

Particularized and Generalized Trust: The  
Indirect Relationship of Trust on Economic  
Development

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## Abstract

This research claims that a solid theory to explain and predict the wellbeing of economies has to include critical factors from political science, economics, and as well as political psychology. Previous researches discussed and explored the significance of including those factors, but they fell short by misconception in the definition of trust. This research revisits those claims by splitting trust into two distinct variables, Particularized and Generalized Trust. Generalized Trust carried the measurement available for all past work done on trust, while for the first time this research was able to successfully provide a unique measurement for Particularized Trust extracted from the fifth wave of the World Values Survey. Moreover, the theory in this research is supported by Anatol Rapoport's tit for tat strategy in the iterated prisoner's dilemma, where the highest possible outcome is achievable through political, economical, and psychological perceptions. Empirical results tested the claims in two levels, individual and national, and found consistencies on the relationship between Particularized Trust and Institutions. An increase in Particularized does influence a positive change in Institutions on both levels. The national level analysis investigated mediation analysis claims and found considerable support that Particularized Trust influences economic prosperity through formal institutions.

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## **Chapter 1: INTRODUCTION**

When Political Scientists attempt to explain a political phenomenon, there is a strong chance that non-political factors play a significant role. For example, psychological factors always seem to be vital in defining an outcome of an interaction between two or more players. The outcome in the Expected Utility Model is heavily dependant on the risk factor of the players, where they are risk averse, risk accepting, or risk neutral. Thus, to maximize the probability of predicting a political outcome is to include the psychological status of the players. If the model fails to admit that non-political factors do have a role in political phenomena, then researches will fall short in explanations and predictions.

Similar to the Expected Utility Model, neoclassical growth models in economics have historically ignored non-economic factors in its attempt to explain an economic phenomenon. The models came short in explaining and predicting outcomes and found that fields other than economics assisted in providing better solutions. This research will incorporate factors from political science, political psychology, and economics in an attempt to explain variance in economic development at the national

level. One variable, trust, stands out to be significant in the relationship between politics and economic prosperity. In this research, I will thoroughly develop the relationship between institutions, trust and economic wellbeing.

Various researches were conducted on trust, but to my knowledge, none have split trust into two different variables and provided a separate measure for both. In this research, I explain that trust is in fact two different variables, Particularized and Generalized Trust. Generalized Trust is primarily the variable that is widely used by various researches on trust. On the other hand, Particularized Trust is a newly generated variable due to the publishing of the fifth wave in the World Values Survey. The qualitative definition of this variable is extracted from Berggren and Jordahl<sup>1</sup> (2006), which is trusting people you know or know something about. Previous work at the national level on Generalized Trust focused heavily on developing nations and few (if any) studies examined the carrying capacity of results from the developed to the developing world. Moreover, 32 out of 53 countries in this research were classified by the World

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<sup>1</sup> Berggren, N., H. Jordahl (2006), Free to Trust: Economic Freedom and Social Capital, *Kyklos*, Vol. 59, No. 2, pp. 141-169.

Bank as developing societies. Of those developing countries, 12 are classified as "high middle income," while 13 are "low middle income," and 7 as "low income" countries.

In this research, there will be two quantitative level analyses, one at the individual level, and the other is at the national level. This research will attempt to find the similarities and consistencies between the two levels of analysis. In the individual level, The United States of America represents the developed world as an example of how relationship between core variables exists in the world's leading economy. In addition, the decision to test this research's theory are the individual level for the United States lay in the argument that its foreign policy is widely marketed with an attempt to create a similar societal structure to different nations around the globe. At the national level, all countries are collapsed and sampled together to analyze the consistencies with the individual level analysis and to search for the influential relationship between Particularized Trust, Generalized Trust, Institutions, Economic Development, and other essential core variables.

What system would people in a society use to achieve their lifestyle goals if proper institutions were not in

place? This research argues that the informal networks in a society are based on Particularized Trust, which is trusting people you know or know something about. Thus, in order for a society to operate at the level of its potential, it has to evolve into creating formal institutions that spread risk, provide insurance and information, prevent cheating, and so on. The theory in this research argues that the path towards economic prosperity starts with Particularized Trust or when individuals trust people they know or know something about. Particularized Trust, in turn, provides the foundations upon which formal institutions are built. The investigation is made with regards to the significance of Generalized Trust in the mediation relationship. In the individual level, the mediation analysis between Particularized Trust, Institutions, and Generalized Trust does not hold for all developed societies. As will be shown later, some societies do go through a period of time where cooperation is achieved by factors exogenous to the model in this research. When examining the relationship at the national level, the results were consistent with theoretical expectations. The research will show that a positive change in Particularized Trust is associated with a change in economic wellbeing through a mediated effect

from institutions. As will be stated more in depth in the literature review, various authors argue that institutions effect economic prosperity through trust.

In this research, I will conduct a number of approaches to investigate their claims. First, I will look into qualitative studies that argue about the essence of Particularized Trust. Some authors did name and distinguished trust into the two types mentioned above, while other referred to Particularized Trust as social capital. Moreover, the theory built in this research is supported by extensive literature on trust that discusses the direction of relationship between Trust, Institutions, and Economic Development as being significantly influential.

The theory in this research is generated through multiple factors. As will be stated more extensively in the literature review and theory section, various researches came to conflicting conclusion about the relationship that trust has with economic development. While reading extensively in this literature, I have come to the inspiration that researches on trust had different conceptions and definitions to the variable. Therefore, when splitting trust into Particularized and Generalized Trust, it became obvious that one is a prerequisite to the

other. Thus, the theory moved to the next level which is analogically parallel to the tit for tat strategy in the iterated prisoner's dilemma. The tit for tat strategy operates under a set of regulations to insure that optimum results are achieved through cooperation. Other strategies that allow continuous defection to be an equilibrium simply do not achieve the highest potential outcome. Similarly, in a society that operate only on Particularized Trust without proper institutions, evolving into advanced societies that notice economic development is unachievable. While societies that operate under proper formal institutions that insure cooperation would yield better economic results. Therefore, the theory came to the design that a mediation analysis exist between Particularized Trust and Economic Development through Institutions.

Various policy implications results from the argument that will be raised in this research, beginning with changes in the domestic and foreign policies. A number of governmental and nongovernmental institutions provide developing states with packages consisting of policy recommendations for economic, political, or social developments. Those packages are mostly similar and do not take into account the domestic politics or political culture differences among states. In this research, I

argue that we need to look past calls for implementing procedural democracies that do not spill into benefitting civil societies. Instead, we need to look into establishing institutions that are able to formalize the already existing societal pyramids (social capital) and concentrate more on achieving the 'ends of democracies', which is a satisfying economic status.

There exist a number of approaches in Political Science, Economics, and other academic disciplines that perceive development from their own lens. For example, some economic models, such as the neoclassical growth theory, set few essential economic factors to explain growth. Vital political factors are argued to be possibly influential, but are not included in the model. The result leads to the inability for the neoclassical growth model to match reality. Moreover, in Political Science, there exist schools of thought that argue economic development is unachievable by non-democracies. Similarly, the ideas in this wave do fall short in explaining development and the advancement of economic status in various nondemocratic nations around the world today and those that existed in the past.

Therefore, the literature review chapter begins by tackling important arguments raised in the neoclassical

growth models. After a brief exposition, I will show the missing components in the model and where extensions are possible. Next, I will bring up the arguments raised in Political Science about the significance of democratization for economic development. In this section, I will also show the various conflicting arguments by known political scientist on the relationship between democracies and economic development. Towards the end of the section, I will state where most solid arguments exist and what the actual relationship between democracies and development are based on researched evidence. In the section that follows, I will show the significance of institutions in their relationship with economies. This section will move forward from the democratization theory to show that it is in fact the quality of formal institutions that has been more associated with development. Moreover, this section leads directly to the next vital argument raised in this research which is the necessity of trust while overlooking the relationship between institutions and the wellbeing of economies. Similar to the second section in this chapter, this part of literature review will bring together various consistent and conflicting arguments about the necessity and influential relationship of trust. Some authors argue that trust influences institutions, while others argue the

opposite. The similarities however, is that a large wave of trust researchers argue its significance with economic development. I will end this chapter by introducing the next, which is my theoretical take on the relationship that trust embodies with institutions and the wellbeing of economies.

This research's theory and hypothesis are stated in chapter 3. Before the propositions are outlined, there are five general points raised in this chapter. I will first of all state the supporting factors to trust that are meaningful for the economy's wellbeing. Next, in order to gain a greater understanding of the connection trust has with core factors, this chapter will analyze the theoretical processes linking trust to economic development. This is completed by initially splitting trust into Particularized and Generalized Trust and by introducing the parallel between this research and the tit for tat strategy in the iterated prisoner's dilemma. Lastly, this chapter is concluded by stating the research's propositions.

Chapter 4 of this research outlines the data analysis. Because trust is a variable that originates from a personal perception, the first section of this chapter begins assessment at the individual level. This section will also

include the operational definitions of the core variables as well as the control variables used in the individual analysis. This section will conclude with the methodology and empirical results of the statistical analysis. Similarly, the next section of chapter 4 states the national level data analysis and the operational definitions of core and control variables. Finally, this chapter concludes with empirical results for national level analysis and show evidence supporting the research's main theory with regards to the relationship between trust, institutions, and economic development.

The closing argument and discussion of the research is stated in Chapter 5. A brief outline of the research approach for the theory begins this chapter. The major breakthroughs and findings with regards to two empirical results allows for discussing the similarities and differences with known work on the significance of trust. In addition, this chapter will include two brief case studies supporting the empirical results in the individual level analysis. Finally, I will conclude with suggested policy implications, limitations, and possible future extensions.

## Chapter 2: LITERATURE REVIEW

### A. The Neoclassical Growth Model

The focus on explaining and predicting the path of economic prosperity started before the availability of quantitative tools. With the advancement of mathematical tools, researchers were allowed to test the existing theoretical claims. In the case of neoclassical growth model, theorists argue growth will reach a steady state because of reasons such as diminishing returns to capital. In "A Contribution to the Theory of Economic Growth," Robert M. Solow<sup>2</sup> explains the neoclassical growth model as a long run economic growth model. He says that tax cuts or investment subsidies only affect the steady state level of output in the short run. The economy would then converge to the new steady state output level. Also, in the short run, Solow explains that the rate of capital accumulation is what determines the rate of growth, while savings rate and capital depreciation rate determines capital accumulation. On the other hand, the growth rate in the long run is exogenously determined. The rate of technological progress and the rate of labor force growth are the only two factors that influence an economy to

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<sup>2</sup> Solow, Robert M. (1956). "A Contribution to the Theory of Economic Growth". *Quarterly Journal of Economics* 70 (1): 65-94

always converge to a steady state growth rate. In his work, Solow reflects that diminishing returns to capital is the key assumption to the model, thus if there is no technological progress or labor force growth, the economy will cease to grow.

One of the main issues facing the neoclassical growth model is its failure to predict economic outcomes. Neoclassical growth model theorists argue that exogenous factors, such as technology and the strength of institutions continuously develop and therefore prevent decrease in growth. Another limitation to the model is in its failure to account for entrepreneurship, institutions, and the development of knowledge. These limitations made way for a number of scientists to develop the endogenous growth theory in an attempt to better explain growth runs.

In "Increasing Returns and Long-Run Growth," Paul M. Romer<sup>3</sup> criticized the neoclassical growth model. He offered an alternative model, one that endogenizes "technological change in which long-run growth is driven primarily by the accumulation of knowledge by forward-looking, profit-maximizing agents." (Romer 1986, p. 1003) Although there is some empirical evidence with regards to the traditional

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<sup>3</sup> Romer, Paul M. (1986) *Increasing Returns and Long-Run Growth*. Journal of Political Economy. Vol. 94, No. 5

growth models, Romer strongly questions the data availability. He states that influential factors, such as business cycles are not filtered out in a number of empirical tests. He suggests aggregating data into decades rather than years to have a better view of growth. Romer says, "When the productivity growth rate is measured over intervals several decades long and compared over almost 3 centuries, the evidence clearly suggests that it has been increasing, not decreasing." (Romer 1986, p. 1008-9) When performing statistical tests, Romer finds growth rates increasing as a function of calendar time as well as the level of development. Also, further on the evidence section, he argued that while economists believe all technical change is endogenous, "Kendrick (1976)<sup>4</sup> concluded that rates of growth of inputs are not sufficient to explain the rate of growth of output in the 40-year interval 1929-69." (Romer 1986, p. 1013) Thus, Romer suggests that the traditional model's failure to reflect reality exist in not incorporating significant factors.

Along the same lines, Robert J. Barro<sup>5</sup> wrote on the critical implication of the neoclassical growth model.

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<sup>4</sup> Kendrick, John W. (1979) *The Formation and Stocks of Total Capital*. New York: Columbia Univ. Press (for N.B.E.R.).

<sup>5</sup> Barro, Robert J. (1997) *Determinants of Economic Growth: A Cross-Country Empirical Study*. Cambridge, MA: The MIT Press.

Barro notes that the major weakness in the neoclassical growth model is that it predicts growth will halt if technology does not advance. He argued that the model is a growth model that does not explain long-term growth because technological progress is not included. His findings suggest that more schooling, better health, lower fertility rates, less government consumption relative to GDP, greater adherence to uncorrupted rule of law, improvements in the terms of trade, and lower inflation all positively influence economic growth.

In chapter 9 of "Neoclassical Growth Theory,"<sup>6</sup> Solow responds to his critics by stating that the neoclassical growth model is flexible enough to incorporate critical factors that his detractors argue about. However, he argues that no matter what is injected in the model, a steady state will occur. He continues by arguing that including human capital in the model, the model will become unsatisfactory, because of the way human capital is measured. He says human capital assumes that the rate of growth of human capital depends on the level of effort devoted to it. In addition, Solow responds to calls for endogenizing population growth and technological progress

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<sup>6</sup> Solow, Robert M. (1999) Handbook of Macroeconomics, Volume 1, edited by J.B. Taylor and M. Woodford.

by saying: "The relevant conclusion is that population growth and technological progress can in principle be endogenized within framework of the neoclassical growth model; the hard problem is to find an intuitively and empirically satisfying story about the growth of productive technology." (p. 659)

By investing research today on the influence of institutions towards economic prosperity, the arguments are consistent with that of Romer and Barro. When one notices arguments suggesting the model has logical foundation but lacks fit to reality, it clearly shows that some variables that are assumed to have minor influence may in fact prove to have more weight than expected. Even though the outcome is to explain and predict an economic phenomenon, economic factors by themselves may fall behind in shaping the outcome. Perhaps this is why researchers, such as Barro, started including political and social factors to look for a change in economic growth.

Today, while work in growth is progressing, researchers are building upon the developed neoclassical growth model by Romer, Barro and others. As data are being developed, measurements for variables that hardly existed earlier are included in the test for variable relationships. Institutions, as well as technology are

treated as major influential factors in models that have better fit to reality. As this research will discuss, one will acknowledge the importance of including institutions in models that attempt to explain or predict economic prosperity.

The core argument in the research is fairly based on the assumption of the developed neoclassical growth model. The traditional growth model treats institutions and the development of technology as exogenous variables, where long-term growth is explained outside the model itself. By having measurements for such influential factors, the newly developed model endogenizes them to show that growth is not diminishing, but growing. If the traditional growth model forces growth to reach a steady state, then the variance in institutions and trust would not cause different changes in the outcome. Thus, neoclassical growth model that accounts for institutions is the basic argument in this research.

#### B. The Process of Democratization

This section attempts to tackle the argument behind well recognized statements discussing the link between democracies and economic development. As will be shown below, there are conflicting arguments with regards to the relationship between the politics of a democracy and economics. Moreover, there has yet to be a consensus on

the actual definition of democracies. In general, the definition seems to be divided into two main themes; procedural and substantive. A democracy in procedural sense is a state that has the means of being a democracy, such as, votes, freedom of speech, and other laws and regulations that democracies such as the United States and United Kingdom possess. A democracy in a substantive sense is a prosperous state that governs and rules for the people by providing all the required public goods such as security, health care, education, and so forth. The two definitions may seem identical, but what distinguishes them is simply the domestic and foreign perception. The United States, for example may be considered a democracy in both cases, which is government by the people and government of the people, but states such as India can hardly argue that they rule of the people because of the widespread poverty. On the other hand, United Arab Emirates may lack the means of being a democracy, but the country's ability in providing quality public goods to its civilians can be defined as governing of the people, which is what democratic ends call for.

The difference between procedural democracies and substantive democracies parallel the difference between

Fareed Zakaria's<sup>7</sup> "Liberal" and "Illiberal" democracies. In a number of articles, including "The Rise of Illiberal Democracy," Fareed Zakaria explains the different types of democracies that exist in today's world and the diversion that occurs to waves of those democracies. Zakaria says, "from Peru to the Palestinian Authority, from Sierra Leone to Slovakia, from Pakistan to the Philippines, we see the rise of a disturbing phenomenon in international life -- illiberal democracy." (Zakaria 1997, p.22) The disturbing phenomenon Zakaria refers to is when "Democratically elected regimes, often ones that have been reelected or reaffirmed through referenda, are routinely ignoring constitutional limits on their power and depriving their citizens of basic rights and freedom." (Zakaria 1997, p.22)

There are certainly various arguments with regards to the type of government most friendly to the economy. Assuming governments around the world are generally divided into democracies and autocracies, which of them is in a better position to achieve economic growth? Moreover, is there a direct or indirect influential relationship between the types of government and economic growth? Today, literature of conflicting arguments is easily found. On

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<sup>7</sup> Zakaria, Fareed (1997). The Rise of Illiberal Democracy. *Foreign Affairs*. Vol. 76, No. 6, pp. 22-43.

the one hand, proponents of democracies would explain the economic success of the United States of America is due to its democratic characteristics. On the other hand, opponents would explain the emergence of China as an upcoming economic giant is due to its autocratic characteristics. Which of the two statements is correct and how would institutionalists respond?

In a rather persuadable argument, Mancur Olson<sup>8</sup> discusses how an autocrat would find it in his interest to promote the wellbeing of his nation's economy. In "Dictatorship, Democracy, and Development", he explains the difference between roving bandits, stationary bandits, democracies and their relationship with economic growth. Olson provides a simple and logical explanation on how an autocrat is interested in his country's economic wellbeing. Under anarchy, land is described to be lacking hierarchical authority where roving bandits move from one area of the land to the other while performing theft and destroying the incentive to invest and produce. Eventually, roving bandits will not perform theft because people in the land do not possess commodities that are up for grabs. Thus, a stationary bandit is a better choice for both if partial

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<sup>8</sup> Olson, Mancur (1993), *Dictatorship, Democracy, and Development*, *The American Political Science Review*. Vol. 87, No. 3, p. 567-576

theft in the form of taxations are to replace complete theft. Autocracies would evolve where rulers secure local population from other roving bandits while collecting as much taxes as possible, making sure enough is left for investment and capital accumulation for the next scheduled tax collection. Olson argues, "if a roving bandit rationally settles down and takes his theft in the form of regular taxation and at the same time maintains a monopoly on theft in his domain, then those from whom he extracts taxes will have an incentive to produce. The rational stationary bandit will take only a *part* of income in taxes, because he will be able to extract a larger total amount of income from his subjects if he leaves them with an incentive to generate income that he can tax." (Olson, p. 568)

Furthermore, Olson explains that the autocrat is rational and self-interested. By insuring the wellbeing of the society, he in turn would be able to receive more through taxation. Thus, when providing public goods, the autocrat in Olson's view has an encompassing interest in it. Olson provides examples that support his assumption about the autocrat's interest. An autocrat is attempting to maximize the time he spends in office because he is interested in wealth. In order to increase wealth through

taxation, he supports investment and incentive to produce. As will be discussed further below, this assumption conflicts with the selectorate theory that argues the wellbeing of a society less insures the longevity of an autocrat in office.

When comparing autocracies and democracies to the growth a country is expected to achieve, Olson says leaders of both are assumed to be rational self-interested. However, because democratic leaders are mostly dependant on a majority of votes to stay in office, it is votes that make democratic parties have an encompassing interest in providing public goods. Thus, the democratic leader would not have an incentive to push tax rates to the revenue-maximizing level such as the autocrat leader. The democratic leader would redistribute less to himself and more to the majority of the electorate, which makes them earn a significant share of the market income of the society, which in turn makes the society more productive. Olson says, "It would therefore be wrong to conclude that democracies will necessarily redistribute less than dictatorships. Their redistribution will, however, be shared, often quite unequally, by the citizenry. Democratic political competition, even when it works very badly, does not give the leader of the government the

incentive that an autocrat has to extract the maximum attainable social surplus from the society to achieve his personal objectives.”(Olson, M. p. 571)

Olson provides one of many arguments that suggest autocracies do have a chance for economic prosperity. However, it seems like the vast majority of literature is invested in the advantages democracies have in achieving sound economic growth. Feng<sup>9</sup>, for example, provided statistical evidence that democracies are needed for better economic performance. He shows that democracies provide foundations for institutions that assist in economic growth. Meanwhile, Boix<sup>10</sup> shows democracies are not generating the maximum potential for economic growth because politicians in office are able to alter the institutional design for their personal benefit. Consistent with the political business cycle phenomenon, Boix argues that in a majoritarian democracy, the party in power will attempt to transform into proportional democracy if an emerging party threatens its office occupancy. This shows that democratic governments are not completely

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<sup>9</sup> Feng, Yi (2003). *Democracy, Governance, and Economic Performance: Theory and Evidence*. The MIT Press, Cambridge.

<sup>10</sup> Boix, Carles (1999). "Setting the Rules of the Game: The Choice of Electoral Systems in Advance Democracies." *American Political Science Review*. University of Chicago. Vol. 93, No. 3 pp 609-623.

efficient if they lack the proper institutions that constrain leaders from seeking personal gains.

Along similar lines, Bueno De Mesquita<sup>11</sup> uncovers differences between the two types of governments through the selectorate theory. He shows that democratic leaders do have an incentive to provide public goods to the large population, because this will reward him with longer office terms. Different from Olson, Bueno De Mesquita says that autocratic leaders' priority is to stay in office. Olson argues that autocrats will benefit out of the society's wellbeing, while Bueno De Mesquita offers a rather different explanation. Using the selectorate theory, Bueno De Mesquita says that a small winning coalition of which their support is crucial for the leader's survival in office, and a large selectorate of which are those supposedly able to have a say in government, is best for the autocrats' success in office. In this situation, the autocrat will distribute private goods to the winning coalition so that they will compare themselves to the deprived selectorate and therefore are less than likely to defect and choose a different leader. Thus, the wellbeing of the society would make it more likely for the members of

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<sup>11</sup> Bueno de Mesquita, Bruce, Alastair Smith, Randolph M. Siverson, and James D. Morrow (2005), *The Logic of Political Survival*. Cambridge, MA: The MIT Press.

the winning coalition to defect, because other opportunities exist for them if they lose their status in the coalition.

Bueno De Mesquita shows the importance of institutions and institutional design in allowing the economy to function at its highest level of efficiency. He says, "Consequently, we should expect democracies to be wealthier than autocracies, on average, because democratic leaders have stronger incentives to succeed in providing effective economic policies than do their authoritarian counterparts." (Bueno De Mesquita, B. p. 391) Thus, democracies are expected to support all policies necessary for economic growth. However, this is not the case for free trade. If free trade promotes growth, why does protectionism continue today? "If protectionism is not good for growth, why does it persist?" (Bueno De Mesquita, B. p. 391) De Mesquita answers by pointing that political considerations rather than economic ones motivate trade protectionism. Political considerations are not filtered out when expanding the winning coalition. It is vital to remember that politicians in autocracies as well as democracies are rational actors where their top preference is longer time in office, not the economic wellbeing of the society.

If the method of choosing political actors for office is different in democracies and autocracies, how can one perform a comparison in order to find out each design's outcome in the economy? Moreover, why are not all autocracies poor and all democracies rich? The complexity of achieving economic growth is well over the argument that luck is behind the success of some autocracies and those democracies that are poor are simply unlucky. There are certainly a number of ways to measure the strength of governments and their capability to extract and reach their population<sup>12</sup>. However, when one looks closely to the above arguments, one would find that the literature that gives democracies an advantage on autocracies focuses mostly on the constraints a democratic leader has. By assuming that both leaders of democracies and autocracies are rational and interested in maximizing their longevity in office, the literature shows that the constraints in the institutional design of democracies thrust leaders to invest a great deal of effort in the success of their economy. On the other hand, the institutional design of autocracies offers different constraints that make leaders provide private goods at the expense of the economy in order to stay in

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<sup>12</sup> Kugler, Jacek and Marina Arbetman (1989), *Choosing Among Measures of Power*, in Richard J. Stoll and Michael D. Ward (Eds) Power in World Politics. Boulder: Lynne Rienner.

office. In "Governing for Prosperity", Bruce Bueno de Mesquita and Hilton Root<sup>13</sup> show that an autocrat increases his chances in staying in office if he would provide private benefits at the expense of the economy.

### C. Institutionalism

When discussing constraints imposed on different leaders that allow them to act rationally in the quest of longevity in office, both democracies and autocracies alike are not constraint-free. Thus, it is the set of constraints a state has that makes leaders maneuver through them in order to maximize their similar preferences. This argument implies that a Chinese Secretary General would almost imitate United Kingdom's Premier if he would occupy that post and similarly vice versa. Schedler, Diamond, and Plattner<sup>14</sup> explain in "The Self-Restraining State: Power and Accountability in New Democracies" that there is nothing magical about claiming to be a democracy that would suddenly invite foreign investments, increase the economy's output, prevent military rule, or stop corruption. They say that "It is becoming increasingly clear that without working systems that can provide "credible restraints" on

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<sup>13</sup> Bueno de Mesquita, Bruce and Hilton Root (2000). *Governing for Prosperity*. New Haven and London: Yale University Press.

<sup>14</sup> Schedler, A, Larry Diamond, and Mark F. Plattner (1999). *The Self-Restraining State: Power and Accountability in New Democracies*. Lynne Rienner.

the overweening power of the executive, democratic regimes tend to remain shallow, corrupt, vulnerable to plebiscitarian styles of rule, and incapable of guaranteeing basic civil liberties.”(Schedler et. al. p. 2) In fact, they argue that public accountability is the key to high governance quality. By having institutions of horizontal accountability, a state would have the capacity to “check abuses by other public agencies and branches of government.”(Schedler et. al. p. 3) Institutions of horizontal accountability are supposed to check, monitor, constrain one another to insure efficiency and productivity and prevent unlawful acts.

Furthermore, by being accountable, Schedler et al. explain that accountability is not simply answerability of public officials about what they are doing. It is also enforcement, which is “the capacity of accounting agencies to impose sanctions on powerholders who have violated their public duties.”(Schedler et al p. 14) Thus, institutions of horizontal accountability would have the capacity to punish other local institutions for improper behavior. If one supposes that a state has three main branches: Judiciary, Executive, and Legislature, then each would have the political accountability to control political power, not to eliminate it. Of course, there is also the question

of who holds institutions of accountability accountable themselves? Schedler et al argue that second-order accountability can act as a solution to solve this question. They say, "We may establish *reciprocal* accountability: two agents, A and B, "check and balance" each other. Or we may establish *recursive* accountability: A is accountable to B, who is accountable to C, who is accountable to A again." (Schedler et al p. 26)

The existence of institutions friendly to economic growth is not restricted to democracies, but is more likely to survive in democracies. As various literature suggest, domestic political transition towards democracy need not be a prerequisite for economic growth. In addition, the establishment of institutions whether for accountability or economic performance do need vital tools that can guarantee a beneficial outcome to societies. For example, according to Schedler et al, institutions of accountability need to be independent. The Judiciary branch would be better off if its budget is totally independent. Also when institutions are public goods, everybody benefits from them, but when they are private goods, they will be

instruments of power where not all will support their existence.<sup>15</sup>

Bueno De Mesquita and Root conclude the relationship between democracy and economic prosperity by raising the significance of institutions. Bueno De Mesquita and Root's central thesis states that "Given the state of knowledge about the economics of growth, the solution to poverty lies in the construction of political institutions that provide leaders with incentives to focus on the welfare of their citizens." (Bueno De Mesquita, B. and Root, H. p. 1) Throughout the book, the authors show that foreign policy today is somewhat misguided or misleading the public on the true necessity for economic growth. They do not argue that foreign policy is completely false, but that it falls short of directing nation-states around the globe on what are the actual required institutions that promote economic growth. Leading democracies today focus more on promoting their procedural characteristics and attempt to influence others to imitate their procedural means. Bueno De Mesquita and Root argue their data show a weak overall relation between economic growth and democracy. They say, "The idea that democracy is necessary for growth is just as false as the proposition that dictatorship is essential for poor

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<sup>15</sup> (Schedler et al p. 333)

countries to escape poverty. The more nearly correct statement is that, on average, the extent of democracy has only a weak relation with subsequent economic performance.”(Bueno De Mesquita and Root, p. 230) They conclude by arguing that an expansion in the rule of law serves better for economic growth and investment than an increase in the level of democracy. They say, “Thus, one cannot argue that democracy is critical for growth because democracy is a prerequisite for the rule of law.”(Bueno De Mesquita and Root, p. 230)

The significance of tackling such an argument lay in a number of issues. In short, the democratic theory argues the necessity of its existence for economic prosperity and falls short in empirically validating its argument. When referring to democracies, various types of formal and informal institutions are introduced without clarifying their substantive effects along with the influential order in which they come in. Also, the mixed argument currently in the field of political science and the heavy policy implications that threatens political instability extends the gap between the theory and the probability of its application. Thus, the aim of this research is to thoroughly develop the relationship between institutions, trust, and economic development.

#### D. Trust

While there were mixed results for the strength of different economic factors explaining economic growth, this research will investigate the significance of political factors in explaining such a phenomenon. As will be shown more in the theory section, the research is investing in the importance of political institutions and institutionally generated trust arguing that they are the largely overlooked segment in various economic models that attempt to explain economic development and growth. Also, as will be explained thoroughly below, trust as a variable will be closely analyzed and show how most major researches slightly misunderstood the variable's measurement and resemblance. Therefore, by carefully analyzing trust and performing minor overhaul to the definition, this research will be able to generate a rigid hypothesis about the relationship between institutions, trust, and economic prosperity.

A number of literature can be found today arguing whether or not trust is a variable, if there is a significant influential relationship between it and institutions, and how is the relationship defined. In this research, I argue that trust is in fact a variable and hypothesize an influential relationship towards the well-

being of an economy. However, I believe that a number of literature and data banks are not able to distinguish between the two types of trust. As Berggren and Jordahl introduced a brief definition and developed here further, trust is divided into Particularized and Generalized Trust. Referring to Particularized and Generalized Trust, Berggren and Jordahl say "the former entails trusting people you know or know something about; the latter trusting most (but not all) people you do not know or know anything about." (Berggren and Jordahl 2006, p.143)<sup>16</sup>

When trust is split into the two previous definitions, one can start to perceive the literature on trust in a much better view. To begin, the confusion that exists today about the contribution of social capital to economic growth can be approached in a better manner. In "Social Capital and Civil Society", Francis Fukuyama<sup>17</sup> argues the importance of social capital to the efficient functioning of modern economies. Fukuyama attempts in his paper to explore social capital's economic and political functions with suggestions on how best to make use of such overlooked

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<sup>16</sup> In reference to the difference between Particularized Trust and Generalized Trust, Berggren and Jordahl say: "Knack and Keefer (1997) use the related terms specific trust and anonymous trust, whereas Uslaner (2002, ch. 2) prefers the somewhat-less-related terms strategic trust and moralistic trust." (p.143)

<sup>17</sup> Fukuyama, Francis (2000), *Social Capital and Civil Society*, IMF working paper, IMF Institute.

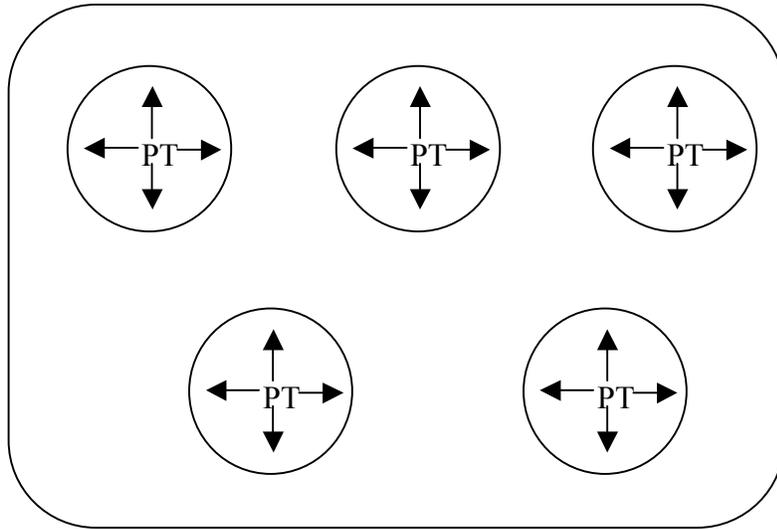
capital. In this research, I argue that throughout the paper, Fukuyama is interchanging his definition of social capital between Particularized and Generalized Trust. He mostly explains social capital as Particularized trust, without stating the difference between the two. Fukuyama correctly defines social capital as Particularized trust by saying, "All groups embodying social capital have a certain radius of trust, that is, the circle of people among whom cooperative norms are operative." However, he mixes the two definitions when arguing that "a modern society may be thought of as a series of concentric and overlapping radii of trust. These can range from friends and cliques to NGOs and religious groups." (Fukuyama 2000, p. 4)

In addition, Francis Fukuyama overlooks the role of institutions in reforming social capital, or Particularized trust, into a more formal Generalized Trust in advanced societies. The establishments of formal institutions do not conflict with the role of Particularized trust. Formal institutions mediate the transformation or evolution from one type of trust to the other. The diagram below summarizes the argument of how formal institutions are believed to act in a society.

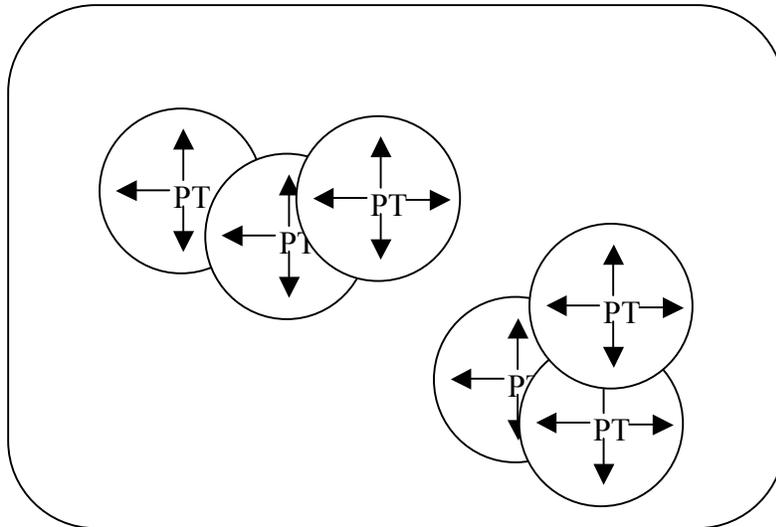
Generalized Trust versus Particularized Trust in a Heterogeneous Society



Towards Informality

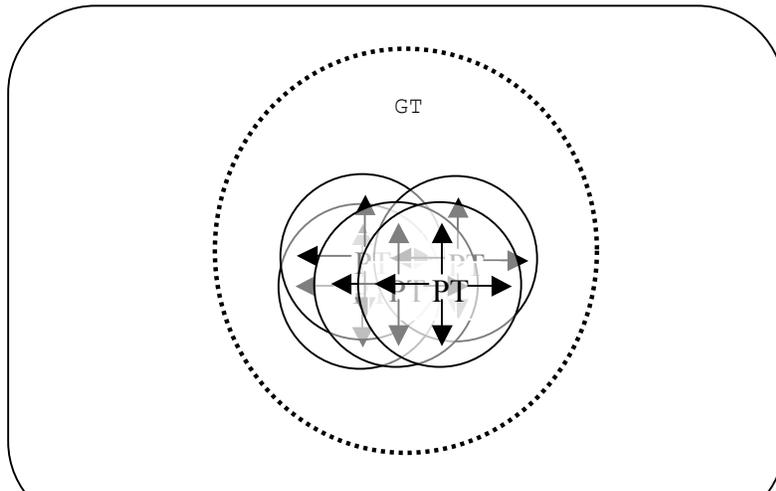


Particularized trust/Social Capital is only extended to those inside the same circle. Circles of trust are not integrated



Institutions and Generalized Trust allow for segmented society or circles of trust to overlap

Towards Formality



Particularized trust is disregarded because the circles of trust are already overlapped by/through Generalized Trust and institutions

PT= Particularized Trust  
GT= Generalized Trust

Of course, this does not mean that in a fully developed society Particularized trust is non-existent, but the role it plays will be minimized while Generalized Trust's role will be maximized. It is vital to recognize that the significance on each type of trust varies in accordance to the level of institutional efficiency and development of a society. For example, in a fairly developing society, law and order stand a minimal chance of applicability to the widely acknowledged clan commitments, thus, more reliance will be made on Particularized Trust for issues such as local trade and survival. On the other hand, a developed society with efficiently functioning institutions is set up like a pyramid where law, order, enforcement, and institutions of good governance are on the tip. Mafia-like groups are sidelined because of the majority's integration in the society. Therefore, advanced societies may rely less on Particularized Trust and more on formal institutions for their everyday life.

In a society without institutions that enforce cooperation, social capital or Particularized Trust is extremely vital to ensure Pareto optimal outcomes. Fukuyama says, "Social capital is clearly spontaneously generated all the time through the playing of iterated

Prisoner's Dilemma games."(Fukuyama 2000, p. 13) And in reference to its indirect relationship with economic growth, he says "religion continues to be a factor in economic development."(Fukuyama 2000, p. 14) Fukuyama does indeed provide a thorough explanation of social capital and well describes its origins. He says, "Social capital is frequently a byproduct of religion, tradition, shared historical experience, and other factors that lie outside the control of government."(Fukuyama 2000 p. 15) However, he does not acknowledge or clearly clarifies the role of formal institutions in mediating the influence from Particularized trust to economic prosperity. "States indirectly foster the creation of social capital by efficiently providing necessary public goods, particularly property rights and public safety."(Fukuyama 2000, p.15) Lastly, he does recognize the reality that some societies are more dependant on Particularized trust than on Generalized Trust, where Nation-States have to acknowledge this fact. If not, Fukuyama says that , "States can have a serious negative impact on social capital when they start to undertake activities that are better left to the private sector or to civil society."(Fukuyama 2000, p.15)

The role that institutions play in today's world can no longer be ignored or undermined. Institutions can at

times act as joints combining or assisting the cooperation between two or more functioning systems. At other times, institutions can be the actual systems that perform the required act in order to produce the outcome of which it was created for. Aside from the existence of international and domestic institutions, the general tasks differ slightly depending on their level of formality. Douglass C. North<sup>18</sup> defines them by saying, "Institutions are humanly devised constraints that structure political, economic and social interaction. They consist of both informal constraints (sanctions, taboos, customs, traditions, and codes of conduct), and formal rules (constitutions, laws, property rights)." (North 1991, p.97) North argues that cooperation is better achieved in game theoretic situations when players have information about each other. When institutions are effective, they 'raise the benefits of cooperative solutions or the cost of defection.' In addition, institutions through time evolved as the backbone to economic growth where they "safeguard property rights across international boundaries so that capital markets can take place with credible commitment on the part of the players." (North 1991, p.102)

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<sup>18</sup> North, Douglass C. (1991), Institutions, *Journal of Economic Perspectives*, Vol.5, No.1

Douglass North also explains institutions that did not evolve through time. With the lack of such evolution, the market found it difficult to develop and generate the actual potential. In places such as North Africa and the Middle East, institutions failed to evolve appropriately, like in Western Europe, to notice higher trade and economic growth. In such areas, North says "There are no institutions devoted to assembling and distributing market information; that is, no price quotations, production reports, employment agencies, consumer guides, and so on." (North 1991, p.103) In addition, one of the key factors that North explains assisted in the evolution of institutions to what it is today in regions such as Europe was innovations. Innovations, as he explains, are behind the development that saw an increase in capital mobility, decrease information costs, and spread risk. While other regions at the time saw innovations as threat to traditional exchanges, those who were eager to find new ways of better trade are the ones that benefited from innovations. Thus, North explains that the evolution of institutions provided the framework of their existence today and their varied influence towards economies.

When institutions are functioning efficiently, it does not mean that they are working for the wellbeing of the

society. Institutions can be public or private goods; some may support their existence while others may object. Institutions may be created to insure the survival of dictatorships at the expense of the economy and vice versa. However, when they are created for a task of which to generate economic growth, institutions can prove to be extremely useful. One of the goals of this research is to search for the interactive relationship that formal institutions play with trust and economic prosperity.

The functions of domestic institutions are no longer limited in generating growth from the local market. In today's world, the global opportunities allow economies to benefit from markets that were beyond their reach. With the increased mobility, more states are able to compete in the international arena. In "Domestic Institutions and the Bypass Effect of Financial Globalization", Ju and Wei<sup>19</sup> discuss how institutional efficiency can distinguish between those who gain and others who loose from financial globalization. They look at the relationship between domestic institutions and patterns of international capital flows. In their paper, they show the differences that efficient institutions make in the overall gains on the

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<sup>19</sup> Ju, Jiandong and Shang-Jin Wei (2007), Domestic Institutions and the Bypass of Financial Globalization. *National Bureau of Economic Research*. Cambridge, MA.

global market. They argue that the level of institutional efficiency and the ability of such institutions to function in accordance with the societal needs control the flow of Foreign Direct Investment and financial capital. Ju and Wei discuss the significance of property rights institutions by arguing that the aggregate outcome of financial capital leaving a developing country and inflow foreign direct investment is more likely to be positive if strong property rights protection exists. Moreover, they state, "financial globalization allows inefficient domestic financial system and weak corporate governance to be bypassed through a combination of inward FDI and outward flow of financial capital."(Ju and Wei, p. 3, 2007) In addition, they also state that "As the collective quality of financial institution and corporate governance improves, net FDI outflow increases, but net financial outflow decreases."(Ju and Wei, p. 26, 2007) They conclude that often FDI and financial capital move in opposite directions. Developed countries are regularly net exporters of FDI but net importers of financial capital due to the higher quality of economic and political institutions. On the other hand, "Developing countries with an inefficient financial system, weak corporate governance but an intermediate level of property rights

protection tend to exhibit an opposite pattern, exporting financial capital, but importing FDI on net" (Ju and Wei, p. 33, 2007) Finally, they say that "the net effect is more likely to be positive the stronger is the quality of property rights protection." (Ju and Wei, p. 34, 2007)

Whether or not a bypass effect improves or *hurt* the economies of developing countries, it is always beneficial in monitoring and protecting the economies by having efficient institutions acting as shields from negative global impacts. In this case, institutions do matter and do make a difference. However, what else do institutions do and how do they more closely connect to the development of societies?

In recent years, a surge of research has been dedicated to the significance of trust in a society. Waves of research have been finding all sorts of relationships between trust and institutions. Although researches are in conflict about the direction of the causal relationship, the variable trust itself is argued to be reaching vital roles in both developed and developing societies. In their work, Uslaner and Brown<sup>20</sup> found that trust plays an important role in communal participation. They argue that

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<sup>20</sup> Uslaner, Eric M. and Mitchell Brown (2003). Inequality, Trust, and Civic Engagement. *American Politics Research*, Vol. 31, No. 10

"greater equality and higher levels of trust are two pathways to participation."(Uslaner and Brown, p.2) Therefore, "high inequality results in lower levels of trust, which in turn leads to lower levels of civic engagement."(Uslaner and Brown, p.4) Furthermore, they state that, "where inequality is high, those people with fewer resources may feel powerless. The indirect effect comes through the impact of inequality on trust. Higher levels of inequality mean less trust, and this may in turn reduce the level of civic engagement."(Uslaner and Brown, p.10) In the importance of such variable, Uslaner and Brown concluded statistically that there is a strong link between civic spirit (trust) and civic engagement.

In 2001, Paul Zak and Stephen Knack<sup>21</sup> produced a remarkable foundation for the debate on the significant role of 'trust' in the society. In their statistical analysis, they found that trust plays a significant role in mediating the characteristics of a society towards investment and growth. Using trust as a variable, they found that formal institutions, social homogeneity, and informal sanctions against cheating have the ability to inflict change in the level of trust. And in another

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<sup>21</sup> Zak, Paul J. and Stephen Knack (2001). Trust and Growth, *Economic Journal*. Vol. 111: 295-321.

association, they found that trust, as well as other variables<sup>22</sup>, have a significant influence on economic performance. They concluded that formal and informal institutions<sup>23</sup> and heterogeneity<sup>24</sup> influence the performance of the economy<sup>25</sup> through 'trust'.

Since Zak and Knack published their work in 2001 till this today, almost all literature on trust and the economic output or institutions pass by their work and findings in a referral base. Because of their precisions, it is extremely difficult to locate literature falsifying their analysis using their data sample. A good way to validate their claims is through developing a better and more general data sample that include larger variety of countries. Also, to further validate their findings, a retest can be made using different time aggregates in order to test if the relationship holds. Other researchers, such

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<sup>22</sup> The other variables used in Zak and Knack's 2001 regression are: Per Capita Income, Schooling Attainment, and Price of Investment Goods.

<sup>23</sup> The proxies Zak and Knack 2001 use for formal institutions are: Index of Property Rights from the ICRG data, Contract enforceability from the BERI data, Transparency International's Corruption Perceptions Index, and Index of Investor Rights from the Center for International Financial Analysis and Research Inc.

<sup>24</sup> The proxies Zak and Knack 2001 use for Heterogeneity are: Income Inequality (Gini), Land Inequality (Gini), Intensity of economic discrimination (Tedd Gurr), and Ethnic Homogeneity (Sullivan 1991)

<sup>25</sup> Economic Performance variables are Investment as percentage of GDP and average annual growth in per capita income from Summers and Heston 1991 data 5.6.

as Berggren and Jordahl<sup>26</sup>, concentrated on one aspect of the relationship in an attempt to further validate the findings. As noted earlier, they defined trust into Particularized trust and Generalized Trust. They argued that institutions of a free economy make an actually free economy possible which therefore generate Particularized trust. When people extend their 'market-induced' Particularized trust to people in general, they will generalize trust. They also argued that some institutions of a free economy are able to directly produce Generalized Trust instead of the indirect flow through free economy and Particularized trust. They said "most of the studies in this literature have not really looked at factors relating to *economic* institutions and policies, with the exception of the institutions of rule of law and perhaps also income inequality." (Berggren and Jordahl 2006, p. 142) They validated their claims through regressing the five areas of the Fraser Institute's Economic Freedom Index (EFI) on trust<sup>27</sup>. Thus, EFI is split into five independent variables

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<sup>26</sup> Berggren, N., H. Jordahl (2006), *Free to Trust: Economic Freedom and Social Capital, Kyklos*, Vol. 59, No. 2, pp. 141-169.

<sup>27</sup> The variable trust used by Zack and Knack 2001 is also used by Berggren and Jordahl 2006, which is the percentage of respondents in each country agreeing with the statement 'most people can be trusted' rather than with the alternative 'you can't be too careful in dealing with people' taken from the World Values Survey. Some missing values are included through the Eurobarometer survey and government surveys.

to form the institutions of a free economy. They are: size of government (EFI<sub>1</sub>), legal structure and security of property rights (EFI<sub>2</sub>), access to sound money (EFI<sub>3</sub>), freedom to exchange with foreigners (EFI<sub>4</sub>), and regulation of credit, labor and business (EFI<sub>5</sub>). Their findings specifically show that legal structure and security of property rights (EFI<sub>2</sub>) has a large and statistically significant influence on trust and concluded that economic institutions have the ability to 'stimulate conscious decisions' by making "economic actors know that voluntary contracts and rules in general are enforceable and can be relied upon." Furthermore, they say, "our findings suggest that there is a role for institutional design, especially for the legal system and the security of property rights, in building Trust." (Berggren and Jordahl 2006, p. 161)

While a number of studies argue Generalized Trust has several advantages and consequences<sup>28</sup>, some researchers find reverse causation. A not yet published paper by Wang and Gordon<sup>29</sup> have produced a quality study on the relationship

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<sup>28</sup> 'Putnam 1993, Fukuyama 1995, Knack and Keefer 1997, La Porta et al. 1997, Dasgupta and Sergaldin 2000, Glaeser et al. 2000, Zak and Knack 2001, Knack and Zak 2002, Berggren and Jordahl 2005 argue trust is beneficial for economic growth. Greif 1989, Woolcock 1998, den Butter and Mosch 2003 argue trust is beneficial for trade. Inglehart 1999 and Uslaner 2003 argue trust is beneficial for democratic stability.' (Berggren and Jordahl, p. 141)

<sup>29</sup> Wang, Lanlan and Peter Gordon (2006), Trust and Institutions: A

between trust and institutions where they relate their results to the most critical work on trust, which includes Zak and Knack's 2001 and Berggren and Jordahl's 2006. In their comparison, they state that Uslaner<sup>30</sup> claims trust leads to better institutions, not the other way around. Uslaner says, "a general outlook on human nature and *mostly* does not depend upon personal experiences or upon the assumption that others are trustworthy." (Uslaner 2002, p.17) Responding to Uslaner and others that argue trust is a causal factor, Wang and Gordon say, "institutions are the very foundations of trust that individual agents seek... we would think that whether trust could be taken as a causal factor can boil down to basically a definitional issue." (Wang and Gordon 2006, p. 2)

#### E. Literature Limitations

The literature above is generally divided into four main sections. The first section introduced the economic factors; the second, the political factors; the third, institutions; and the fourth discussed trust and its significance. The four sections together generate a

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Multilevel Analysis, working paper.  
[www.stat.columbia.edu/~gelman/stuff for blog/lanlan.pdf](http://www.stat.columbia.edu/~gelman/stuff%20for%20blog/lanlan.pdf)

<sup>30</sup> Uslaner, Eric M. (2004), *Trust, Democracy, and Governance: Can Government Policies Influence Generalized Trust?* in Dietlind Stolle and Marc Hooghe, eds., *Generating Social Capital* (Palgrave, 2004), <http://www.bsos.umd.edu/gvpt/uslaner/generating5uslaner.doc>.

logical approach to the theory in this research. Alone, however, the literature on the neoclassical growth model, democracy and development, institutions, and trust has its limitations. Acknowledging those limitations allows this research to attempt to introduce a theory that bridges the existing gaps in the literature and show how the path towards societal development is not found in one simple narrow model.

As it has been discussed earlier, the neoclassical growth model lacks essential factors and as a result, falls short in explaining economical growth in history. In addition, having the development of technology and institutions exogenously explained, the model fails to predict the path of growth in the future. Even though the growth model successfully explains convergence between states or governorates within a country, the model's quality is lowered by the lack of convergence between countries. Aside from Japan's development and convergence with the west after World War 2, the failure of various other countries to converge with the west makes Japan stand as an anomaly. In brief, political factors, such as formal institutions, do not seem to find a safe haven in the neoclassical growth model.

The claims on the benefits of democracies have not ended and will certainly not end with the findings of this research. Scientific and not, the politics behind marketing democratization is overwhelming. The problem that is created from such a phenomenon is fear of biasness in qualitative and quantitative researches supporting democratization with evidence. One of the best ways to filter political influence is to search for consistencies in the literature. The consistencies suggest that institutions that exist in democracies are key to economic development. However, as Bueno De Mesquita argues, those institutions are not necessarily found in democracies. This argument therefore makes calls for democracies secondary to formal institutions, such as the rule of law, property rights, enforcement and accountability, etc.

Moreover, the relationship that institutions have with economic development is certainly logical, but lacks some depth. What is meant here can be better explained with a brief example. Suppose a test is being made on various kinds of ropes to uncover their quality. The rope that can handle the most pressure before snapping is said to be the best. The depth in the quality of the rope is in the thousands of threads that make up those ropes. Thus, improving the quality of those threads has great influence

on the overall quality of the rope itself. Therefore, when the rope is being used, two or more objects can safely depend on being efficiently attached by the rope that consists of quality threads. Similarly, the literature on institutions assumes individuals' relationship to each other are similar and thus act similarly neglecting the unique structure of each societies.

This research theorizes trust to be the missing link and that it is what provides depth to the relationship between institutions and the wellbeing of an economy. However, because research on the significance of trust is relatively young, exploring its usefulness is still in its early stages. There is a general understanding on the measurement of trust between researchers, but the definition is victimized by misconception. This weakness leads to confusion on the relationship trust has with institutions and the wellbeing of economies. Even though researchers began separating trust into Particularized and Generalized Trust, there is no known measurement for the former.

Therefore, the next chapter attempts to overcome those limitations by first bridging economic and political factors together, where they feed on each other in terms of significance towards the economy. In addition, including

trust in the model introduces depth to the relationship between institutions and development and allows for this limitation to be overcome. Finally, by splitting trust into Particularized and Generalized Trust and providing a measurement for the former improves the existing claims in the literature about the vital influence of trust and its placement with respect to the relationship between institutions and development.

### **Chapter 3: THEORY AND HYPOTHESIS**

#### **A. Theory Overview:**

The literature above allows this research to develop various claims with regards to the factors that influence economic growth. Because the current international political environment and foreign policy is driven by unscientific claims, it was vital to begin the literature review by tackling unsupported arguments on the prerequisites for economic prosperity. Thus, discussing such claims made by democratic theorists allows this research to solidly argue that trust could prove to be more important to nations today than factors of procedural democracies, such as elections for example.

Most, if not all literature agree that some form of trust is required to allow growth and development in a

society. However, the literature does not collectively agree on technical issues such as the definition of trust, how to create it, and what relationship it has with institutions. In addition, with each study testing their proposed theories, they also do not agree on the other supporting factors to trust that are meaningful for the wellbeing of an economy. This section examines the factors thought to be beneficial for economic prosperity along with providing an assessment for the findings of the above-mentioned literature. In order to gain a greater understanding of the relationship between trust and economic prosperity, this section will analyze empirically the theoretical processes linking trust to economic wellbeing. By doing so, this chapter will attempt to shed light on the processes responsible for conflicting empirical findings in the extant literature.

Within the literature on trust, an individual's religious background is often posited to have important implications for Generalized Trust and thus on economic prosperity. Looking at different religions, however, results of each religion on trust are conflicting. Glaeser

et al. (2000)<sup>31</sup> found statistical evidence to suggest that the Methodist, Lutheran, Prebysterian, Episcopalian, and Catholic religions are positively associated with trust, while the Baptist religion is negatively associated with trust. Guiso et al. (2003,<sup>32</sup> 2006<sup>33</sup>) published two papers with conflicting results. In 2003, they found that those who are raised religiously, currently religious, Catholic, Muslim, Protestant, and Hindu have higher degrees of trust. On the other hand, Jews and Buddhist have lower degrees of trust. In 2006, they found that Jews have higher degrees of trust, while Muslims, Hindu, and Buddhists have lower degrees of trust. Wang and Gordon (2006) claim that almost all previous work on trust lacked statistical efficiency by not using multi-level data. When they tested claims that some religions are positively or negatively associated with trust, they aggregately found that the Catholic and Orthodox religions are negatively associated with trust, while Muslims, Protestants, and oriental religions are positively associated.

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<sup>31</sup> Glaeser, E. L., D. I. Laibson, J. A. Scheinkman, C. L. Soutter (2000), Measuring Trust, *The Quarterly Journal of Economics*, Vol. 115, No. 3, pp. 811-846.

<sup>32</sup> Guiso, L., P. Sapienza and L. Zingales (2003), People's Opium? Religion and Economic Attitudes, *Journal of Monetary Economics*, Vol. 50, No. 1, pp. 225-82.

<sup>33</sup> Guiso, L., P. Sapienza and L. Zingales (2006), Does Culture Affect Economic Outcomes? *Journal of Economic Perspectives*, Vol. 20, No. 2, pp. 23-48.

Even though researchers find significant statistical correlation between religion and trust, it is quite difficult to argue that nations should pursue a policy of transforming all Catholics into Muslims in order to facilitate trust and economic growth. If different religions have different values of trust, then the religion-based argument loses theoretical significance when attempting to connect the technical differences in each religion to economic performance. Therefore, once other factors are included, religious background should play a minor role in explaining trust and, along with the type of government, should and will be disregarded as an influential factor.

A possible explanation for the inconclusive results with respect to religion lies in the inclusion of both developed and developing nations in trust-growth regressions. In developed societies, government institutions serve to promote Generalized Trust, thereby minimizing the need for the Particularized Trust formed through organized religion. If researchers were not able to distinguish between Particularized and Generalized Trust, they will not be able to use the data in the World Values Survey appropriately. In this case, religious background should be treated as a control, and depending on

the efficiency of institutions and the level of development, the influence on economic performance will vary.

The relationship that Particularized Trust has with economic prosperity is mediated through formal institutions, which are represented in this research by the Indexes of Economic Freedom from the Fraser Institute.<sup>34</sup> Individuals show a tendency to interact with and trust people they know or know something about, which is what defines variance in Particularized Trust. Hence, an increase in Particularized Trust allows more opportunity for societal interactions by default. However, this does not presume a direct relationship with economic development. Institutions are the factors that mediate this relationship, where their efficiency is directly dependant on the societal interaction (Particularized Trust), and directly influence a change in economic well-being. Thus, I argue that increased Particularized Trust creates the need for quality formal institutions in order to insure Pareto optimal outcomes. Moreover, in this research, Pareto optimal outcomes are represented by higher economic well being.

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<sup>34</sup> <http://www.fraserinstitute.org/>

Even though Berggren and Jordahl provide a definition for Particularized Trust that is used in this research, their theory is unlike the arguments raised here. They state:

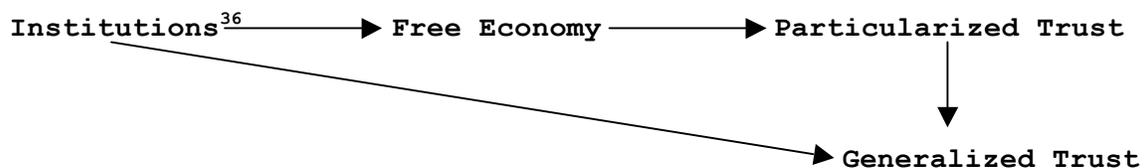
"It is quite easy to see how Particularized trust can arise in a free economy.<sup>35</sup> There is both an *incentive* and *mechanisms* for trust to emerge between economic actors. The incentive stems from the fact that producers strive towards high long-term profits and that trust worthiness is generally conducive to the generation of such profits. All else equal, a product or service that consumers perceive to be offered in conjunction with an assurance of implicit or explicit contract adherence meets higher demand than a product or service without such an assurance. Likewise, customers must make it credible that they are able to fulfill their side of the bargain and provide payments in a reliable manner. Generally, this could be described as a willingness both by producers and consumers to secure outcomes that are mutually beneficial and to avoid suboptimal outcomes in which cheating occurs due to a lack of trust." (Berggren and Jordahl 2006, p. 143)

One can understand from the statement above that this research's argument is slightly dissimilar. Berggren and Jordahl argue that institutions of a free economy have an indirect influence on Particularized Trust through a free

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<sup>35</sup> Berggren and Jordahl refer to free economy: "By a 'free economy' we mean an economy characterized by a relatively small government, the rule of law and private property rights, monetary stability, free trade and free capital flows, and a relatively low degree of regulation." (p. 143)

economy. Moreover, Particularized Trust has direct influence on Generalized Trust. Therefore, Institutions of a free economy influence Generalized Trust through a free economy and through Particularized Trust, which is a three stage relationship. In addition, Berggren and Jordahl argue that Institutions of a free economy also has direct influence on Generalized Trust, so the influence is direct and indirect simultaneously. The diagram below simplifies their argument.



On the other hand, the theory in this research explains the relationship in slightly different manner. There is an agreement that institutions do influence the economy, but both are dependable on a positive change in Particularized Trust. The similarities between both are in the argument that Particularized Trust influence Generalized Trust, Institutions influence Generalized Trust, and that Generalized Trust does not influence a change in the economy. The diagram below represents the theory in this research.

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<sup>36</sup> Berggren and Jordahl measure Institutions of a free economy with the five indexes of the Economic Freedom Index (EFI<sub>1-5</sub>)



A vital similarity between both arguments stated above is the dependence of Generalized Trust on factors such as institutions and Particularized Trust. This shows that the belief does exist that Generalized Trust is a product rather a representation of societal interactions such as Particularized Trust. Because Particularized Trust is not a product of formal institutions, the significance of institutions is raised when mediating the influence from one stage to the other. In previous works that argue institutions influence economic growth through trust, institutions were portrayed as a purely independent factor. Moreover, a society is seen to trust people in general once institutions are in place, which therefore benefits the economy. This relationship certainly is logical, but it is only part of the story. This research argues that the essence of development starts with a baseline level of Particularized Trust based on localized individual interactions. Formal institutions do not simply exist in a society; they are established to reflect the needs of society, to formalize contracts when social and economic

relationships become more complex numerically and geographically. In an iterated prisoner's dilemma, an ongoing interaction between two players shows shared interest is through cooperation. This is a form of Particularized Trust, where both the number of expected interactions and the "shadow of the future"<sup>37</sup> are increased.<sup>38</sup> When the relationship starts to evolve into a more intricate one, formal institutions are requested by society and created by the governing system. Thus, Generalized Trust's usefulness to the economy decreases and perhaps diminishes because individuals already trust themselves to the level that they request and create formal institutions to insure Pareto optimal outcomes. In this case, Generalized Trust is a dependant and not an independent factor; it is a product of formal institutions that spread *general* assurance to different groups in societies.<sup>39</sup>

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<sup>37</sup> Dal Bo', Pedro (2005), Cooperation under the Shadow of the Future: Experimental Evidence from Infinitely Repeated Games. *The American Economic Review*. Vol. 95 No. 5 p1591-1604

<sup>38</sup> Dal Bo shows that the shadow of the future significantly reduces opportunistic behaviors.

<sup>39</sup> Rare cases see Generalized Trust be a direct product of Particularized Trust without the mediating influence of institutions. This is possible because a number of interactive models include an individual's risk perception as an important factor in decision-making. If risk propensities are unequally distributed in a society, then it will likely differ in its need for formal institutions to insure Pareto optimal outcomes. Various exogenous factors such as culture, social background, or

## B. Prisoner's Dilemma:

A brief analogy of Prisoner's Dilemma would better explain the theory behind the relationship between Particularized Trust, Institutions, and Economic Development. The concept of Prisoner's Dilemma and the complications that arise from it start from the basic classical form. It begins when police arrest two suspects. Without sufficient evidence, investigators then separate the suspect in two different prisons and visit them to offer the same deal. Each prisoner can either testify (defect) or remain silent (cooperate.) If, for example, one defects, while the other cooperates, then the defected prisoner would emerge free, while the cooperative one would receive the maximum punishment. If both defect, then both would receive the medium punishment. If both cooperate, then both would receive the minimum punishment. The dilemma, of course, is where both prisoners are assured that the other would not know the decision of the first.

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personal experiences can be reasons for such unequally distributed outcome. Hence, Generalized Trust is more sensitive to exogenous factors than Particularized Trust, as it involves trusting people that individuals know nothing about. Suppose a society exists that is full of risk takers where they have other means of insuring cooperation other than their reliance on formal institutions. Then by trusting people they know or know something about would by default lead to trusting people in general. Therefore, at the individual level, it is possible that the relationship between Particularized and Generalized Trust is unique to each country by itself.

Because there are four possible outcomes to the Classical Prisoner's Dilemma outline above, researchers for years invested qualitative and quantitative tools that assist in explaining and predicting outcomes. This game, as in all other game theory, assumes that each prisoner (player) is interested in maximizing his own payoff with no concern for the other. Thus, rational choice leads both players to defect and make this outcome the equilibrium of the game.

However, the interest of this research lay in the Iterated Prisoner's Dilemma, where the game is repeatedly played. This is because when the game is not played once, the prisoners would tend to seek a different outcome, creating a different equilibrium. Specifically, iterated prisoner's dilemma can be played where the number of shots or games are known ahead of time, or where the number of shots are unknown, thus the player assumes that the game is played indefinitely. Again, the interest of this research is in the iterated prisoner's dilemma where the number of shots are unknown. If the number of shots are known in advance, economic theory states that the players should defect continuously, no matter how many times the game is played. On the other hand, when the game is indefinitely repeated, cooperation may be a sub-game perfect

equilibrium, where the threat of punishment can control the incentive to defect. As will be explained more below, the analogy of the iterated prisoner's dilemma with the research's theory is where societal interactions are assumed continuous without the prior knowledge of when a society or an economy would simply collapse and vanish. This, therefore, allows interactive individuals to influence the creation of formal institutions that can threaten punishment to defectors. Thus, Particularized Trust is the lower level initial interaction in a society.

The iterated prisoner's dilemma reflects the daily interactions that occur in societies, whether they are backwards, developing or developed. What distinguish the outcome are multiple factors such as prior knowledge and information on what the outcome will yield. In an iterated prisoner's dilemma, the players are assumed to have a memory of each others' previous moves, and change their next strategy accordingly. Obviously, is it safe to predict that this assumption is held constant across societies, where individuals do have the ability to remember regardless of their societal background. However, what varies between a society and another is the ability to form a strategy to reach the desired outcome, where an individual attempts to maximize his own payoff. Here,

multiple factors step in such as education, which allows the individual to form a strategy by himself, or enforcement of rule of law, which prevents the society from cheating the individual.

Moreover, as mentioned above, the only correct answer for the iterated prisoner's dilemma within standard economy theory is defection. However, this is not the case in reality. As it is widely seen and acceptable, many societies around the world, such as in the United States of America for example, do cooperate and therefore assist in the overall development of the country. This is because  $N$  is unknown, or in simple terms, the society believes that there is always going to be a tomorrow, making cooperation stable. In his work, Robert Aumann<sup>40</sup> discussed that indefinite interaction leads to cooperative outcomes. However, what mostly relates to this research's theory is the work done by Robert Axelrod in "The Evolution of Cooperation."<sup>41</sup> In his book, Robert Axelrod reflects on a tournament he organized for the prisoner's dilemma. Various researchers from around the globe participated and

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<sup>40</sup> Aumann R. (1959) Acceptable points in general cooperative  $n$ -person games, in R. D. Luce and A. W. Tucker (eds.), Contributions to the Theory 23 of Games IV, Annals of Mathematics Study 40, 287-324, Princeton University Press, Princeton NJ.

<sup>41</sup> Axelrod, R. (1984). *The Evolution of Cooperation*. New York: Basic Books (reprinted 1989 in Penguin, Harmondsworth).

competed against each other in this tournament. Throughout the numerous devised strategies, Axelrod found that interactions between players over time, repeated over and over again, altruistic strategies did better than greedy strategies. The reason is not because the assumption of maximizing self-payoff changed or shifted, but because players and strategies evolved into finding better means of maximizing self gain, i.e. through cooperation. Thus, despite the evolution of different strategies, the assumption of maximizing self-gain remains. This is a key point in understanding the theory raised in this research. At the national level, different societies and countries are combined in one basket. There are various levels of development, where the argument is held constant that despite these differences, all societies consist of individuals that strive to maximize their own gain.

Within the main deterministic strategies developed for the prisoner's dilemma tournament, the tit for tat strategy by Anatol Rapoport came out on top. The tit for tat strategy in game theory, specifically for the iterated prisoner's dilemma, means equivalent retaliation. The initial interaction between an agent and an opponent starts with cooperation. Then, the agent simply responds similarly to the opponents' actions. If the opponent

cooperates, the agent cooperates, if the opponent defects, the agent defects. In sum, there are four separate conditions for this strategy that have made it prevail in between all strategies in the iterated prisoner's dilemma. First, the agent will always cooperate unless the opponent provokes him. Second, the agent retaliates if he was provoked. Third, the agent is forgiving and does not hold a grudge once he has vented his anger on the opponent. Fourth, the number of times the interaction exists between the agent and the opponent must be unknown, hence indicating to both the interaction is continuous. This condition is vital for both players to allow them to maximize their long-term payoff. The parallel idea tit for tat has with the theory in this research is through those four conditions. When observed from a societal point of view, the conditions can act as formal institutions. Initially tit for tat explain a cooperative interaction, which can resemble Particularized Trust. Next comes the conditions that govern the society's affairs. For example, the first condition could be raised by educational institutions that promotes a more successful future is through cooperation. Also, public security and civil order protect citizens' rights, thus assure defectors or cheaters of retaliation in the second condition. In addition, the

court system can mediate settlement between disputes to prevent a conflict from spiraling downwards reflects forgiveness in the third condition. Finally, the fourth condition simply reflects reality that life in general does not have a countdown clock or that people are ignorant about when life simply ends. Thus, the theory argues that if a society does not have a set of regulations that mediate initial interaction (Particularized Trust) to cooperate (Development), then cooperation would not be optimal.

In brief, reflecting on condition four and as I mentioned previously, there are two different outcomes in the iterated prisoner's dilemma. Those two outcomes depend heavily on this fourth condition, which is whether  $N$ , the number of time the interaction between the agent and the opponent occurs, is known or unknown. It has been discussed earlier that the theory in this research is consistent with the unknown  $N$  iterated prisoner's dilemma, more specifically, the tit for tat strategy. But what has not been discussed is why the known  $N$  game is not desirable in this research? The answer circulates mainly around the argument that if the agent and the opponent are assumed rational players, then they should naturally defect in the last shot in order to score the most points. Moreover, if

the players knew that they are in the last two shots, they will defect yet again. This concept keeps on moving backwards until the players strategize on defection every time, which is because of the known N game. Thus, as will be shown below, the outcome for defectors does not generate the true potential between players.

Today, the world still notices societies scoring low in government stability. Citizens of those societies act naturally when defecting because they believe that long term societal success is unachievable in their lifetime. The potential for success does exist but institutions do not build on the initial trust, which is Particularized Trust. The following example presents the parallel between the tit for tat strategy and the theory that argues economic development is an outcome of the mediation analysis. Consider a society with four agents, two use the tit for tat strategy, and two are defectors, under the assumption that all four seek to maximize their own gain. For simplicity's sake, let each agent face one another six times in a row, with the following possible set of outcomes. If both agents cooperate, they share 3 points; if both defect, they share 1 point; if one cooperates while the other defects, then the former gets nothing while the latter gets the highest score of 5 points.

In a game between a defector and a tit for tat agent, the defector gains a total of 10 points and the tit for tat strategist gains a total of only 5 points after six rounds. This is because the defector always defects, winning the first game and drawing the next five, while the tit for tat strategist initially cooperates and responds to defection similarly the next five games. Moreover, when two defectors face each other they will each gain a total of 6 points because of their continued defection in the six shots game. Finally, when two tit for tat strategists face each other, each will gain a total of 18 points because of their continued cooperation. Therefore, the total amount of points gained by each defector is 26 despite not losing any game, while the total amount of points gained by each tit for tat strategist is 28 despite not winning any game. This of course, for simplicity's sake is only after six games. In reality, the interaction in societies is infinite where the difference between defectors and tit for tat strategists increases in correlation with the amount of interactions. Lastly, the more tit for tat strategist exists in a game, the more advantage they gain over defectors.

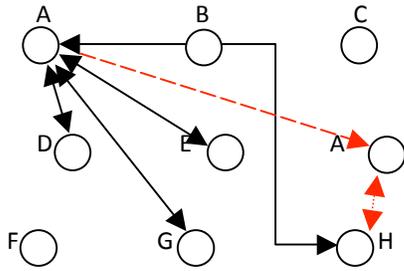
Concluding the remarks on the iterated prisoner's dilemma, Robert Axelrod found that rational individuals act

selfish and will therefore cooperate to maximize self-gain. Thus, rational individuals in a society would trust one another in the form of Particularized Trust for better outcomes. For the long run, however, they will create a mechanism that punishes defectors, such as formal institutions, so that cooperation could most always be the equilibrium, hence economic development.

C. Hypothesis:

Thus, the theory in this research centers on the relationship between Particularized Trust and economic prosperity. This relationship is theorized to be mediated by formal institutions because of reasons stated above. The above arguments are explored through examining the following diagrams and national and individual level propositions:

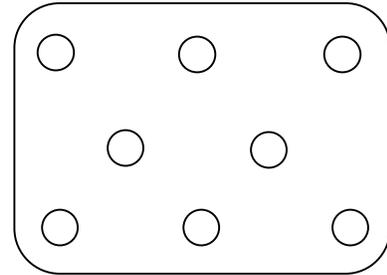
## P.T.



### Particularized Trust

Individuals face others in a society for daily interactions. In the absence of formal institutions, they would tend to interact more with closer ones, and less with distant ones. If they have an interest with distant ones such as (A) and (H), then there are two possibilities, either through another individual, or to make personal effort and move closer to (H). Thus, distance is relevant with Particularized Trust.

## G.T.



### Generalized Trust

The atmosphere in a society is dictated by the existence of formal institutions. Thus, individuals and the distances between them are not totally relevant as long as they are in the same boundary. A personal choice exists for individuals whether they trust each other or not, which minimizes the significance of personal relationships.

According to the diagram that represents Particularized Trust, individuals (A) and (H) interact for self gain. This process influences a positive change in the quality of institutions, such as creating the four elements of the tit for tat strategy to reach an equilibrium that benefits both with respect to their mutual potential. This, in turn, generates higher gain for both and leads to the first hypothesis.

**P.T.**—————▶ **Institutions** —————▶ **GDP/Capita**

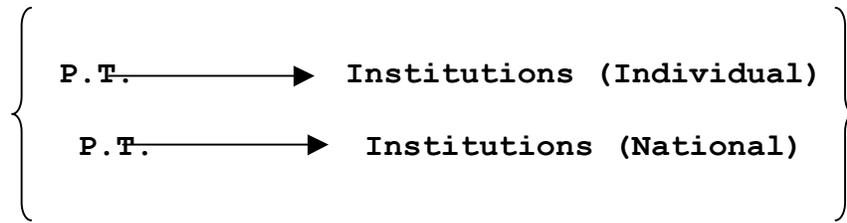
H1: At the national level, Institutions mediate a positive relationship between Particularized Trust and Economic Progress.

The more Particularized Trust (Individual Interaction) increases in a society, the more they create bounding mechanisms in the form of institutions to formalize their mutual understandings. Therefore, by default, the probability of finding Generalized Trust increases. Which leads to the second hypothesis of the research.

**P.T.**—————▶ **Institutions** —————▶ **G.T.**

H2: An increase in Particularized Trust is associated with an Increase in Generalized Trust, both directly and indirectly through the mediating effects of institutions.

Lastly, this research assumes the phenomenon in the tit for tat strategy that places regulations for cooperation between two or more individuals is held constant without regard to national boundaries. Which therefore leads to the third hypothesis.



H3: At both the individual and national level, an increase in Particularized Trust leads to an increase in the level of formal institutions.

By splitting the data into the correct categories of Particularized and Generalized Trust, this chapter will test these claims, while also providing insight into the complexities inherent in the relationship between trust, institutions, and economic prosperity.

What is the significance of testing the mediating relationship that institutions play between Particularized trust and economic performance? Hernando De Soto<sup>42</sup> argues that in many countries capital exists but people are not able and not willing to circulate their capital. He refers to this concept as 'Dead Capital', where resources are used inefficiently due to the governing system. He says, "Capital, as I argued earlier, is therefore not created by money; it is created by people whose property systems help them to cooperate and think about how they can get the

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<sup>42</sup> De Soto, Hernando (2000), *The Mystery of Capital: Why Capitalism Triumphs in the West and Fails Everywhere Else*. New York, NY, Basic Books.

assets they accumulate to deploy additional production.”(De Soto 2000, p. 64-65) It is trust and not institutions that facilitate the individual-level psychological processes associated with economic cooperation and thus it is crucial to understand the processes through which institutions facilitate the transformation from Particularized to Generalized Trust. It is vital to understand that Particularized Trust provides the necessary foundation for the establishment of numerous institutions that mediate a positive change in Generalized Trust. However, along with De Soto’s argument, this research is interested in those institutions that are thought to specifically benefit the economy. The measurements are provided in the next chapter.

#### **Chapter 4: DATA ANALYSIS**

##### A. Individual Level Data Analysis:

This section reviews the data analysis of the research. Because trust is a variable that originates from a personal perception, the section begins assessment at the individual level. First of all, I will outline the measurement of core variables before presenting the mediation analysis results which attempts to link Particularized Trust to Generalized Trust through

institutions. The data used in the individual level analysis is from the fifth wave of the World Values Survey. The data was carried out between the years 2005 and 2007 for 53 developed and developing countries. Unlike the national level analysis, the individual level analysis looks specifically into the relationship between Particularized Trust and Generalized Trust through institutions as a mediator. This allows one to understand and distinguish between the two types of trust before proceeding to the national level analysis.

*i. Operational Definitions:*

The operational definitions of the core variables as well as the control variables used in the analysis include:

*Dependent Variable*

1. Generalized Trust (GT): Consistent with much literature on trust, Generalized Trust is measured by whether respondents agree with the statement "most people can be trusted." The variable is coded as a dummy variable (1 = most people can be trusted; 0 = need to be very careful). Generalized Trust captures the measurement of the variable Trust used by previous

scholarly work in Zak and Knack 2001, Berggren and Jordahl 2006, Wang and Gordon 2006, and others.<sup>43</sup>

### *Independent Variables*

2. Particularized Trust (PT): This variable is measured using an additive scale combining two indicators of in-group trust. Respondents answer the questions of whether they trust "people they know personally" and whether they trust "their neighbors." As described in Berggren and Jordahl 2006 Particularized Trust is whether a person knows another person or knows something about another person. The first part of the definition reflects the first survey question, while the second part of the definition reflects the second survey question. Each indicator is measured on a scale 1 to 4, with higher values indicating higher levels of trust; thus, the combined measure ranges from 2 to 8. Cronbach's alpha suggests a reasonable level of scale reliability (.60) and the simple additive measure performs as well as more sophisticated indexes relying on factor analytic techniques. To the knowledge, this research is first to provide a measurement for Particularized Trust and

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<sup>43</sup> Most, if not all scholarly work on trust use this measure. See literature review for more scholarly work on trust.

make it not just theoretically, but quantitatively different from trust or in this case, Generalized Trust. The fifth wave of the World Values Survey is rather different than previous data waves because it has those two additional questions that make measuring Particularized Trust possible. The definition Berggren and Jordahl provide for Particularized Trust is a two part definition. The first part is whether a person knows another which is measured by the answers to the question "whether you trust people you know personally." The second part of the definition is whether a person knows something about another person which is measured by the answers to the question "do you trust your neighbor." This question is the closest possible proxy found in the fifth wave of the World Values Survey that represents the second part of the definition by Berggren and Jordahl. The word 'or' that intercedes both parts is consequently replaced by a '+' sign, which explains the additive scale of the variable.

3. Institutions: This variable is measured using a principle components factor analysis that combines three measures of perceived institutional effectiveness. Individuals responded to survey

questions of whether they have "confidence in the police", "confidence in the courts", and "confidence in the government". As expected, only one factor with an eigenvalue over 1 emerged and the rotated factor loading were high by traditional standards, ranging from high of .87 "confidence in the courts" to a low of .82 "confidence in the government". It has been stated earlier that the World Values Survey represent the individual's perception and thus this research would conduct an analysis at both the individual and national level. Similar to Particularized Trust, Institutions at the individual level represent the perception on the quality of institutions. To the knowledge, this research is first to provide such measurement at this level of analysis for institutions. This measurement follows the definition provided by Schedler et al. in "The Self-Restraining State: Power and Accountability in New Democracies," which explains accountability. They argue accountability is not simply answerability of public officials about what they are doing. It is also enforcement, which is the "capacity of accounting agencies to impose sanctions on powerholders who have violated their public duties." (Schedler et al. p. 14)

In this case, "confidence in the government" proxies' answerability, while "confidence in the police" and "confidence in the courts" proxies' accountability.

#### *Controls*

4. Evaluations of Economic Well-Being: This variable is measured using an individual's perceived level of satisfaction with their financial situation. The variable is measured on a scale of 1 to 10, with higher values indicating greater satisfaction.
5. Civic Engagement: Consistent with much of the literature on political participation (c.f., Verba et al. 1995),<sup>44</sup> an individual's level of civic engagement is measured by an additive measure for whether the respondent is an "active member" in various civic organizations, such as religious or professional organizations). This measure also includes party membership and thus includes political aspects of civic engagement.
6. Religious Affiliation: This variable is a dummy variable of whether an individual responding to the survey is Muslim or Catholic. Previous researches, such as Zak and Knack 2001, have shown that religion

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<sup>44</sup> Verba, Sidney, Kay L. Schlozman, and Henry E. Brady. 1995. *Voice and Equality: Civic Voluntarism in American Politics*. Cambridge, MA: Harvard University Press.

is a significant predictor of trust, thus, this variable is incorporated in the individual level analysis.

7. Ethnic Diversity: This variable captures individual opinions on the effects of ethnic diversity on their society. The variable ranges from 1 "ethnic diversity erodes country unity" to 10 "ethnic diversity enriches life". This variable is included in the model as a control variable, which is extracted from the World Values Survey. It reflects the personal perception of individuals on ethnic diversity. Previous scholarly work by Knack and Keefer (1997) and Zak and Knack (2001) used ethnic diversity for the national level analysis. Zak and Knack found trust to be higher in more ethnically, socially, and economically homogenous societies. Moreover, this individual level variable is measured differently and allows the research to find further consistencies between both levels of analysis.

8. Socioeconomic Status: First is education, which ranges from 1 to 9, where higher values imply greater education. Second is income, ranging from 1 to 10, with higher values implying higher income.

The two countries studied at the individual level are considered developed societies, which allow me to move forward in the analysis for a number of reasons. Initially, the theory states that Generalized Trust is a product of Particularized Trust and formal institutions. If formal institutions are well developed in an advanced society, then I expect to find a positive change in the level of Generalized Trust. Therefore, in the individual level analysis, I also expect to find a positive influence between Particularized Trust and institutions. In addition, I expect Generalized Trust to be influenced by a change in both institutions and Particularized Trust through a mediation analysis. Lastly, I expect the satisfaction level towards economic wellbeing and other control variables to influence a positive change in Generalized Trust.

*ii. Methodology and Results:*

The link between Particularized Trust and Economic well-being is examined through multiple mediators of institutions and/or Generalized Trust. The method to complete the analysis uses a modified "causal steps approach" that was introduced in Baron and Kenny (1986)<sup>45</sup>.

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<sup>45</sup> Baron, R.M. and D.A. Kenny. 1986. "The moderator-mediator variable distinction in social psychological research:

This approach required researchers to establish significant relationships between the independent variable in the analysis and both the dependent variable and the mediating variables. In addition, a significant relationship should also be established between the independent and dependent variable including the mediating variables in a single multiple regression model. Although the analysis below follows this approach closely, the inclusion of a binary mediating variable and probit estimator prevents this research from directly comparing coefficients across the models, as in the case of ordinary least squares estimates.<sup>46</sup>

*iii. Empirical Results:*

The first of two selected countries for the individual level analysis is the United States of America. The reason behind the first selection is logical and straightforward. The United States is the World's only superpower and its

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conceptual, strategic, and statistical considerations." *Journal of Social Psychology* 51: 1173-82.

<sup>46</sup> Problems associated with endogeneity could impact the validity of the estimated coefficients and thus instrumental variable methods are used to adjust for potential biases. In the case of continuous dependent variables such as institutions and economic well being, standard two-stage least squares (2SLS) estimates were run. In the case of Generalized Trust, however, instrumental variable probit estimates were used to assess the causal validity of the proposed theoretical model. In each case, exogeneity tests, i.e., a Hausman test for continuous models and Wald's test for binary models, indicate that using traditional methods is appropriate and thus exogeneity is assumed.

foreign policy is not just marketed and enforced, but also accepted and adapted heavily by both democratic and nondemocratic nations. In addition to its military power, what makes its institutional structure and design attractive is its leading economic status. Furthermore, the United States attracts migrants from all over the world, including Europe. Thus, it is not an exaggeration to state that the United States' society is a mirror image of the aggregate world society. Searching the relationship between significant factors in the individual level allows this research to find similarities and differences with the national level analysis which collapses the country level survey data that includes both developed and developing countries.

**Particularized Trust → Institutions → Generalized Trust**

Table 1 examines the mediating relationship of institutions between Particularized and Generalized Trust for the individual level respondents in the United States of America. The table includes three models necessary to determine mediation: 1) The relationship between Particularized Trust (PT) and Generalized Trust (GT); 2) The relationship between PT and the mediating variable

institutions; 3) The relationship between PT and GT when the mediating variable is included in the model. The models use robust standard errors.

**Table 1:** U.S., Results for the Relationship between PT, Institutions, and GT

<b>Variable</b>	<b>Model 1: Generalized Trust Probit</b>	<b>Model 2: Institutions OLS</b>	<b>Model 3: Generalized Trust Probit</b>
<i>Particularized Trust</i>	0.464*** (0.049)	0.221*** (0.022)	0.431*** (0.051)
<i>Income</i>	-0.027 (0.027)	---	-0.029 (0.027)
<i>Education</i>	0.135*** (0.035)	---	0.144*** (0.036)
<i>Organizational Activity</i>	0.023 (0.020)	---	0.019 (0.020)
<i>Muslim</i>	0.022 (0.994)	---	0.087 (1.044)
<i>Catholic</i>	-0.108 (0.102)	---	-0.115 (0.104)
<i>Diversity</i>	0.059*** (0.019)	---	0.064*** (0.019)
<i>Economic Well-Being</i>	0.075*** (0.021)	---	0.066*** (0.022)
<i>Institutions</i>	---	---	0.163*** (0.059)
<i>Constant</i>	-4.709*** (0.366)	-1.273*** (0.139)	-4.548*** (0.378)
N	1045	1194	1032
R <sup>2</sup>	---	0.077	---
Percent Classified	69.00%	---	70.54%
F/Chi <sup>2</sup> -Probabillity	0.000	0.000	0.000

\*p < .10; \*\*p < .05; \*\*\*p < .01

The overall results for the individual level analysis for the United States show strong support for the mediating relationship hypothesized above. The results provide support for the causal steps approach (MacKinnon et al.

2007).<sup>47</sup> Particularized Trust positively and significantly influences institutions, which therefore positively and significantly influences Generalized Trust. First, there is a significant ( $p < .01$ ) positive relationship between PT and GT when institutions are not included in the model. Second, there is a significant ( $p < .01$ ) positive relationship between PT and institutions. Lastly, as shown in the last column of Table 1, there is a significant positive relationship between institutions and GT, and the absolute value of the coefficient estimate, as well as predicted probabilities, for PT is lower in the last model than in the first model.<sup>48</sup> These results provide micro-level support for the core argument made in this research. Model 3 (in Table 1) shows that Particularized Trust remains a significant predictor of Generalized Trust when controlling for institutions. Mackinnon et al. (2007) state that a mediating relationship requires the mediator to remain significant in its influence on the dependent variable while including the independent variable in the model. In this case, institutions did remain significant, but also Particularized Trust did not lose its significant

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<sup>47</sup> MacKinnon, D.P., A.J. Fairchild, and M.S. Fritz. 2007. "Mediation Analysis." *Annual Review of Psychology* 58: 593-614.

<sup>48</sup> The control variables display signs in the correct theoretical direction.

relationship with Generalized Trust. That is, there is something associated with PT which is not related to institutions that also promotes GT.

While the results in Table 1 imply a statistically meaningful relationship between Particularized Trust, institutions, and Generalized Trust, the table fails to adequately address whether the relationship is 'strong' in a substantive sense. In order to examine the substantive strength of the hypothesized relationships and given that the probit coefficients are not directly interpretable, the results in Table 1 are supplemented with the analysis presented in Table 2. Table 2 presents the predicted probabilities (or expected value in the case of Model 2) of moving my primary independent variables of interest from their minimum-to-mean value, as well as from their mean-to-maximum value. As shown in Table 2 also, the substantive effects for the United States are quite strong, which is clearly demonstrated when looking at the predicted probabilities for the final model (Model 3). Moving Particularized Trust from its minimum to its mean level increases the likelihood that a respondent agrees with the statement that "most people can be trusted" by roughly 37%. Furthermore, moving Particularized Trust from its mean-to-maximum leads to an additional 30% increase in Generalized

Trust for a total of roughly 67% total increase. Institutions also displays a meaningful relationship: moving institutions from its minimum-to-mean leads to 13% increase in Generalized Trust, while moving the variable from its mean-to-maximum leads to another 12% increase in the feelings that most people can be trusted.

**Table 2:** Substantive Effects across United States of America

	<b>Model 1 (Predicted Probabilities)</b>		<b>Model 2 (Expected Value)</b>		<b>Model 3 (Predicted Probabilities)</b>	
	Min to Mean	Mean to Max	Min to Mean	Mean to Max	Min to Mean	Mean to Max
PT Institutions	0.375 ---	0.324 ---	0.919 ---	0.404 ---	0.369 0.13	0.305 0.122

The second selected country for the individual level analysis is Italy. There are various reasons behind the selection of this country including the requirement of another developed nation to relate to the United States' results. In addition to Italy being a leader in the World's economy and an influential member of the elite G8 team, the uniqueness of its societal dealings when still relying somewhat fairly on informal networks. This issue is covered more in the discussion and conclusion chapter.

Most of all, while the United States is a Presidential Democracy, Italy is a multiparty parliamentary democracy, which allows us to observe any differences between the level of confidence in the police, courts, and government. This would also permit comparing the level of substantive effect institutions has on Generalized Trust to perhaps acknowledge an issue between one structure of government to another.

As suspected, what is true for the United States does not appear to be true for other countries. Table 3 presents the mediating analysis for Italy, where the mediating relationship does not seem to hold. First, I find significant positive effects between Particularized and Generalized Trust ( $p < .01$ ), as well as significant positive effects between Particularized Trust and institutions. However, the relationship between institutions and Generalized Trust is insignificant at traditional levels and thus Particularized Trust appears to have a direct effect on Generalized Trust in Italy. Similar to the United States, the relationship between Particularized and Generalized Trust is also strong from a substantive perspective. As shown in Table 4, moving Particularized Trust from its minimum-to-mean value increases the likelihood of Generalized Trust by roughly

37%. Additionally, moving from the mean-to-maximum leads to another increase in the predicted probability of close to 30%. These results highlight the complexities associated with examining trust across different country contexts. As discussed in the theory section above, it seems like individuals in Italy have other means than formal institutions that ensures cooperative outcomes. A brief case study in the discussion chapter below shows an example of how exogenous factors in Italy can influence Generalized Trust.

**Table 3: Italy, Results for the Relationship between PT, Institutions, and GT**

<b>Variable</b>	<b>Model 1: Generalized Trust Probit</b>	<b>Model 2: Institutions OLS</b>	<b>Model 3: Generalized Trust Probit</b>
<i>Particularized Trust</i>	0.350*** (0.056)	0.153*** (0.019)	0.338*** (0.058)
<i>Income</i>	0.031 (0.025)	---	0.035 (0.025)
<i>Education</i>	0.078** (0.033)	---	0.073** (0.033)
<i>Organizational Activity</i>	0.086*** (0.030)	---	0.085*** (0.031)
<i>Catholic</i>	-0.540*** (0.164)	---	-0.587*** (0.167)
<i>Diversity</i>	0.113*** (0.029)	---	0.114*** (0.029)
<i>Economic Well-Being</i>	0.037 (0.033)	---	0.028 (0.034)
<i>Institutions</i>		---	0.096 (0.093)
<i>Constant</i>	-3.696*** (0.461)	-0.884*** (0.105)	-3.527 (0.481)
N	575	937	559
R <sup>2</sup>		(0.066)	
Percent Classified	72.35%	---	71.74%
F/Chi <sup>2</sup> -Probability	0.000	0.000	0.000

\*p < .10; \*\*p < .05; \*\*\*p < .01

**Table 4:** Substantive Effects across Italy

	Model 1 (Predicted Probabilities)		Model 2 (Expected Value)		Model 3 (Predicted Probabilities)	
	Min to Mean	Mean to Max	Min to Mean	Mean to Max	Min to Mean	Mean to Max
PT Institutions	0.366 ---	0.314 ---	0.53 ---	0.388 ---	0.367 0.084	0.304 0.071

B. National Level Data Analysis:

The national level analysis allows this research to compare results with past empirical studies. The data comes from a variety of sources used in past analysis that is updated with more recent aggregates along with additional countries. As with the individual level analysis above, the survey data used in the national level analysis comes from the 5<sup>th</sup> wave of the World Values Survey. Consistent with past uses of the World Values Survey data at the national level (c.f., Inglehart 1997<sup>49</sup>; Inglehart and Welzel 2005<sup>50</sup>), the variables are collapsed using each nation's mean value.

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<sup>49</sup> Inglehart, Ronald (1997). *Modernization and Postmodernization: Cultural, Economic and Political Change in 43 Societies*. Princeton, N.Y.: Princeton University Press.

<sup>50</sup> Inglehart, Ronald and Christian Welzel (2005). *Modernization, Cultural Change, and Democracy: The Human Development Sequence*. New York, N.Y.: Cambridge University Press.

*i. Operational Definitions:*

The core independent variables and control variables used in the national level analysis include:

*Dependent Variables*

1. Generalized Trust: Consistent with past studies, this variable is measured at the percent of individuals that agree with the statement that "most people can be trusted" taken from the 5<sup>th</sup> wave of the World Values Survey.
2. GDP per Capita: Extracted from the Center for International Comparisons at the University of Pennsylvania, GDP per Capita measures real gross domestic product per capita for the aggregate years 2000 to 2004.

*Independent Variables*

3. Particularized Trust: This variable uses the mean value of the factor used in the individual level analysis for each nation taken from the 5<sup>th</sup> wave of the World Values Survey.
4. Institutions: This Variable is measured using the "Property Rights Index" from the Fraser Institute. A rating of property rights in each country on a scale from 1 to 10. This index is based on five sub-factors: 1. Judicial independence: the judiciary is

independent and not subject to interference by the government or parties in disputes; 2. Impartial court: a trusted legal framework exists for private businesses to challenge the legality of government actions or regulations; 3. Protection of intellectual property; 4. Military interference in rule of law and the political process; 5. Integrity of the legal system. The advantage this variable provides in testing its relationship with trust comes in the theory beneath the tit for tat strategy in the iterated prisoner's dilemma. Property Rights Index is the  $EFI_2$  Legal Structure and Security of Property Rights. According to Berggren and Jordahl, it "provides assurance that opportunists are punished." Also in their work, they show that this variable has most significant influence on Trust between the rest of the Economic Freedom Indexes.

#### *Controls*

5. Evaluations of Economic Well Being: This variable uses the mean level of an individual's perceived level of satisfaction with their financial situation taken from the 5<sup>th</sup> wave of the World Values Survey.

6. Civic Engagement: This variable measures civic engagement as the mean level of organizational activity using the World Values Survey data.
7. Religious Affiliation: The percentage of population of each country that belongs to the Roman Catholic or Muslim religion taken from La Porta et al (1999) and recorded from the years 1990-1995.
8. Ethnic Diversity: As suggested by La Porta et al (1999) in p. 238, 'The five component indices are: 1. Index of ethnolinguistic fractionalization in 1960, which measures 1) the probability that two randomly selected people from a given country will not belong to the same ethnolinguistic group (the index is based on the number and size of population groups as distinguished by their ethnic and linguistic status); 2) the probability of two randomly selected individuals speaking different languages; 3) probability of two randomly selected individuals do not speak the same language; 4) the percentage of the population not speaking the official language; 5) And the percent of the population not speaking the most widely used language.'
9. English Speakers: This variable is a measure for the percent of country that speaks English as a first

language, which follows the literature on institutional development.

*ii. Empirical Results:*

**Particularized Trust → Institutions → Generalized Trust**

Table 5 presents the results for the relationship between Particularized and Generalized Trust at the national level. Looking across the model presented in this table, I find that the models fit quite well. For instance, Model 1 and Model 3 display R-squares over .70, while only two variables (Particularized Trust and English) account for over 35% of the variance in institutions. Turning first to the control variables, I find some support for past explanations of trust in the expanded 5<sup>th</sup> wave of the World Values Survey. Consistent with theoretical expectations, nations with higher socio-economic statuses (measured by education and economic wellbeing) are generally more trusting, while nation states with large Muslim and Catholic populations are less trusting. Additionally, organizational activity and ethnic

heterogeneity fail to achieve statistical significance at traditional levels.<sup>51</sup>

Nevertheless, the results show that a mediating relationship between Particularized Trust, Institutions, and Generalized Trust was not reached. There is strong positive support for the relationship between Particularized Trust and Generalized Trust, where the relationship is significant at the 5% error level and the coefficient estimate shows that a one unit increase in Particularized Trust leads to a roughly 11% increase in the percentage of individuals agreeing with the statement "most people can be trusted." In addition, consistent with results in individual level analysis, the coefficient relating Particularized Trust and Institutions is highly significant at the 1% error level and displays the correct theoretical sign. However, there is an insignificant relationship between Institutions and Generalized Trust when controlling for other potential confounding factors. Moreover, the relationship between Institutions and Generalized Trust for the 53 countries included in this

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<sup>51</sup> The results here between education and Generalized Trust support past findings by Zak and Knack 2001 and Berggren and Jordahl 2006. Even though the measures capture different years (updated in this research) they have found a positive influence on trust by education. In addition, results on Muslim population are similar to Giuso et al 2006 but different to the Catholic population, where they find Catholics positively associated with trust, while Muslims are negatively associated with trust.

research remains the same regardless of the type of variable used to measure institutional development. Thus, the results in Table 5 support the argument that Particularized Trust facilitates both Institutions and Generalized Trust; however, there is little evidence for the mediating effects of institutions.

**Table 5: National Level Relationship between PT, Institutions, and GT**

<b>Variable</b>	<b>Model 1: Generalized Trust OLS</b>	<b>Model 2: Institutions OLS</b>	<b>Model 3: Generalized Trust OLS</b>
<i>Particularized Trust</i>	0.113** (0.041)	1.910*** (0.415)	0.099** (0.045)
<i>Education</i>	0.000* (0.000)	---	0.000** (0.000)
<i>Economic Well-Being</i>	0.090 (0.020)	---	0.091*** (0.025)
<i>Organizational Activity</i>	-0.017 (0.020)	---	-0.019 (0.018)
<i>Heterogeneity</i>	-0.105 (0.104)	---	-0.112 (0.098)
<i>Muslim</i>	-0.003** (0.001)	---	-0.002*** (0.001)
<i>Catholic</i>	-0.002** (0.001)	---	-0.002*** (0.001)
<i>English</i>	---	2.021*** (0.634)	---
<i>Institutions</i>	---	---	0.009 (0.014)
<i>Constant</i>	-0.769 (0.248)	-5.120*** (2.386)	-0.770** (0.280)
N	37	42	34
R <sup>2</sup>	0.712	0.357	0.726

\*p < .10; \*\*p < .05; \*\*\*p < .01

Moving forward, the aim of this research is to test the mediation analysis between Particularized Trust and economic development through institutions. However, it was

vital to test the possibility of Generalized Trust being a part of the mediation as some researches argue.<sup>52</sup> The table above shows that Generalized Trust cannot be part of the mediation; thus, the research will move forward and test the main theory, which is the indirect influence of Particularized Trust on GDP per Capita.

There are various reasons for the lack of evidence on the mediation analysis between Particularized and Generalized Trust at the national level. One of which is the attempt for this research to reach the carrying capacity of developed to developing countries which calls for the inclusion of a fair number of developing societies, as will be discussed more in the discussion chapter. Another significant factor that explain this result, which would also be looked into further in the next chapter, is that humans in general could prefer to formalize the already existing networks in the forms of solidifying trust in those they know or know something about instead of the risk of trusting people in general.

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<sup>52</sup> Zak and Knack 2001, Berggren and Jordahl 2006, and others.

## Particularized Trust → Institutions → GDP Per-Capita

Table 6 represents the mediation analysis results between Particularized Trust, Institutions, and Economic Development. Before turning to the results of the mediation analysis, however, it is important to briefly discuss the overall model performance. While Model 1 only explains 18% of the variance in GDP per capita, the inclusion of institutions increases the R-squared to just over 70%. This increase represents a considerable enhancement in the explanatory power of the model (implying almost a three-fold increase in the variance explained) and further support past findings<sup>53</sup> on the importance of political institutions for economic progress. Although there was little support for the mediation between Particularized Trust, Institutions, and Generalized Trust, this table concludes with considerable support on the indirect relationship between Particularized Trust and Economic Development. First, the coefficient relating Particularized Trust to GDP/Capita is positive and highly significant when the variable Institutions is not included

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<sup>53</sup> Directly and indirectly (through a mediation analysis), most if not all literature agree collectively that political institutions' performance are vital for economic progress. From those who qualitatively argue a direct link include Francis Fukuyama 1995, and from those who quantitatively argue a direct link include Yi Feng 2003.

in the model. Second, consistent with all the findings above, Particularized Trust is positive and significantly related to Institutions. Finally, the coefficient relating Institutions to GDP/Capita is positive and highly significant with Particularized Trust included in the model, while the coefficient for Particularized Trust is lower in absolute value in the final model (i.e., the coefficient is not significantly different from zero). The evidence provides support for the argument that Particularized Trust impacts a country's level of economic development through its ability to stimulate the formation of political and economic institutions.

**Table 6: National Level Relationship PT, Institutions and GDP Per-Capita**

<b>Variable</b>	<b>GDP Per-Capita OLS</b>	<b>Institutions OLS</b>	<b>GDP Per-Capita OLS</b>
<i>Particularized Trust</i>	8137.029*** (2350.658)	1.9099013*** (0.415)	-1294.1912 (2022.437)
<i>Education</i>	-0.000** (0.000)		-0.000 (0.000)
<i>English</i>		2.021*** (0.634)	
<i>Institutions</i>			4319.1255*** (556.080)
<i>Constants</i>	-35561.68** (13301.057)	-5.1199448** (2.386)	-6974.8033 (9784.316)
N	44	42	40
R <sup>2</sup>	0.18	0.36	0.72

\*p < .10; \*\*p < .05; \*\*\*p < .01

## **Chapter 5: DISCUSSION AND CONCLUSION**

The access to the 5<sup>th</sup> wave of the World Values Survey was essential in reaching conclusions about the relationship between core variables of Particularized Trust, Generalized Trust, Institutions, and Economic Development. Even though Institutions and Economic Development were national level data, the availability of data in the 5<sup>th</sup> wave made way for this research to reach a breakthrough in providing a measurement for Particularized Trust and provided the ability the variable's effect at the individual and national level. Further, the difference in findings this research reached with respect to past empirical results may in large part be due to important differences between the 5<sup>th</sup> wave of the World Values Survey and past datasets. Previous work at the national level on Generalized Trust focused primarily on developing nations and few (if any) studies examined the carrying capacity of results from the developed to the developing world. Fortunately, the 5<sup>th</sup> wave contains a colorful mixture of societies that vary in their level of development. Specifically, the World Bank classifies 32 out of the 53 nations in this research as developing societies. Of those

developing countries, 12 are classified as "high middle income," 13 as "low middle income," and 7 as "low income."<sup>54</sup>

The results in Table 1 represent the unique findings in the United States as a representative in this research for the developed world. The United States, as it is well known, is the world's hegemon and only super power of the current time. Its foreign policy carries more weight than any other country and its influence reaches all parts of the world. Many nations around the world implement political and economic policies consistent with U.S. preferences in order to reach some level of prosperity. The differences between the tables above show that the relationship between Particularized and Generalized Trust in the United States does not hold when being applied to other societies around the world. The analysis for Italy show that Particularized Trust does enhance the probability of Generalized Trust, but the mediation analysis is not supported. Instead, as I will show below, some societies do go through a period of time where cooperation is achieved by factors exogenous to this model.

The United States was included in this study for a number of reasons. First, as argued above, U.S. foreign policies today is both marketed and requested around the

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<sup>54</sup> World Bank 2008

world because of its high economic status. In addition, the United States is rich with diverse societies that include migrants from all over the world. Therefore, because of this diverse society, this study assumes that individuals are well spread along the risk scale, which increases the likelihood of safely analyzing the mediation relationship without exogenous influence. The brief example below shows how Particularized Trust develops into Generalized Trust through institutions in the United States.

In "Building Trust and Managing Business over Distance: A Geography of Reaper Manufacturer D. S. Morgan's Correspondence, 1867" Gordon M. Winder<sup>55</sup> explains the buildup of trust in the United States through a typical business expansion in the mid nineteenth century. Referring to Dayton Samuel Morgan, a senior partner in D.S. Morgan & Co. of Brockport, New York, Winder says, "We can interpret Morgan's as a personal business: he built trust through geographically extensive networks of face-to-face contacts." (Winder 2001 p. 95-96) When the success and growth of his company meant maintaining relations with

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<sup>55</sup> Winder, Gordon M. (2001) "Building Trust and Managing Business over Distance: A Geography of Reaper Manufacturer D. S. Morgan's Correspondence, 1867" *Economic Geography*, Vol. 77, No. 2, pp. 95-121.

other firms and through distance, the need for developing a unified governance to reduce the costs of transactions and overcome the uncooperative behavior grew. Thus, "American business shifted toward institutional-based trust in business dealings, as the scale of enterprises and the greater distances over which they operated militated against personal knowledge of business partners." (Winder 2001 p. 96) However, Winder explains that this was a slow transition, where "enterprises in industrial districts continue to take advantage of the local, disintegrated networks bound together by trust generated in personal relationships" well into the twentieth century. (Winder 2001 p. 96) The buildup of the enterprise required formalizing relations that extended through distances. Then, mobility from one place to the other was not as easy as today, where transportation moved more slowly, thereby making each trip a burden by itself. This increased the necessity to move trust from Particularized to generalized forms. Winder says, "Morgan used institutions and a series of network transfers that accumulated trust to back process-based trust gained through meetings." (Winder 2001 p. 113) Even though today institutions in the United States are successful enough to provide Generalized Trust and allow individuals to trust people in general,

quantitative and qualitative results show that businesses are personal. "Morgan's business was personal: his business was with people he met and knew. So Morgan relied on process- and characteristic-based trust in his business." Furthermore, Winder says, "It should be no surprise that professional behavior should occur before the rise of national engineering and medical professional associations." Lastly, by stating the importance of institutions mediating Particularized Trust and the enterprise's prosperous development, Winder writes in his conclusion:

"In Morgan's "transterritorial" networks he used personal travel: fleeting, face-to-face meetings structured Morgan's relationships with distant parties. Many of these relationships grew out of relationships generated locally, since friends, employees, and acquaintances often moved away from Brockport, either on their own initiative or in support of Morgan's business. Others grew out of Morgan's membership in regional networks. His journeys and hotel status also embroiled him in the tumultuous world of American business, from which he gained much tacit knowledge. But in Morgan's transterritorial networks formal

administrative arrangements also played important roles: legal documents specified relationships; written correspondence renegotiated terms; bank notes promised payment. Morgan used institutional arrangements facilitated network extension and development. These were building blocks for trust." (Winder 2001 p. 117)

The significance of such an event stated above, is that institutions are not simply a given in a society. When individuals seek to reach a prosperous end in their businesses, they would tend to use the system that is already in place. If the interactive system in place lacks proper institutions that spread risk, provide insurance and information, prevent cheating, and so on, then individuals would use the system currently in place, which in most case are the informal networks. Fortunately, Morgan's business was able to survive time even when others later in time that were not part of the face-to-face meetings took over the enterprises. This of course is due to the existence of institutions that influence the creation of Generalized Trust. Thus, the example above shows that Particularized Trust precedes Generalized Trust, while institutions facilitate the enhancement from one type of trust, to the other.

On the other hand, the case of Italy shows that Particularized Trust may also have a direct effect on Generalized Trust. While institutions in Italy do not mediate the relationship between the two types of trust, Italy remains a developed country. Does this mean that if a mediation analysis does not exist between Particularized and Generalized Trust a country would fail to prosper economically? According to Table 3 and table 6 presented earlier, this does not seem the case.

Henry Farrell and Jack Knight (2003)<sup>56</sup> examine trust and cooperation in Industrial districts, which are geographical zones characterized by small firms specializing in a particular area of production. In Italy, for example, they find radical decentralization of production that is "highly unusual in advanced Western economies." This, they say, "has arguably been the source of Italy's economic success in many sectors over the past three decades." In these areas of Italy, one would find that formal contracts are relatively rare, "instead subcontracting relations depend on word of mouth agreements." Farrell and Knight argue that firms can

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<sup>56</sup> Henry Farrell and Jack Knight (2003), "Trust, Institutions and Institutional Evolution: Industrial Districts and the Social Capital Hypothesis," *Politics and Society*, 31, 4:537-556.

indeed betray the trust bestowed upon them and gain from it, but in the long run, they would be viewed as outsiders and thus would lose out on economic opportunities. They state that scholars have come to a 'broad consensus' that trust plays a crucial role between economic actors in the success of industrial districts. "Authors have tended to identify this trust as being specifically non-rational in origin. It is typically attributed to pre-existing history and shared social identity, or to the creation of new forms of common identity, rather than to interests." (Farrell and Knight, 2003, p. 18) Also, in discussing such cooperation, they argue "there is extensive evidence that cooperation in these industrial districts is strongly linked to institutions of a sort which are amenable to rational choice analysis, in the form of informal rules which govern the behavior of actors." (Farrell and Knight, 2003, p. 19) When firms began to search for better deals in different industrial districts that exist in the same country, Farrell and Knight state that they remained to rely less on formal contracts and more on informal agreements and commitments in order to 'underpin cooperation.' Thus, in Italy, such firms remained risk-takers even when subcontracting to new firms of different industrial districts.

The theory in this research argues that the path towards economic prosperity starts with Particularized Trust or when individuals trust people they know or know something about. Particularized trust, in turn, provides the foundations upon which formal institutions are built. The investigation was made with regards to the significance of Generalized Trust in this mediation relationship. When examining the relationship at the national level, the results were consistent with theoretical expectations. While Table 5 showed insignificant influential relationship between institutions and Generalized Trust when controlling for confounding factors, Table 6 did reflect that a change in Particularized Trust is associated with a positive change in economic well being through a mediated effect from institutions.

Turning to the results obtained from the national level analysis, various authors argued that institutions effect economic prosperity through trust. A number of approaches I have made in this research to investigate their claims. First, I have looked into qualitative studies that argued about the essence of Particularized Trust. Some authors did name and distinguished trust into those two types, which are Particularized and Generalized Trust, while others referred to Particularized Trust as

social capital. They may differ from this research with regards to the definition, but I believe that Particularized Trust is the closest measurable proxy for social capital. Moreover, the theory built in this research was supported by extensive literature on trust, which discusses the direction of relationship between trust, institutions, and economic development. The national level analysis investigated the existing claims and found considerable support that Particularized Trust influences economic prosperity through institutions. When national level analysis looked into the mediation analysis between Particularized and Generalized Trust, results did not reflect such relationship while supporting a more direct influence between the two types of trust.

There are a number of breakthroughs this research has reached that is different from past work on the relationship between trust and economic development. First, to my knowledge, this research is the first to provide a measurement for Particularized Trust, quantitatively differentiating it from Generalized Trust. The measurement, an additive scale combining two indicators of in-group trust using the World Values Survey, is theoretically consistent with definitions found in previous literature. The relationship between Particularized Trust

and Institutions held positive and significant despite the level of analysis and inclusion of numerous controls. Therefore, an increase in Particularized Trust does lead to an increase in GDP per capita, where trust in people you know or know something about proved to be more important to the economy than trusting people in general. In conclusion, the results provide support for hypothesis 1,2, and 3 stated above.

Results from such research should always aim to influence decision-making processes. The advantages of investing time and effort in identifying the factors that influence development lay in its ability to being converted as a legitimate policy. Hence, decision-making should be a product of scientific studies in order to avoid reaching goals through trial and error. One of the best ways to approach such phenomenon is to investigate theories before shifting them into policies. The findings in this research suggest that trust is increasingly important factor in a society. I have used economic prosperity as a dependant variable and noticed significant influential relationship with trust. In addition, while this research categorized trust into Particularized and Generalized, the findings suggest that more effort should be invested in the primary stages of trust, which is building upon networks of people

who know each other or know something about each other. This argument calls for revisions on the relations between States and International Governmental Organizations (IGOs) to focus promoting unique policies that builds upon Particularized Trust and to accept that means to ends can be generally different from the developed world.

Domestically, this research highlights the significance of developing institutions that are in line between Particularized Trust and economic prosperity. Characteristics of procedural democracies, such as elections were not included in the model, yet the model was not miss-specified. This is consistent with the argument raised numerously by Bueno De Mesquita that signifies democracies are not necessarily a prerequisite for economic development. There are various authoritarian governments around the world today that fail to transition toward democracies because of internal stability issues where they should recognize that there are other routes to prosperity. Allowing the society to have safe and stable communications, while developing strong property rights, judicial systems, and such, prove to be the seeds on success. Francis Fukuyama's arguments on the essence of social capital towards development are also generally consistent with this perspective. Thus, this research

quantitatively shows that formal institutions mediate the influence of basic social capital on the well being of an economy.

In conclusion, this research has shown that the path towards economic prosperity runs from Particularized trust through institutions. The more individuals trust each other, the more likely a country will notice higher levels of GDP per capita. As Douglass North suggests, institutions were the product of innovations, which allowed increased capital mobility, lower information cost, and the spread of risk. Individuals interact with each other and extend their networks to levels that influence the establishment of quality institutions, which therefore benefits the economy. Without Particularized Trust, however, institutions are not likely to develop and thus economic prosperity will be more difficult to achieve. While North states that innovation is the key that evolved institutions in advanced economies, this research reflects a similar argument that states extending and increasing circles of trust in a society indirectly influence a positive change in the well-being of an economy.

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