic exchange (restated: the cost of participating in a market)) will be.

In this paper we first provide a theoretical insight on the term social capital (section 3), then we provide an overall review of trust in Iran, using the data from World Value Survey (WVS) and Iran's official data banks (section 4). Then we introduce the typical trust game and review some of the studies that have applied this game in their work (section 5). Afterwards, we provide the results of a trust game conducted in different cities of Iran among 1000 subjects that consist of M.A or M.Sc students (section 6). Finally we conclude (section 7).

**Social Capital:** The concept of "Social Capital"- broadly defined as network cooperation based on trust and regular face-to-face interaction [2], is currently receiving a lot of attention from development agencies and research institutions. The attention is partly due to its definition and partly to the way it affects social, political and economical variables.

As for the matter of definition, we are faced with a broad cluster of choices. Such as "features of social organization, such as trust, norms [or reciprocity] and networks [of civil engagement], that can improve the efficiency of society by facilitating co-ordinate actions" [93], or as the World Bank (2000) puts it "the institutions, relationships and norms that shape the quality and quantity of a society's social interactions". Another definition of social capital could be seen in the work of [3] as "the rules, norms, obligations, reciprocity and trust embedded in social relations, social structures and society's institutional arrangements which enable members to achieve their individual and community objectives".

Many definitions define what social capital is and what it does. In fact, there seems to be broader agreement in the literature about what social capital does, rather than what it is! In particular, it is widely agreed that social capital facilitates mutually beneficial collective action.

Since the different and diverse set of definitions, the researches concerning the social capital consist of such diversity as well, which includes studying the phenomenon and its effects from macro and micro perspectives. For instance, Dufur *et al.* [4] took a micro view in order to discuss the matter of social capital. They examined whether social capital created at home and at school has differing effects on child academic

achievements. They hypothesized that children derive social capital from both their families and their schools and that capital from each context promotes achievement. They have shown that capital from each context is helpful, with social capital in the family more influential than social capital at school. On the other hand, [5] took a more macro view in their research. They argued that for further applications of this concept we must distinguish between actual/potential social capitals, within a neo-capital framework that unifies the existing 'plethora' of capitals.

Collier [6] differentiates between government social capital (e.g. enforceability of social contracts, rule of law and the extent of civil liberties) and civil social capital (e.g. common values, shared traditions, norms, informal networks and associational membership) [6]. In societies where government's social capital is limited, a large proportion of contracts may depend on civil social capital and trust.

Furthermore, a social capital study in Russia revealed that individuals invoke networks that involve informal, diffuse social co-operation to compensate for formal organization failure. Social capital may produce either a positive or a negative output [7]. For example, [8] argues that groups may be willing to impose costs on non-members to achieve their goals. In contrast, [9] argue that co-operation among members of a group creates habits and attitudes towards serving the greater good that carry over to members' interactions with non-members.

Not only social capital as a phenomenon is fascinating and worth studying, but also the effects it has on economic output and the process of development is of the same importance. For instance, [3] describe five mechanisms for how social capital affects outcomes:

- It improves society's ability to monitor the performance of government, either because government officials are more embedded in the social network or because monitoring the public provision of services is a public good;
- It increases possibilities for co-operative action in solving problems with a local common property element;
- It facilitates the diffusion of innovations by increasing inter-linkages among individuals;
- It reduces information imperfections and expand the range of enforcement mechanisms, thereby increasing transactions in output, credit, land and labor markets;
- It increases informal insurance (or informal safety nets) between households, thereby allowing households to pursue higher returns, but more risky, activities and production techniques.

The potential for social capital to make a positive contribution to outcomes in diverse areas of social concern such as health, community safety and education has captured the interest of policy makers, social analysts and researchers (Commonwealth of Australia, 2002). This interest has led to a demand for statistics that measure the concept of social capital and that can be applied to informing policy development and further research.

The term social capital may be originally from sociology; however, in recent years it has played a great and significant role in economic studies. Studying social capital in a society has revealed important facts on economic matters such as growth [10] economic development [11, 12] production theory and studying the firm's behavior [13] income distribution [14] etc.

When bringing the term social capital into account some classical phenomena could no longer be accepted. In considering social capital sometimes an altruistic person plays the role of a rational person (the classical view of the economic person). And instead of the goal to maximize the profit, well being maximization takes place. However, some scholars argue otherwise.

For instance, [15] discussed in his work that in many instances there is no need for meta-concepts like Social Capital, as trust is often simply the outcome of profit maximization. Whilst approaches that refer to Social Capital ignore the set of economic opportunities, incentives and conflicts behind trust, he proposed a simple model to show that when these are taken into account, the roles of trust and Social Capital can be better defined and understood.

In addition, [16] found that analysis of economic actors' speech and behavior involved in activities of credit shows that behind the claimed altruism nature of the trust relationship exists an economic rationality that's social and temporal horizons of optimization differ from the model of the trade exchange seen in conventional economic theory.

Another matter in studying the social capital is the way it is being measured. Since it is a phenomenon directly related to the human behavior, evaluating it and its effects could be somehow challenging. In this respect, the researchers have taken two different paths. One is evaluating the phenomenon by attributing the statistical data that best fit its definition (e.g. rate of crime, civic engagement [17], Consensus decision-making [18]). In this manner of evaluation the social capital would be estimated indirectly. For instance, if in a country the rate of overdrafts is high then it could be concluded that the amount of social capital in this country is low.

Another way of measuring social capital is by applying social experiments (e.g. the trust game) or using questionnaires (e.g. the World Value Survey). One of the advantages of this method is its more closeness to reality. Since in this method the evaluation is estimated by direct contact with the people it could be more reliable.

Social capital is inherently a multi-dimensional term and can be studied from different aspects. This property makes studying the phenomenon both easier and more difficult simultaneously. Easier since it could be broken in to pieces and after studying each piece they could be put back together and be studied as a whole. On the contrary, since so many aspects and hence so many pieces the process of evaluating social capital could cost a considerable amount of time and money.

In this research the objective is to evaluate the Trust as one of the aspects of the social capital in Iran, using both statistical methods and experimental methods. As a matter of fact, the statistical method will be only used to illustrate an overall view of the situation of trust in Iran. The main concentration of this paper is to measure trust through an experimental method (i.e. The Trust Game).

**Trust: an Overall View:** Trust is a strong belief in the honesty, goodness etc of someone or something [19]. In any interaction, whether it is social, economical or political, the amount of trust the both sides have towards each other would determine the amount of expenses they have to pay in order to gain the expected result of the interaction. It could be as simple as buying a pack of potato chips or it could be as complicated as voting in a presidential election. Nevertheless, trust plays a significant role in the costs (time and money) of the interaction.

There is a great deal of recent theoretical and empirical evidence that trust between people fosters co-operation and economic activity and is hence crucial for economic and social development [20, 21]. Therefore, measuring and explaining the determinants of trust has gathered a lot of interest and attention in developing countries among social scientists and policy makers. Furthermore, the complexity trust (as a social variable) has in its nature has resulted in divers methods of evaluation which met considerable challenges.

In the current literature on measuring trust mostly two methods are being applied: the trust game and the results of the General Social Survey (conducted by the World Value Survey). In this section we try to provide a brief review of the latter method. Furthermore, by using some social indicators as different indexes of trust (social, economical and political trust), we would illustrate the conditions of trust in Iran for the period of 2005-2011.

Table 1: The state of trust (source: World Value Survey)

Year	2000		2007	
	Num	%	Num	%
you could trust most of the people	1256	49.6	281	10.5
you can't be too careful dealing with people	666	26.3	2366	88.7
I don't know	344	13.6	20	0.7
no answer	266	10.5	0	0

The World Values Survey (WVS) is a worldwide network of social scientists studying changing values and their impact on social and political life (WVS Brochure, 2008). The WVS studies trust as one of the critical values in societies around the world. It covers over 97 countries around the globe including Iran.

The WVS's method of measuring trust is simple; a sample of residents within a country is chosen randomly and then they are asked to choose between two choices: 1. most people can be trusted and 2. You cannot be too careful in dealing with people. Whether the subjects choose number one or two determines the state of trust in a country. Table 1 shows the answers to this questionnaire for the years of 2000 and 2007 in Iran.

As it can be referred from the table at the year 2000, 49.6 percent of the subjects believed that "you could trust most of the people". However, time has changed such a belief among the Iranians. Since after only 7 years this number has declined to 10.5 percent and over 88 percent of the subjects have come to the conclusion that "you can't be too careful dealing with people". Although Trust surveys have been criticized for not implying consequences for the respondents, which is in contrast to trust games [22] where the decisions have real monetary effects, but the negative trend in the state of trust among Iranians cannot be neglected.

Another way of measuring trust in a society is by dividing it into sub indexes. Therefore in the following we try such a method by dividing trust into 3 sub categories: social, economical and political trust.

**Social Trust:** Social trust is the state of trust members of a society have towards each other in social interactions. Therefore, we measure social trust as the amount of failures in a social interaction between people. In order to do so, we have chosen the ratio of divorces to marriages as the index for measuring social trust. Marriage in its nature is a social interaction which occurs between two members of a society on some terms (that trust is mostly one of these terms). Therefore, divorce could be interpreted as the failure in this interaction and the ratio could illustrate the state of social trust between the

society members. In this case a higher ratio shows more failure and hence less trust. Figure 1 illustrates the status of this index for the period of 2005-2011.

As it can be seen in the figure every year a higher proportion of this social interaction (i.e. marriage) fails (i.e. ends in divorce). The trend of the ratio shows a downward trend in the state of social trust in Iran.

**Economical Trust:** We define economical trust as the state of trust between members of a society in an economical interaction. Therefore, we evaluate the economical trust in Iran by the amount of cheque overdrafts (i.e. cheques that could not be cashed due to lack of money in the account). Since overdrafts could be interpreted as betraying trust in an economical interaction, higher number of overdrafts could be seen as lower state of economical trust. The trend of overdrafts (as the state of economical trust) is illustrated in Figure 2.

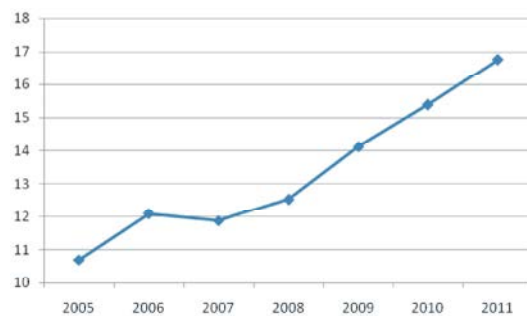


Fig. 1: The ratio of divorce to marriage (source: Iran's Statistical Center)

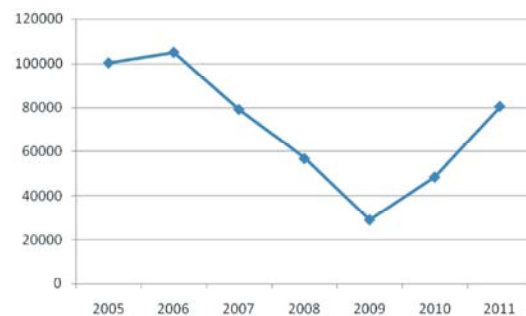


Fig. 2: The amount of overdrafts (source: Central Bank of Iran)

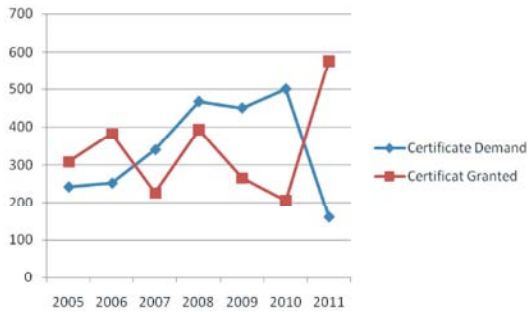


Fig. 3: Press Certificate demands and Certificates granted (source: the 18<sup>th</sup> International Exhibition of PRESS and News AGENCIES)

As the figure shows the amount of overdrafts started a declining trend since 2006 (hence the state of economical trust has started to rise). However, this trend met a turning point in 2009 and since then it followed an increasing trend (i.e. the state of economical trust started to fall).

**Political Trust:** We define political trust as the state of trust between the members of a society and the leaders of the society. In here for evaluating political trust we have used the amount of press certificates demanded from the government relative to the amount of the certificates granted by the government. The gap between these two indexes can be interpreted as the state of political trust. Since it illustrates the amount of trust people have towards the government. Figure 3 shows the trend these two indexes had for the period of 2005-2011.

It can be seen from the figure that the amount of certificates granted by the government has experienced some fluctuations overtime. However, the gap between the amount demanded and the amount granted started rising since 2008 and the bigger this gap is the lower the state of political trust is.

As it can be seen the state of trust in Iran, both according to the WVS report and the three determinants that we introduced, has experienced a considerable downturn which cannot be neglected since it has a great influence on the economical, social and political performance of the country. In the next section by introducing an economical experiment (the trust game) a more accurate method of evaluating the state of trust in Iran will be used.

**The Trust Game:** In social sciences and in particular in economics the data and its accuracy play a crucial role. The more accurate the data are the more reliable the

results of the study would be. Therefore, the method the data are gathered by plays a significant role as well. As far as we know there are three main ways to gather data for a research: 1. Official data banks such as the WorldBank, Government Data Bases, etc, 2. Questionnaires and 3. Experimental Methods.

In this paper we mostly rely on the third method. It has some advantages to the two former methods such as lower costs, controllable environments, more accuracy, etc. in an economical experiment a social situation such as a trade would be stimulated in laboratories in which the subjects would be fully informed of the rules of the experiment and their interactions would be closely observed. In these situations the subjects are given some choices to contribute in a hypothetical interaction where they try to maximize their benefits.

The trust game is one of these experiments that has widely been used in different researches [23-27]. Since the vast usage of this experiment in different studies a brief preview of some of the previous researches that used this method could be interesting.

As for more accuracy of a designed experiment than the official data banks Johnson & Mislin [23] used a unique data set of trust game replications to validate the commonly used “trust” question from the World Values Survey. They found that trust as measured by the World Values Survey is positively correlated with experimentally measured trust.

Briefly, a trust game is a two stage game involving a “sender” and a “receiver.” The sender is given a certain amount of money and has to decide how much of it to send to the anonymous receiver and how much to keep. Any positive amount sent by the sender is normally tripled before it is given to the receiver, who then decides how much to return to the sender [23]. The amount that is sent would demonstrate the amount of trust and the amount sent back by the receiver could be regarded as an index of trustworthiness. Recent research on trust games has however found other motivations beyond pure trust and trustworthiness to be important, such as unconditional altruism and risk preferences [28-31].

The trust game has evolved since it was first used. At first the trust game was simply a transfer of endowment between two subjects but recent studies have added some new features to the experiment that could improve its accuracy and reliability. For instance, Brühlhart & Usunier [24] found trustors to give no more to poor than to rich trustees, confirming trust as the dominant motivation for “trust like” choices. Furthermore, Dubois *et al.* [32] found that trustees’ direct reputation has a

positive effect on reciprocity, but did not affect the average trust in the population. Trust is significantly higher only when players can build up a reputation in both roles. They showed that the increase in trust is mainly linked to the formation of mutual trust–reciprocity relations.

Some studies even took gender into account [25]. They compared choices by men and women in the Investment Game and used questionnaire data to try to understand the motivations for the behavioral differences. They found that men trust more than women and women are more trustworthy than men. The relationship between expected return and trusting behavior is stronger among men than women, suggesting that men view the interaction more strategically than women. Women felt more obligated both to trust and reciprocate, but the impact of obligation on behavior varies.

In summary the trust game has gained a lot of additional features since it was born; Features such as socio-economic background [27], effects of reputation and competition [33], risk attitudes [34], etc.

The feature that we have added to the typical experiment in this paper is the personality type. It is defined as the personal ties the subjects have toward each others. Each subject is given the choice to choose from five different Personality types (PT):

- Someone you always keep a distance from and prefer not to talk to or associate with him in different activities.
- Someone whom you only prefer to see and have small talks in parties and gatherings.
- Someone you would choose as kind of friend that you would like to travel with.
- Someone you would choose as kind of friend that you would tell your secrets to.
- Someone you would accept and treat as a family member.

As it can be seen from number 1 to 5 the personal ties get stronger and the person in front of the subject becomes closer to him/her. The reason for this additional feature in the game is that the stronger ties the subject chooses means the less he would trust since he would demand so many guarantees to trust someone (such as friendship or being relative). A complete overview of the game is provided in the appendix. In the next section we provide the results of the experiments in Iran.

**Data and Results:** In this paper we have applied an adjusted trust game. The trust game is usually conducted in pencil and paper manner. The participants consists of 1000 M.A or M.Sc students (500 for the first stage and 500 for the second stage) from different cities of Iran such as Tehran, Isfahan, Babolsar, Qom, etc. The game includes two stages: the lending stage and the returning stage. In the first stage the subject (trustor) is given 10 units (1 unit=500,000 Rials<sup>1</sup>) of money ( $x$ ). Then he (for simplicity we assume the subject is a He) has two choices; he could either keep all the money or lend as much of it as he pleases to the second participant whom he does not know and will not see. If he chooses to lend all or some of the money that he is given, he has to choose between one the 5 personality types (PT) that were introduced earlier in the paper. After he has chosen the personality type to whom he prefers to lend the money to he would choose the amount of the money he likes to lend.

Afterwards, the lent money would be tripled ( $3x$ ) by the experimenters and put in another questionnaire. In the second stage of the experiment the subjects will be divided into 5 groups. In each group the subjects are given a new set of questionnaires that has the tripled amount that was lent in the first stage of the experiment. Each group faces one of the 5 personality types. In other words, assume a hypothetical subject who is participating in the second stage. He is given a tripled amount and he is told that “this money is lent to you by for example the PT3”.

Before going any further some notes are in order: first of all, both in the first and second stage all the subjects are fully informed about the process of the game especially the fact that the money will be tripled before it is given to the trustee and second, for ensuring the accuracy of the results, the subjects who participate in the first stage are not allowed to participate in the second stage.

Then in the second stage the subjects are faced with two choices. They could either keep all the money or they could return ( $y \leq 3x$ ) as much of it as they please. At the end of the game the participants in the first stage would gain the profit of ‘ $10-x+y$ ’ and the trustees who have played in the second stage would gain the profit of ‘ $3x-y$ ’. Table 2 shows the average amount lent, returned and the average profit each group has gained divided by the Personality Types (PT).

---

<sup>1</sup>The national currency of Iran

Table 2: Average lending, returns and profits (Divided by Personality type) (source: researchers' estimation)

Average lending, returns and profits (Divided by Personality type)					
	Trustor's lending x	Trustee's return	Relative return	Trustor's Profit	Trustee's Profit
PT	x	y	$y/3x$	$10-x+y$	$3x-y$
1	7.25	4.573529	0.210277	7.323529	17.17647
2	5.75	4.665	0.270435	8.915	12.585
3	5.671429	4.665	0.274181	8.993571	12.34929
4	6.680723	4.665	0.232759	7.984277	15.37717
5	6.940678	4.712121	0.226305	7.771443	16.10991

Table 3: The econometric estimation output (source: researchers' estimation)

Dependant Variable y (the trustee's return)		
	Coefficient	Prob
Constant	10.97394	0
x (the trustor's lending)	-0.14396	0.1707
PT1dum	-6.48576	0.0013
PT2dum	-9.13942	0
PT3dum	-5.48929	0.0092
PT4dum	-8.16718	0
PT5dum	-7.67204	0
PT1dum*x	0.341799	0
PT2dum*x	0.541253	0
PT3dum*x	0.279283	0.001
PT4dum*x	0.445859	0
PT5dum*x	0.360353	0
R <sup>2</sup>	0.193267	
Log likelihood	-1708.05	
N (x>0)	492	

As it can be seen from the table the most lending on average was to PT1 and after that PT5 and PT4 respectively take the second and the third place. On the other hand, the trustees, on average returned the most of their endowment to PT5. However, the average amount of return is somehow near in the 5 Personality Types; Which could mean that most of the subjects felt obligated to return at least the amount the trustor has spent. Interestingly, the most profit in the first stage goes to the subjects who trusted PT3 and in the second stage the first profit was gained by subjects who were to return the money to PT1.

Afterwards we have estimated an econometric equation in which the amount returned is the dependant variable and the amount lent is the independent variable. In addition, the Personality Types are inputted to the equation as dummy variables. The results of the estimation are shown in Table 3.

As can be seen from the table 3, the amount that the trustees return is significantly by the Personality Types they face in the experiment.

## CONCLUSION

Social capital which in short could be identified as network cooperation based on trust and regular face-to-face interaction [2] has recently draw many attentions among social scientists, scholars and also policy makers. The complexity of the human behavior has but the classical methods of studying social sciences such as sociology, politics and economics under the shadows of doubt.

In this paper we studied the state of trust as one of the features of social capital in Iran. At first we provided an overview of the state trust has in Iran in recent years (2005-2011), by using the WVS report. Then by introducing some indexes as indicators of trust (social, economical and political trust), we evaluated the state of trust in Iran. The data, from both WVS and official data banks, showed that in recent years the state of trust in Iran has experienced major declines.

Finally, using an adjusted trust game, we examined the state of trust between Iranians. The data from the experiment showed lack of trust between Iranian people which agrees with the results provided by the WVS and official data banks. In the end by using a simple OLS method we showed that the amount returned by the trustees is significantly affected by the Personality Types (which where inserted as dummy variables).

## ACKNOWLEDGMENT

We would like to sincerely appreciate the aids of Dr. Mohsen Renani, Ali Salehi and Elham Jahantigh, whom without their help finishing this paper would be much more challenging.

## REFERENCES

- Renani, M. and R. Moayedfar, 2012. The Decline Cycles of Morals and Economy; Tarh-e-no, Tehran, Iran.

2. Svendsen, L.H.G., C. Kjeldsen and E. Noe, 2010. How do private entrepreneurs transform local social capital into economic capital? Four case studies from rural Denmark; *The Journal of Socio-Economics*, 39: 631-644.
3. Narayan, 1997. *Voices of the Poor: Poverty and Social Capital in Tanzania*, WorldBank, Washington D.C.
4. Dufur, M.J., T.L. Parcel and K.P. Troutman, 2010. Does Capital at Home Matter More than Capital at School?: Social Capital Effects on Academic Achievement; *Research in Social Stratification and Mobility*, pp: 10-16.
5. Waldstrom, C. and G.L.H. Svendsen, 2008. On the capitalization and cultivation of social capital: Towards a neo-capital general science?, *The Journal of Socio-Economics*, 37: 1495-1514.
6. Collier, P., 1998. *Social Capital and Poverty*, social capital initiative; working paper, pp: 4.
7. Rose, R., 1999. *What Does Social Capital Add to Individual Welfare?: An Empirical Analysis of Russia*, World Bank.
8. Olson, M., 1982. *The rise and decline of nations*. New Haven: Yale University Press
9. Putnam Leonardi and Nanetti, 1993. *Making Democracy Work: Civic Traditions in Modern Italy*”; Princeton University Press, Princeton.
10. Roseta-Palma, C., A. Ferreira-Lopes and N.T. Sequeira, 2010. Externalities in an endogenous growth model with social and natural capital, *Ecological Economics*, (69): 603-612.
11. Mladovsky, P.H., and E. Mossialos, 2007. *A Conceptual Framework for Community-Based Health Insurance in Low-Income Countries: Social Capital and Economic Development*” *World Development*, (4): 590-607.
12. Balamoune-Lutz, M., 2011. Trust-based social capital, institutions and development, *The Journal of Socio-Economics*, 40: 335-346.
13. Doong, Sh. Ch., H.G. Fung and J.Y. Wu, 2011. Are social, financial and human capital value enhancing? Evidence from Taiwanese firms, *International Review of Economics and Finance*, (20): 395-405.
14. Robinson, J., L. E. Seiles M. and S. Jin, 2011. Social capital and the distribution of household income in the United States: 1980, 1990 and 2000. *The Journal of Socio-Economics*, 40: 538-54.
15. Crudeli, L., 2006. Social Capital and economic opportunities, *The Journal of Socio-Economics*, 35: 913-927.
16. Ferrary, M., 2003. Trust and social capital in the regulation of lending activities, *Journal of Socio-Economics*, 31: 673-699.
17. Foley, M.W. and B. Edwards, 1996. The paradox of civil society, *Journal of Democracy*, 7(3): 38-52.
18. Arefi, M., 2003. Revisiting the Los Angeles Neighborhood Initiative (LANI): Lessons for Planners, *Journal of planning education and research*, 22(4): 384.
19. *Longman Dictionary of Contemporary English*, Fifth Edition, 2009.
20. Fukuyama Francis, 1995. *Social Capital and the Global Economy*; Heinonline: [www.heinonline.org](http://www.heinonline.org).
21. Knack, S. and P. Keefer, 1997. Does Social Capital Have an Economic Payoff? A Cross-Country Investigation; *The Quarterly Journal of Economics*, 112(4): 1251-1288.
22. Berg, J., J. Dickhaut and K. McCabe, 1995. Trust, Reciprocity and Social History; *Games and Economic Behavior*, 10(1): 122-142.
23. Johnson, D.N. and A. Mislin, 2012. How much should we trust the World Values Survey trust question?” *Economics Letters*, 116: 210-212.
24. Brühlhart, M. and J.C. Usunier, 2012. Does the trust game measure trust?” *Economics Letters*, 115: 20-23
25. Buchan, R.N., T.A.R. Croson and S. Solnick, 2008. Trust and gender: An examination of behavior and beliefs in the Investment Game, *Journal of Economic Behavior and Organization*, 68: 466-476.
26. Sutter, M. and M.G. Kocher, 2003. Age and the Development of Trust and Reciprocity; *social science Research Network*.
27. Gächter, S., B. Herrmann and C. Thöni, 2004. Trust, voluntary cooperation and socio-economic background: survey and experimental evidence, *Journal of Economic Behavior and Organization*, 55: 505-531.
28. Cox, J.C., 2004. How to identify trust and reciprocity; *Games and Economic Behavior*, 46(2): 260-281.
29. Holm, H.J. and A. Danielson, 2005. Tropic trust versus nordic trust: Experimental evidence from Tanzania and Sweden; *The economic Journal*.
30. Karlan, D.S., 2005. Using experimental economics to measure social capital and predict financial decisions; *American Economic Review*, 95(5).
31. Schechter, L., 2007. Traditional trust measurement and the risk confound: An experiment in rural Paraguay; *Journal of Economic Behavior and Organization*.



32. Dubois, D., M. Willinger and T. Blayac, 2012. Does players' identification affect trust and reciprocity in the lab? *Journal of Economic Psychology*, 33: 303-317
33. Huck, S., K.G. Lünser and J.R. Tyran, 2012. Competition fosters trust *Games and Economic Behavior*, 76: 195-209.
34. Eckel, C. and K.R. Wilson, 2004. Is trust a risky decision? *Journal of Economic Behavior and Organization*, 55: 447-465.