The Socio-Economic Determinants of Interpersonal Trust Levels

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**ABSTRACT**

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1. INTRODUCTION

As policymakers search for a path to economic development, the challenge they may face is not only finding the right policy mix but also on how human behaviours can alter the implementations of those policies. Here comes the role of behavioural economics in achieving the desired results for stable and higher levels of economic development. We put here that the inherent capacity to implement policies depends crucially on interpersonal trust (Borum, 2010). Nevertheless, economic literature is limited in explaining the causal effects of interpersonal trust on development. Interestingly, higher economic growth does not always promote higher interpersonal trust (Helliwell, 1996; Inglehart, 1997; Olson, 1982). One rationale for such is that the role of interpersonal trust is higher in developing and less developed countries (Ji & Long, 2022). On the other hand, literature has also established that interpersonal trust and trustworthiness is a keystone towards higher economic development (Banfield, 1967; Coleman, 1988; Dasgupta & Gambetta, 1988; Fukuyama, 1995; Greif, 1993; Putnam, 2000). Without the role of interpersonal trust, the growth necessary reforms are not only difficult to mobilize but almost impossible in retaining the long-term fruits of growth. This elaborates the need for an in-depth search of associations among the two.
Our study provides a strategy to uncover the causal effect of economic growth on interpersonal trust by focusing on the inherited component of human capital and political stability along with rule of law and order and on its time variations over long periods of waves from 1999 to 2020. Since it is already well established that interpersonal trust shares a relationship with economic growth, we expand the framework by elaborating the need for political stability and rule of law and order. With the inclusion of panel data, rather than cross-sectional data on trust, we acquire time-varying determinants of interpersonal trust. Once we have gained the time-varying determinants of interpersonal trust, we will be in a better position to understand the successful implications of policy implementation. This study will allow addressing defies in identifying the effect of not only human capital but also economic development on interpersonal trust. By focusing on the dependent variable as trust, rather than economic development, we also avoid reverse causality. Lastly, by providing a time-varying measure based on five waves (each comprising of four years) of trust, we control for observed time-varying factors such as changes in the economic growth, political stabilities, population, and rule of law and order situations in a dynamic macroeconomic model. Our estimations of interpersonal trust are based on the five waves from the world Value Survey. This strategy has allowed us to track back the evolution and evaluation of interpersonal trust over the decades for fourteen big nations from all over the world, in different regions.

The study is organized as follows. Section I presents the introduction, followed by section II; elaborates literature review and section III shows the estimation strategy, and the data descriptions. The effect of economic development, political stability, and rule of law and order on interpersonal trust is discussed in Section IV. Section V provides the conclusion of the study.

2. LITERATURE REVIEW

With development comes along a higher level of education or awareness which affects interpersonal trust, which may be there in presence of ignorance (Collie et al., 2015). Ian interpersonal trust might also transmit through human capital and cultural transmission (Coleman, 1988). Whereas, human capital is one of the major elements towards the higher economic growth of a country (Aslam, 2020). The sharp decline in not only interpersonal trust relationships but also authorities in serving to underline that interpersonal trust is an essential element, yet often unheeded, an ingredient in successful policy implementation (Simpson, 2007). We also establish here that encouraging investment in building interpersonal trust must be considered as a new approach to higher economic development, as well as it is associated with the role of political stability and rule of law and order (Knack & Keefer, 1997). With the decline in interpersonal trust, it is observed that voter turnout has also been affected negatively. This leads to a decline in union memberships and political associations and engagement, thus political stabilities and later economic development (Rothstein, 2001).

Another important point to make here is that societies with a higher level of interpersonal trust may incur lower transactional costs (Dyer & Chu, 2003). In simpler words, they may spend less time and money on protecting theory property rights and this might help them to solve their issues
with a lower level of help from law-and-order systems. Alternative proposition here is that the generation of interpersonal trust is a top-down phenomenon, rather than a bottom-up approach (McAllister, 1995). This reflects that confidence in authorities, which are embedded with political stability and rule of law and order, is a necessary condition for the development of interpersonal trust. The rule of law and order not only facilitates cooperation among individuals but also fosters the norms of reciprocity, which are essential ingredients of interpersonal trust and a healthy society (Grootaert, 2001).

To be trusted is a greater compliment than being loved (Dalcher, 2018; Lau, Lam & Wen, 2014; Rempel, Holmes & Zanna, 1985; Sullivan & Transue, 1999; Tschannen-Moran, 2007). Being trustworthy is an essential part of one’s self-concept (Choi, 2005; Epstein, 1980; Gecas, 1982; Goldsmith, Moore & Beaudoin, 1999; Judge, Erez & Bono, 1998; Komarraju, Musulkin & Bhattacharya, 2010; Lau, Lam & Wen, 2014; Leung & Leung, 1992; Marsh, Parada, & Ayotte, 2004; Mazar, Amir & Ariely, 2008; Onkvisit & Shaw, 1987; Skovlund, 2014). Whereas, love is built on trust (Kelly, 2005; Luhmann, 1986; Tennov, 1998). Love takes no bound, from social, economic, or personal levels (Lynch, 2013). The virtues of trust in relationships are everywhere, whether those relationships be romantic friendship, familial, or the workplace (Lau, Lam & Wen, 2014; Sias, 2008). Trust is an imperative factor for individual and collective growth prospects, which has an inherent characteristic to promise development (Zeffane & Connell, 2003). However, trusting and being trustworthy can be hard and even harder to define or measure (Chen, Yang, & Chen, 2020; Chita-Tegmark, Law, Rabb & Scheutz, 2021; Hergeth, Lorenz, Vilimek & Krems, 2016; Mainous, Smith, Geesey & Tilley, 2006; Platt, Jacobson & Kardia, 2018; Somu, Kirthivasan, & Shankar Sriram, 2017; Ullman & Malle, 2018; Walker, Verwey, & Martens 2018).

Trust is determined through the elements of trust. The role of trust in supporting and promoting economic growth suggests that societies with higher levels of trust should also be wealthier and have higher levels of economic growth (Ahmad & Hall, 2017; Aslam, 2020; Roth, 2006). Consider trade, even trading with others involves some measure of trust; you trust that the goods and services you are receiving will be worthwhile or that you trust the supplier (Castaldo, Perrini, Misani & Tencati, 2009; Chusseau, Dumont & Hellier, 2008; Elahi & Yu, 2009; Hofstede, Jonker, Meijer & Verwaart, 2006; Kowalski, Lee & Chan, 2021; Krugman, 2015; Lyeonov, Vasilyeva, Bilan, & Bagmet, 2021). Trust makes business is more efficient and it makes it easier to build large businesses. When Trust is high you don't have to spend all of your resources protecting property rights to some extent, rather you are trusting other people to not simply come along and take what you have (Ahmad & Hall, 2017; Craig, 2007; Fahr & Irlenbusch, 2000; Olaisen & Revang, 2017; Osherenko, 2006; Peloso & Caldwell, 2011; Teraji, 2008). When Trust is high corruption tends to be lower and you can rely more upon the quality of public sector officials and public services and also capital markets should work better (Li & Wu, 2010; Morris & Klesner, 2010; Ritchey, 2010; Rose-Ackerman, 2001; Rothstein & Eek, 2009; Serritzlew, Sønderskov & Svendsen, 2014; Uslaner, 2004, 2013; You, 2018). Similarly, borrowing and lending will be easier and less costly because people in general will expect others to be paying them back.

Considering the importance of building up interpersonal trust, this study looks into its determinants, that can boast the levels of interpersonal trust. As seen above, most of the literature
on interpersonal trust looks at the behavioural determinants of it and is based on micro data. To overcome this gap in literature, the study in hand will explore how social and economic factors can play their role towards building interpersonal trust levels in panel of countries.

3. DATA AND METHODOLOGY

Economic growth is measured by gross domestic product (constant) expressed in US dollars and population measures the number of people in a country. We have employed the data on “political stability” and “rule of law and order” using the International Country Risk Guide (ICRG). We have incorporated a large number of observations for at least 14 countries. The countries of origin cover mixed data based on the availability of data. We tried to select as many countries as possible based on availability of data to have a more comprehensive argument and coherent results. Moreover, these 14 countries have similar characteristics. Interpersonal Trust is measured by the question: “Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?” The answers correspond to “Most people can be trusted,” “Can’t be too careful,” and “Depends.” We construct an interpersonal trust indicator by taking an average number of responses from “Most people can be trusted”. Interpersonal Trust in a country is acquired by using the World Values Survey (WVS) database. The selection of interpersonal trust is based on the studies of (Jalan, Matkovskyy, Urquhart, & Yarovaya, 2022; Sohlberg, 2022; Fang & Zhu, 2022).

What is the impact of macroeconomic variables on interpersonal trust? In answering this question, we had to deal with the endogeneity issue in the estimation of the following basic equation;

$$Trust_{it} = \alpha_1 LAW_{it} + \alpha_2 POP_{it} + \alpha_3 GDP_{it} + \alpha_4 Pol_{it} + e_{it}$$  \hspace{1cm} (1)

Where, GDP_{it} stands for GDP in a country “i” at period “t”. The variable “Trust” measures the responses of the variable “trust” of individuals who live in the country “i” at period “t”. Whereas the variables “LAW”, “POP” and “POL” denotes a “rule of law and order”, “population” and “political stability” for respondents associated with country “i” at period”. To cater to the issue of endogeneity, we opt for a dynamic panel model using the GMM technique. The equation (1) will then form the following equation;

$$T_{it} = \alpha_1 T_{-1, it} + \alpha_2 T_{-2, it} + \alpha_3 LAW_{it} + \alpha_4 POP_{it} + \alpha_5 GDP_{it} + \alpha_6 Pol_{it} + e_{it}$$  \hspace{1cm} (2)

The vector associated with “\(\alpha_1\) "and" \(\alpha_2\)" includes the past performance of trust, denoted by “T.1” and “T.2” of the economy with the lagged values and “\(e\) " denotes an error term. To our best abilities, it is possible to go back only to the wave of 1999 to get a measure of “interpersonal trust” using the World Values Survey. The different five waves provide us with enough data to form short panel data to acquire meaningful results using the GMM technique while solving the issue of endogeneity simultaneously. To deal with two important issues that may affect interpersonal
trust, we take two important avenues. First, we add changes in the political structures using a proxy of “political stability”. Second, we implement the use of the “rule of law and order” along with two lags of interpersonal trust. These two components share one of the main and most direct relationships with interpersonal trust, targeting economic development in a long run.

4. RESULTS AND DISCUSSIONS

This section documents the relationship between interpersonal trust and its relation to macroeconomic variables. Model 2, 3, 4, and 5, presented in table 1, are regressed to conduct sensitivity analysis which validates the authenticity of results in the final model (1). We estimate the relationship between interpersonal trust and GDP by running individual regressions on the trust question and found that they share a significant but negative relation. Theoretical results support positive as well as negative associations between the two. Considering our model, there are three rationales for such; (i) associational activities with strong interpersonal ties may report a high trust but may also reduce economic outcomes in some cases. An example could be negative economic output evolving from strong civil society (Putnam, 1993; Putnam, 1995, 2000). (ii) In low-trust societies, such as the ones are developing countries, building up to higher levels of interpersonal trust theoretically improves economic outcomes, but, once a threshold level is reached, increased levels of interpersonal trust may show the tendency to harm the economic output. (iii) In the case of welfare states, high levels of interpersonal trust may also lead to negative economic growth (see Atkinson (1999) for a detailed discussion). Another important point to make here is that the impact of GDP on trust may be negatively significant, but, must not be mistaken as vice-a-versa.

Table 1: Results

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
<th>Model 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trust (lag 1)</td>
<td>0.394***</td>
<td>0.354***</td>
<td>0.358***</td>
<td>0.328***</td>
<td>0.377***</td>
</tr>
<tr>
<td></td>
<td>(0.0698)</td>
<td>(0.0509)</td>
<td>(0.0837)</td>
<td>(0.0416)</td>
<td>(0.0537)</td>
</tr>
<tr>
<td>Trust (lag 2)</td>
<td>0.858***</td>
<td>0.838***</td>
<td>0.896***</td>
<td>0.648***</td>
<td>0.773***</td>
</tr>
<tr>
<td></td>
<td>(0.0567)</td>
<td>(0.0447)</td>
<td>(0.0333)</td>
<td>(0.0651)</td>
<td>(0.0356)</td>
</tr>
<tr>
<td>GDP</td>
<td>-0.1527***</td>
<td>-0.11748***</td>
<td>-0.1326**</td>
<td>-0.1143**</td>
<td>-0.1143**</td>
</tr>
<tr>
<td></td>
<td>(0.0635)</td>
<td>(0.0581)</td>
<td>(0.0342)</td>
<td>(0.0132)</td>
<td></td>
</tr>
<tr>
<td>Pol</td>
<td>2.069*</td>
<td>2.510**</td>
<td>2.182**</td>
<td>3.453***</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(1.081)</td>
<td>(0.948)</td>
<td>(0.932)</td>
<td>(1.028)</td>
<td></td>
</tr>
<tr>
<td>Law</td>
<td>2.535***</td>
<td>2.452***</td>
<td>2.666***</td>
<td></td>
<td>1.832***</td>
</tr>
<tr>
<td></td>
<td>(0.453)</td>
<td>(0.413)</td>
<td>(0.316)</td>
<td></td>
<td>(0.283)</td>
</tr>
<tr>
<td>HK</td>
<td>26.01***</td>
<td>23.78***</td>
<td>31.26***</td>
<td>18.51***</td>
<td>14.98***</td>
</tr>
<tr>
<td></td>
<td>(2.831)</td>
<td>(2.093)</td>
<td>(2.932)</td>
<td>(2.507)</td>
<td>(1.729)</td>
</tr>
<tr>
<td>Population</td>
<td>0.0233***</td>
<td>0.0185***</td>
<td>0.0320***</td>
<td>0.0162***</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.00500)</td>
<td>(0.00368)</td>
<td>(0.00389)</td>
<td>(0.00463)</td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>-142.3***</td>
<td>-137.1***</td>
<td>-142.2***</td>
<td>-79.21***</td>
<td>-107.9***</td>
</tr>
<tr>
<td></td>
<td>(12.98)</td>
<td>(13.13)</td>
<td>(10.26)</td>
<td>(7.040)</td>
<td>(13.93)</td>
</tr>
<tr>
<td>Sargan test</td>
<td>0.212</td>
<td>0.222</td>
<td>0.213</td>
<td>0.106</td>
<td>0.314</td>
</tr>
<tr>
<td>Hansen test</td>
<td>0.284</td>
<td>0.321</td>
<td>0.327</td>
<td>0.214</td>
<td>0.390</td>
</tr>
</tbody>
</table>

*Standard errors in parentheses*** p<0.01, ** p<0.05, * p<0.1*
The two lagged values of trust convert the model in equation (1) into a dynamic model corresponding to equation (2). If there exists strong interpersonal trust, we should find a statistically significant relationship between interpersonal trust and political stability. It is already established in the literature that political stability and rule of law may encourage economic growth (Aslam, 2020; Aslam & Farooq, 2019; Aslam, Naveed & Farooq, 2021; Aslam & Shabbir, 2019; Aslam & Zulfiqar, 2016; Qamar, Ashraf, Ghouse & Aslam, 2020). We now develop a model to explain how interpersonal trust can be affected from rule of law and order and political stability, thus higher economic growth. The results from table 1, provide support for the hypothesis that the effect of the feelings of interpersonal trust is related to individuals’ perception of political stability. Earlier it is established in the literature that the actual efficiency and performance of politicians are important characteristics, however, our result provides the inherent agency of interpersonal trust which can result in political stability. This channel supports the argument that interpersonal trust serves as a key for the political development of the state (Sullivan & Transue, 1999). Besides, another important element is if interpersonal trust has evolved, the relation between the trust and rule of law and order is also statistically significant as depicted in table 1. In particular, the development of justice systems and rule of law and order provide people to build trust in the legitimacy of their authorities. This accelerates the smooth running of the system and encourages economic growth. A weak rule of law threatens bonds of trust among individuals that are arguably crucial to the development of politico-social life, and its smooth functioning.

Lastly, the human capital (education and health) along with the population shares a positive and significant relationship with interpersonal trust. Knack and Keefer (1997) also affirm the conclusion that nations with higher levels of interpersonal trust are also equipped with better-educated populations. In simpler words, increasing human capital can lead to an increase in trust among individuals. Human capital and population growth go hand in hand when it comes to encouraging the trust process among individuals. Another important implication of results is that trust-based human capital may explain the growth process more efficiently.

5. CONCLUSION AND POLICY IMPLICATIONS

We set out in this study to ask how amenable macroeconomic variables are to interpersonal trust levels. Our analysis predicts that interpersonal trust can be raised directly by an increase in population, human capital, and rule of law and order with political stability. Moreover, the interpersonal trust levels may be indirectly affected by economic growth measured by GDP. The results are novel and must not be taken as vice-versa. The reasons for such are; i) associational activities with strong interpersonal ties, ii) there is a tendency of increased interpersonal trust to harm the economic output beyond the threshold level, and (iii) the case of welfare states. Among the macroeconomic variables that impact interpersonal trust, education and health are inherent in human capital. Furthermore, our results also suggest that good policy may also initiate a virtuous circle of rising interpersonal trust levels among society. In such regards, rule of law and order and political stability have raised interpersonal trust significantly. This can further improve the lives
of people resulting in more political stability, which may further result in increased levels of interpersonal trust levels in societies. We have established here that three important variables; human capital, law and order, and political stability are the foundation for increasing interpersonal trust levels.

REFERENCES


