

A Comparative Behavioral Investigation into Trust and Reciprocity using the Trust

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ABSTRACT

This paper discusses the importance of trust to economic transactions and risk-mitigation, and investigates the degree of compliance of individual behaviors to engender trust and reciprocity, through a behavioral approach, to understand the pervasiveness of such essential economic ethic in everyday economic transactions. The methodology of this study assesses the behavior of the subject pool (players representative of Muslims and non-Muslims) through a Trust Game that was designed to test how entrenched trust and reciprocity are in modern societies. The game is an experiment in decision-making to measure trust in economic decisions and to demonstrate that trust is as fundamental to economic transactions as self-interest. The concept of trust and reciprocity can be complex when taken into account its relationship with risk that is not readily quantified, especially in a highly uncertain situation. For this experiment, in terms of trust and reciprocity, both Muslims and non-Muslims performed well, although Muslims performed a little bit better than non-Muslims. There were no significant differences between the primed and unprimed subjects. While empirical studies have demonstrated the importance of trust and ethics in economic development, they do not demonstrate how deep religious understanding in human behavior for mutually beneficial decision-making. This paper attempts to address this concern so as to use religious values in productive economic behaviors, like mitigating risk in uncertainty through trust and reciprocity in risk-sharing. This paper provides an actual behavioral investigation into how people behave in real life as compared to what their religion prescribes to them.

Keywords: Behavioral rules, compliance, religious primes, unquantifiable risk.

1. INTRODUCTION

The current climate of global financial uncertainty could still be partly attributed to the meltdown of 2008 where governments and other regulatory agents failed in their responsibility to monitor and steer unrestrained speculative and damaging financial activities. Outside the instrumental complexities of collateralized debt obligations, the repeal of the Glass-Steagall Act, or macro-analysis of global imbalances in levels of savings and investment, prominent voices have echoed in unison on the erosion of trust and confidence in the global financial system. In his keynote address to the 2009 BIAC Business Roundtable, OECD Secretary-General Angel Gurría stated: *“The global financial and economic crisis has done a lot of harm to the public trust in the institutions, the principles and the concept itself*

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of the market economy. It is also eroding public trust in corporations ... This feeling of deception is dangerous.” The main themes to financial reform following the aftermath was basically to encourage greater responsibility after (ex post) and accountability for risks taken prior (ex ante), in the form of not bailing out the bankruptcies, limiting the increasing complexity of financial instruments, transparency and answerability for derivative trading to prevent investment managers from making enormous bets with other peoples’ money, among other improvements.

Our various institutions specify rules that indicate what kind of conduct is most appropriate to achieving just results when individuals face alternative choices and must take action. Institutional reforms would mean moral, spiritual and material development of the individual and society leading to maximum socioeconomic welfare and the ultimate good of mankind. Hence, the religious tenets of beliefs can be viewed as the required infrastructure for continual balanced development. The impact of these rules of behavior on growth and development can be analyzed in terms of their effects on income and wealth distribution, resource allocation, saving and investment, and monetary stability within a society and its economic system.

In this paper, we wanted to investigate the level of compliance in the members of a society to the fundamental ethical principles of trust and reciprocity using the well-documented experimental game called the Trust Game. In our experiment, we will group our sample groups into Muslims and non-Muslims in order to make distinction in the rootedness of trust and reciprocity in religious traditions and belief systems. This research will be using a priming instrument to heighten identity saliency in the subjects against control groups which are unprimed. The experiment was carried out in Singapore and then repeated in Malaysia, with actual cash incentives within the game scenario played out by selected unbiased test subjects.

2. Literature Review

1.1. Trust and Reciprocity in the Economy

Institutional economists, economic sociologists, political economists and others concerned with the social organization of economic life have long maintained that trust and confidence are crucial to effective economic functioning, not only in underwriting specific exchanges between particular agents, but in terms of a generalized foundation of trust that underpins a wider socio-economic system. In instrumental terms, resources of trust promote economic efficiency by reducing the transaction costs of economic exchange, on the assumption that others will behave according to common norms of economic conduct. It may be possible to transact without such an underpinning of trust but the risks and associated costs of doing so are much higher (such as in the contexts where cheating, fraud or corruption are rife) than otherwise. In formal economies, law tends to formalize trust relations; if someone cheats on an agreed contract, there is legal recourse. But such resort to law is costly – transaction costs are minimized when ordinary economic business is done under an implicit rather than an explicit contract, without complicated legal forms to govern each agreement. This opens onto the more fundamental sense in which trust matters for economic life, in the unspoken assumptions we make that others share our understanding of an exchange, are operating

according to common social norms: trust mediates the risk of socio-economic interaction. The reduction of economic uncertainty, the “greasing” of exchange relations, the management of risk, can be seen to foster economic efficiency at a macroeconomic level as well as within any given exchange. Trust leads a double life as both a social value and an economic resource; as such, it is a critical concept for linking social arrangements with economic outcomes.

A number of researchers have explored the relationship between social trust and economic prosperity, with a broad consensus on the positive association between levels of trust and levels of national wealth (Knack and Keefer, 1997; Whiteley, 2000; Zak and Knack, 2001; Uslaner, 2002; Beugelsdijk et al, 2004). Individuals in wealthier economies are more likely to express trust in others (interpersonal trust) and also in economic and political institutions (systemic trust). Trust has a direct correlation to economic well-being at both ends of the prosperity spectrum: levels of trust have been seen as critical factors in emerging and developing economies, as well as for developed economies. Additionally, there is data that suggest that it is not only wealth but its distribution that is relevant, with trust linked not only to higher GDP per capita but to lower levels of income inequality (Rothstein and Uslaner, 2005). In an important early study, Knack and Keefer (1997) observe that “... *trust and civic norms are stronger in nations with higher and more equal incomes.*” In a more recent, large cross-sectional study, Delhey and Newton (2003) note the significance of cultural and political determinants of trust, but argue that the marked relationships between wealth, income inequality and trust suggest that “money matters for trust more than most things.” In a European context, national income measures are consistently linked to resources of social trust. Successive waves of data from the European Social Survey show that respondents in the wealthiest economies report higher levels of interpersonal as well as institutional or systemic trust. Finland and Denmark, for instance, score highest in measures of systemic trust, while transitional economies with comparatively low measures of GDP per capita, such as the Czech Republic, Hungary and Poland, report the lowest levels of systemic trust in Europe.

As financial markets have grown more complex, and exchanges within them depersonalized via electronic communications, the problem of trust has become more acute. Systemic risk requires systemic trust, and the ways in which risk has been distributed across the system via complicated and often opaque instruments has tested systemic resources of trust to breaking-point. The choking up of different kinds of lending — inter-bank, business and mortgage lending — is a signal example of a crisis in confidence inside the financial system. The inability of banks to assess the creditworthiness of their partners in a context of toxic assets and complex debt obligations makes the risks of lending simply too high for trust to mitigate. There are clear problems of “external” or investor confidence too, visible in falling stock prices and depressed stock market activity. And it is also arguable that the crisis in the markets may have impacted on individuals’ confidence in a wider economic and political system like governments and regulations, in banks and corporations, in open global markets as a whole. Felix Roth (2009) presents data showing significant declines in expressed levels of public trust in the key European institutions, and notably the European Central Bank, together with 2008 survey data from Germany in which almost half the respondents described the social market economy as socially unjust, while almost three quarters saw the distribution of income in the German economy as unfair.

In reciprocity, neoclassical economists recognized solutions to externalities, which constitute a form of “market failure”. Private market-based decision making does not necessarily guarantee efficient outcomes from a general welfare perspective. People can resolve certain problems through mutually beneficial transactions or reciprocity. For example, a land-owner and a polluter could enter into a contract in which the land-owner agrees to pay the polluter a certain amount of money in exchange for a specific reduction in the amount of pollution. Such contractual bargaining can be mutually beneficial. Once the building is less exposed to pollution, the land-owner can raise rents. As long as the increase in rents is greater than the payment to the polluter, the outcome is beneficial for the land-owner. Similarly, as long as the payment exceeds the loss of profit from lower pollution (be it through lower production or investment into cleaner technologies), the polluter is better off as well.

1.2. Risk and Uncertainty in Economics

Mainstream economics and finance are dominated by models of decision-making under risk under the rationality axioms, where modern macroeconomics has its analytical roots in the general equilibrium framework of Kenneth Arrow and Gerard Debreu (Arrow and Debreu, 1954). In the Arrow-Debreu framework, the probability distribution of future states of the world is known by agents. Risk can be securitised and thereby priced and hedged. As for modern finance, its origins begin in the portfolio allocation framework of Harry Markowitz and Robert Merton (Markowitz, 1952; Merton, 1969). This Merton-Markowitz framework adopts an established probability distribution for potential market risk. This allows portfolio risk to be computed and thereby priced and hedged. Jointly, the Arrow-Debreu and Merton-Markowitz frameworks make the foundation of modern macroeconomics and finance. They help explain patterns of behaviour from consumption and investment to asset pricing and portfolio allocation, at least for the past 50 years.

However, economic actors do not necessarily abide by the neo-classical rationality axioms and information available to them is seldom complete. The recognition of the limitations of rationality and general equilibrium models in capturing key contributors to financial crises began to attract interest in decision-making under uncertainty. The study of optimal choice under uncertainty first requires the distinction between measurable risk and unknown risk factors that may affect outcomes. In other words, it is a study into the inability to form priors on the distribution of future outcomes rather than risk (Knight, 1921). Neither the Arrow-Debreu nor Merton-Markowitz frameworks reflect such uncertainty. Instead, economic and financial models have been built on often unrealistic assumptions about humans’ state of knowledge, emotions and cognitive capacity.

Only recently have those strong assumptions about states of knowledge and cognition been questioned and investigated. Many of the dominant figures in 20th century economics — from Keynes to Hayek, from Simon to Friedman — placed imperfections in information and knowledge centre-stage. Uncertainty was for them the new “normal” in decision-making affairs. In complex environments, Herbert Simon (1972) believed human behaviour followed simple procedural rules. Simon thus underlined “procedural rationality”, or decision-making using heuristics or procedural rules. These heuristics were evolutionary responses, honed in the light of experience passed down generationally from the past (nature) or accumulated

locally in the present (nurture). As the individual develops these "mental short-cuts" in making decisions in such an environment of uncertainty, and the importance of ethical rules in that environment are also just as necessary in order to prevent unwanted outcomes or negative externalities that may have wider consequences socially and now internationally.

1.3. Engendering Trust and Risk-sharing — Islamic Finance Perspective

Erbas and Mirakhor (2013) notes that the fundamental cause of the 2008 financial crisis was the negligent, immoral, even criminal behavior of some actors. They saw it as a breach of the social contract implicit in fiduciary responsibility and trust, which bore disastrous consequences, and is not compatible with the commonly shared morals that guide economic behavior across many cultures and faiths, including Islam. The fundamental principle of Islamic risk sharing becomes important because of the acknowledgement of such temptations and human penchants as well as uncertainty. Erbas and Mirakhor (2013) emphasize that Islamic risk sharing does not permit washing one's hands off of the liability once a loan is made ex ante but one must remain a party to it until risks are realized ex post. Thus, it is not permitted to create derivatives of derivatives (exotics, toxics, etc.) and other highly complex products, and it becomes possible to know who owes what to whom for an ex post settlement of claims and liabilities. The extended set of rules derived from the Quran and Sunnah as well as the concept of the *khalifah*, supports this commitment to fiduciary, personal accountability and responsibility, building and maintaining trust as well as dispensing and upholding economic and social justice. Furthermore, the availability of *khiyar* or options in Islamic contracts gives investors the option of continuing or halting or abandoning an investment to hedge against uncertainty over time, and decision makers may be willing to pay for such contractual flexibility. An early discussion of economically significant benefits from flexibility is by Marschak and Nelson (1962). They argue that flexibility comes at a cost, such as the cost of accepting lower payoffs or the cost of delaying some payoffs into the future. They propose a measure of flexibility in decision making according to which the more the decision maker expects to learn from each decision outcome, the more he/she values flexibility. Sequential decision programs are ambiguous over time, and more so as the time horizon becomes longer. Erbas and Mirakhor note that splitting multistage investments, or implementing them as segmented decisions over time, as opposed to once-and-for-all decisions with an ex ante commitment for the entire time horizon, gives investors the option of continuing or halting or abandoning an investment to hedge against uncertainty over time, and decision makers may be willing to pay for such flexibility.

3. Research Methodology

1.4. Sampling Design

We carried out our tests in two different cities — Singapore and Kuala Lumpur. Our sample size was 30 in Singapore and 40 in Malaysia which though modest, still had a good spread of age, education, gender and income (see Appendix 1) instead of limiting to undergraduate or graduate groups. There is less variation in the Muslim community in Singapore and Kuala Lumpur which is predominantly Sunni and follow the Shafi'e school of thought. We are not aware of existing hypotheses in the literature regarding how atheism or agnosticism might affect economic behavior.

Table 1: Decision Rules, Payoffs and Sample size.

Game	Decision Rules	Payoffs	Total Size
Test for Trust & Trustworthiness (Trust Game)	Player 1 starts with \$40/RM40 and decides how much to invest in Player 2. Moderator decides that investment has tripled. Player 2 now decides how much to give back to Player 1.	Player 1 retains uninvested amount plus what Player 2 returns. Player 2 keeps what is not returned.	38 Non-Muslim (22 primed) - 17 Investors (9 primed) - 21 Trustees (13 primed) 32 Muslim (16 primed) - 18 Investors (10 primed) - 14 Trustees (6 primed)

1.5. Research Procedure

The methodology of this study aims to assess the behavior of the subject pool (players representative of the Muslims and non-Muslims) in a given scenario (Trust Game) that will test the rules of trust and reciprocity. The same game will be played by the two groups. The instructions in a session will be read stage by stage. Neutral terminology will be used to avoid any potential bias. At the end of each scenario, the data is tabulated for analysis to examine the decisions made in different situations. It is a simple one-off game, in which the players simultaneously and independently choose their actions, and they do so only once. The test subjects do not know what is being tested for in each game to obtain neutrality and objectiveness in the outcomes. This allows us to extract actual behavioral responses as they would behave naturally in real life. Also, to statistically control for religious effects, we use a priming instrument used by Shariff and Norenzyan (2007) to segregate the Islamic-salient subjects from non-Islamic subjects via sentence-unscrambling task.

1.6. Priming Instrument

The experimental results will be tested for significance, in particular, for the significance of possible differences between Muslim and non-Muslim subjects. In order to statistically control for religious effects, we use a priming instrument used by Shariff and Norenzyan (2007) to segregate the Islamic-salient subjects within the Muslim group as well as the religious-salient subjects within the non-Muslim group via sentence-unscrambling task. The sentences vary depending on whether the subject is in the Islamic-salient condition or the control condition. Five of the sentences unscrambled by Islamic-salient subjects contain religious content. None of the control subjects' sentences contain religious content. An advantage of this priming instrument is that it is subtle; compared with blatant primes, subtle primes more reliably cause behavior to conform to norms (Wheeler and Petty, 2001), which aids in interpreting our results within our theoretical framework of self-categorization. The basic idea is that priming a social category temporarily increases the strength of affiliation with that category. Stronger affiliation with a category causes behavior to shift towards that category's norms, so comparing primed and unprimed behavior allows us to infer something about what the category's norms are and how they affect steady-state behavior.

1.7. Trust Game (Test for the Rules of Trust & Reciprocity)

In the trust game, the first player (investor) decides how much money he is given (S\$40/RM40) to keep and how much to give to player 2 (trustee) as an investment. This first stage of the game is a test of trust (of player 1) and reciprocity (of player 2). The amount invested earns a certain return (amount invested triples). Player 2 must now decide how much to give back to player 1. Ultimately, both players are better off with the investment but player 1 takes a risk with investing in player 2 and counting on that he/she is trustworthy. This game underscores the value of trust as a social capital that makes economic interactions more efficient.

The Trust Game was designed by Berg et al. (1995) and also called the “investment game”. It was an experiment in decision-making to measure trust in economic decisions and to demonstrate that trust is as basic to economic transactions as self-interest. As “trust is not intrinsically part of mainstream economics”, the success of this experiment in demonstrating the primacy of trust is problematic for basic assumptions of standard economics, which tend to ignore trust. Under standard economic assumptions of rational self-interest, the predicted actions of the first player in the trust game will be that he will choose to invest nothing. However, in the original Berg et al. experiment, thirty out of thirty-two game trials resulted in a violation of the results predicted by standard economic theory. In these thirty cases, first players sent money that averaged slightly over fifty percent of their original endowment.

4. Data Analysis

The Trust Game, designed by Berg et al. (1995) is a popular experiment used to measure trust in economic decisions (Brulhart, 2012). The experiment is designed to demonstrate that trust is basic to economic transactions but standard assumptions of conventional economics tend to ignore trust. The first round of play requires the first player (with the capital) to invest in a second player to test the rule of Trust. In the second round of play, the game-master deems that the investment has tripled and the second player decides how much to share the proceeds (to test Reciprocity). In terms of trust, we may view subjects who invested S\$/RM20-40 had higher levels of trust. In those terms, Muslims performed better than non-Muslims (94% versus 82%). Primed and unprimed subjects performed almost exactly the same at 89% versus 88%.

Table 2: Breakdown of Responses for Trust in the Game of Trust

Invest	Trust				Total
	S\$/RM0-15		S\$/RM20-40		
	Count	Ratio %	Count	Ratio %	
Muslim	1	6%	17	94%	18
Primed	1	10%	9	90%	10
Unprimed	0	0%	8	100%	8
Non-Muslim	3	18%	14	82%	17
Primed	1	11%	8	89%	9
Unprimed	2	25%	6	75%	8
Combined (M & nM)	4	11%	31	89%	35
Primed	2	11%	17	89%	19
Unprimed	2	13%	14	88%	16

In terms of reciprocity, where the reciprocity value is calculated based on returned amount subtracted by the initial amount invested (returned - invested) or net returns. The responses were as follows:

Table 3: Breakdown of Responses for Reciprocity in the Game of Trust.

Net Returns	Reciprocity								Total
	Less		Equal		S\$/RM5-15		>S\$/RM20		
	Count	Ratio %	Count	Ratio %	Count	Ratio %	Count	Ratio %	
Muslim	0	0%	3	23%	5	38%	5	38%	13
Primed	0	0%	0	0%	3	50%	3	50%	6
Unprimed	0	0%	3	43%	2	29%	2	29%	7
Non-Muslim	3	14%	4	18%	5	23%	10	45%	22
Primed	2	15%	3	23%	2	15%	6	46%	13
Unprimed	1	11%	1	11%	3	33%	4	44%	9
Combined (M & nM)	3	9%	7	20%	10	29%	15	43%	35
Primed	2	11%	3	16%	5	26%	9	47%	19
Unprimed	1	6%	4	25%	5	31%	6	38%	16

We understand that reciprocity is giving back (net returns) equal or more to what was received. So, upon combining the ratios for equal, S\$/RM5-15 and >S\$/RM20 categories, we find that Muslims performed better (100%) versus non-Muslims (86%). Primed and unprimed subjects performed about the same (89% versus 94%) although primed subjects tend to reciprocate at higher amounts (i.e. >S\$/RM20).

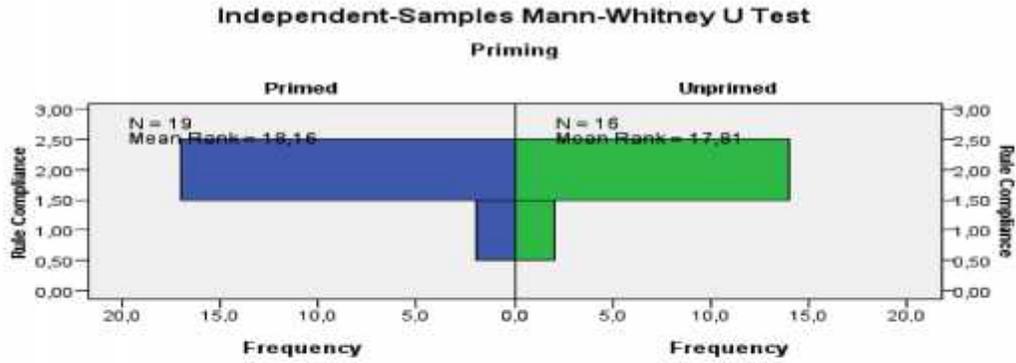
5. Statistical Analysis

A set of non-parametric comparisons was developed to test the hypothesis of differences between Muslims vs. Non-Muslims and primed vs. unprimed groups regarding their adherence to several rules. Due to the small sample sizes, non-parametric tests were carried out to provide statistical insights on the data (if possible). Mann-Whitney U tests were employed for its versatility to conduct the 2-sided test of significance.

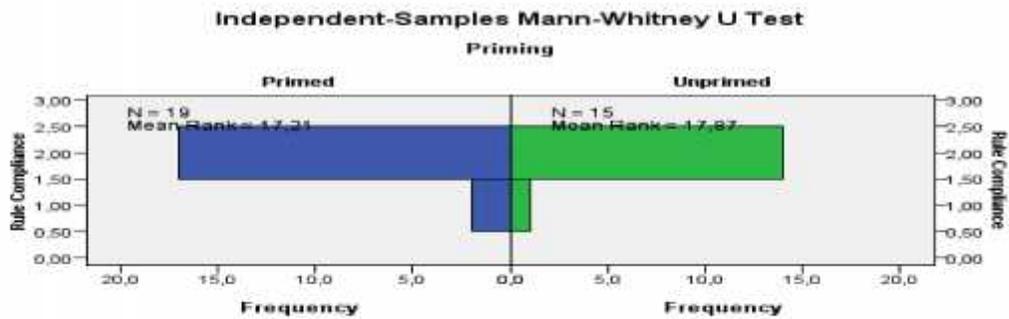
The statistical analyses seem to indicate that the null hypothesis was accepted (due to sig > 0.10), which implies that the statistical tests were unable to detect any difference between the groups regarding their medians of adherence to cooperation, from the religion or priming aspects. As such we make our analysis based on the primary raw percentage data in tables 2 and 3.

Table 4: Mann-Whitney U Test for Trust and Reciprocity.

Rules	Religion (Muslim or non-Muslim)				Priming (Primed or Unprimed)			
	N	Mann-Whitney U	Standard Error	Sig. (2-sided test)	N	Mann-Whitney U	Standard Error	Sig. (2-sided test)
Trust	35	171.5	16.703	0.546	35	155	16.649	0.935
Reciprocity	34	139	13.689	0.944	34	137	14.17	0.864

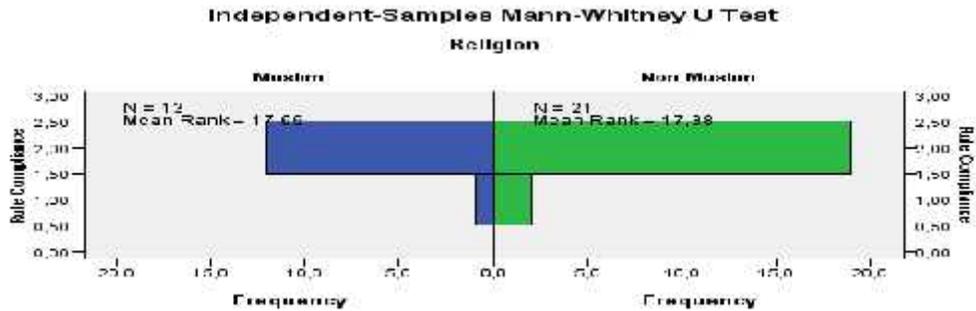


Total N	35
Mann-Whitney U	155,000
Wilcoxon W	345,000
Test Statistic	155,000
Standard Error	16,649
Standardized Test Statistic	,180
Asymptotic Sig. (2-sided test)	,857
Exact Sig. (2-sided test)	,935



Total N	34
Mann-Whitney U	137,000
Wilcoxon W	327,000
Test Statistic	137,000
Standard Error	14,170
Standardized Test Statistic	-,388
Asymptotic Sig. (2-sided test)	,698
Exact Sig. (2-sided test)	,864

Table 5: Overall Performance for both Cities (Islamic and Priming Effects)



Total N	34
Mann-Whitney U	139,000
Wilcoxon W	230,000
Test Statistic	139,000
Standard Error	1,089
Standardized Test Statistic	,180
Asymptotic Sig. (2-sided test)	,857
Exact Sig. (2-sided test)	,811

SUMMARY		
	Rule of Trust	Rule of Trustworthiness
Muslim Priming Effects	P < UnP	P = UnP
Non-Muslim Priming Effects	P > UnP	P < UnP
Combined (M & nM) Priming Effects	P = UnP	P < UnP
Muslim vs non-Muslim	M > nonM	M > nonM

Where P = primed; UnP = unprimed subjects and M = Muslim and nonM = non-Muslim participants

and > means performs better and < means conversely according to the primary criteria of the experimental game.

The higher performance by the Muslims in Singapore and Malaysia seem to indicate that the rule tested was consistent to their understanding of the values of trust and reciprocity, values espoused by their religion and reinforced in their social, racial or cultural identity. These values could also have been deeply entrenched in their upbringing, affirmed through their

social circles or become profoundly ingrained as part of their identity — be it as part of their cultural evolution or religious identity. In short, their better performance could be due to these values being emphasized in their daily lives and how embedded they have been in their perception of themselves and others in their worldview. However, we caution from taking a broad-brush observation and these results should not be seen as representative of all Muslims in other countries. In order to verify this, we need to repeat these experiments in more countries and if resources permit, in bigger sample sizes. A deeper understanding of religious and priming effects would require further verification of these findings in multiple countries, and possibly non-Muslims be segregated by their respective religions instead of being lumped together as a non-Muslim group. The priming instrument then would also have to be customized to each individual religion specificities.

Underperformers in the game were players who would rather keep the investible funds to themselves (or at least a significant portion of it), while the over-performers were those who see others as being trustworthy with the funds and thus allocate a higher amount to them. In the context of real life outside of the scenario given in the game, a possible explanation as to why non-Muslims may have 'underperformed' is that there are two factors in which people have found most helpful in making smart decisions: the propensity to trust and the analysis of opportunity, risk, and credibility. It is the combination of the two that creates sound judgment. It takes discernment and an assessment of someone else's ability and suitability to handle those funds. Without much information about the partner, sometimes it takes courage not to trust, in order to avoid losses and unnecessary risk in a highly uncertain situation. This could be one explanation for the underperformers.

6. Concluding Remarks

It should also be noted that poor and tyrannical countries find themselves entrapped into continuing mistrust, inequality and dysfunctional institutions. High levels of inequality contribute to lower levels of trust, which lessen the political and societal support for the state to collect resources for launching and implementing universal welfare programs in an uncorrupted and non-discriminatory way. Unequal societies find themselves trapped in a continuous cycle of inequality, low trust in others and in government, policies that do little to reduce the gap between the rich and the poor and create a sense of equal opportunity. Demands for radical redistribution, as we see in many transitioning countries, exacerbate social tensions rather than relieving them. However, we know that extending trust to people inspires them. It brings out the best in them and it motivates them. In fact, the reason that extending trust is so powerful is because trust is a compelling form of positive human motivation. This is a key source of economic growth and collaboration. Extending trust also in turn increases trust. It is somewhat ironic that one of the best ways to increase trust is to simply extend it. There are many reasons for this. Trusting people inspires them to want to be worthy of that trust. It brings out the best in them. It makes it safer to risk and innovate. And extending trust generates reciprocity. When we trust people, they tend to trust in return. Our results clearly show that: 0% Muslims returning less than what they received and only 14% of non-Muslims doing so; overall a mere 9% did not reciprocate. And when we withhold trust, they will in return withhold it. In teams and organizations, giving trust manifests in greater

employee engagement and retention, increased customer loyalty and referrals, and other economic benefits.

Finally, the identity formulation through individual experiences, upbringing, cultural conditioning and external expected rules of behaviors by those of society are also governed by rules that are enforced by the economic, legal and political institutions of a country where one resides. The effective understanding of how religious values affect behavioral outcomes can be applied to fill gaps in institutions to produce improvements through much needed reforms. Our findings indicate that religious tenets, in general, could be viewed as the force behind the 'invisible hand' that Adam Smith had probably alluded to, where in the pursuit of self-interest, the 'invisible hand' will safeguard the collective interest. There always has been a moral and ethical obligation to pursuing one's own interest because we do not live in isolation. If we choose to ignore these obligations, the unspoken social contract breaks down and it would lead to the tragedy of commons. Building trust by upholding ethical and moral obligations hence reinforces public civility and communal solidarity, removes fears and mistrust in public and private institutions for a harmonious and profitable existence, by reducing risk in highly uncertain times through shared goals and reciprocal undertaking.

REFERENCES

- Akerlof, G. A. and Shiller, R. J. (2009). *Animal Spirits: How Human Psychology Drives the Economy, and Why It Matters for Global Capitalism*. Princeton, NJ: Princeton University Press.
- Arrow, K. and Debreu, G. (1954). Existence of an Equilibrium for a Competitive Economy. *Econometrica*, Vol. 22, No. 3. (July), pp. 265-290.
- Berg, J., Dickhaut, J., and McCabe, K. (1995). *Trust, Reciprocity, and Social History*, *Games and Economic Behaviour*, 10, 122–42.
- Beugelsdijk, S. H., de Gott, L. F. and van Shaik, A.B.T.M. (2004). Trust and Economic Growth: A Robustness Analysis, in: *Oxford Economic Paper*, No. 56, 2004, pp. 118-134.
- Bourgeois-Gironde, S. and Corcos, A. (2011). Discriminating Strategic Reciprocity and Acquired Trust in the Repeated Trust-game, *Economics Bulletin*, AccessEcon, vol. 31(1), 177-188.
- Brulhart, M. (2012). Does the Trust Game Measure Trust? *Economics Letters* 115, no. 1 (2012): 20-23.
- Carl, N. and Billari F.C. (2014). Generalized Trust and Intelligence in the United States. *PLoS ONE* 9(3): e91786.
- Cesarini, D., Dawes, C., Fowler, J., Johannesson, M., Lichtenstein, P. and Wallace, B. (2008). Heritability of Cooperative Behavior in the Trust Game. *Proceedings of the National Academy of Sciences of the USA* Vol. 105 no. 10, 3721–3726.
- Delhey, J. and Newton, K. (2003). Who Trusts? The Origins of Social Trust in Seven Societies. *European Societies*, 5(2), 93-137.

- Earle T. C., Siegrist M, Gutscher H. (2007). Trust, Risk Perception and the TCC Model of Cooperation. In: Siegrist M, Earle T.C, Gutscher H, *Trust in Cooperative Risk Management: Uncertainty and Scepticism in the Public Mind*. Earthscan, London, 1–49.
- Eckel C. C. and Wilson R. K. (2004). Is Trust A Risky Decision? *Journal of Economic Behavior and Organization* 55:447–465.
- Einhorn, H. (1972). Expert Measurement and Mechanical Combination. *Organizational Behavior and Human Performance*, 7:86-106.
- Erba , S. N. and Mirakhor, A. (2013). The Foundational Islamic Market Principles, Knightian Uncertainty and Economic Justice: An Institutional-Behavioral Assessment. In Z. Iqbal & A. Mirakhor, eds. *Economic Development and Islamic Finance*. Washington, D.C.: The World Bank., pp. 93–129.
- Granovetter, M. (1985). Economic Action and Social Structure: The Problem of Embeddedness. *American Journal of Sociology* 91 (3): 481–510.
- Gurría, A. (2009). *Responding to the Global Economic Crisis – OECD’s role in Promoting Open Markets and Job Creation*, 21 May 2009, <http://www.oecd.org>.
- Henrich, J., Boyd, R., Bowles, S, Camerer, C, Fehr, E, and Gintis, H. (2004). *Foundations of Human Sociality: Economic Experiments and Ethnographic Evidence from Fifteen Small-Scale Societies*. Oxford, U.K.: Oxford University Press.
- Henrich, J. and McCabe, K. (1998). Behavioural Foundations of Reciprocity: Experimental Economics and Evolutionary Psychology, *Economic Inquiry*, 36, 335–52.
- Inglehart, R. (1990). *Culture Shift*. Princeton: Princeton University Press.
- Izutsu, T. (2004). *Ethico-Religious Concepts in the Qur’an*. Kuala Lumpur: Islamic Book Trust.
- Knack, S. and Keefer P. (1997). Does Social Capital Have An Economic Payoff? A Cross-country Investigation, in: *Quarterly Journal of Economics*, No. 112, 1997, pp.1251–1288.
- Knight, F. (1921). *Risk, Uncertainty and Profit*. Washington, DC: Beard Books.
- Markowitz, H. M. (1952). Portfolio Selection. *Journal of Finance* 7, 77–91.
- Marschak, T. and Nelson, R. (1962). Flexibility, Uncertainty, and Economic Theory. *Metroeconomica*, 14: 42–58.
- Merton, R. C. (1969). Lifetime Portfolio Selection under Uncertainty : The Continuous Time Case. *Review of Economics and Statistics* 51, 247–257.
- Molm L., Takahashi N. and Peterson G. (2000). Risk and Trust in Social Exchange: An Experimental Test of a Classical Proposition. *American Journal of Sociology* 105:1396– 1427.
- Roth, F. (2009). The Effect of the Financial Crisis on Systemic Trust. *InterEconomics*, Vol. 44, No. 4, 203-208.

- Rothstein, B. and Uslaner, E. (2005). All for All: Equality and Social Trust, in: *LSE Health and Social Care Discussion Paper*, Number 15, London School of Economics and Political Science.
- Shariff, A. and Norenzayan, A. (2007). God Is Watching You: Priming God Concepts Increases Prosocial Behavior in an Anonymous Economic Game. *Psychological Science* 18: 803- 809.
- Simon, H. (1976). From Substantive to Procedural Rationality. In *Method and Appraisal in Economics*, edited by Spiro J. Latsis, 129–48. Cambridge, U.K.: Cambridge University Press.
- Tomasello, M. (2014). *A Natural History of Human Thinking*. Cambridge, MA: Harvard University Press.
- Uslaner, E. (2002). *The Moral Foundation of Trust*. Cambridge, Cambridge University Press.
- Wheeler, S. C. and Petty, R. E. (2001). The Effects of Stereotype Activation on Behavior: A Review of Possible Mechanisms. *Psychological Bulletin* 127(6), 797-826.
- Whiteley, P. F. (2000). Economic Growth and Social Capital, in: *Political Studies*, No. 48, pp. 443-466.
- Zak, P. J. and Knack, S. (2001). Trust and Growth, in: *Economic Journal*, No. 111, 2001, pp. 295-321.