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The Hype of Social Capital in the Finance - Growth Nexus

Forthcoming: Economic Notes

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The Hype of Social Capital in the Finance - Growth Nexus

Ibrahim D. Raheem, Kazeem B. Ajide and Xuan V. Vo

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Abstract

The trilogy among economic growth, social capital (SC), and financial development is examined based on three hypotheses: first, SC is important in the finance-growth nexus. Second, there is a threshold effect of SC in the finance-growth nexus. Third, the SC-finance-growth trilogy depends on the countries' income level. Building dataset for 70 countries,someinteresting results were obtained: (i) the marginal effects of both SC and finance promotes economic growth at higher levels; (ii)there is evidence of a threshold effect of SC, as finance enhances more growth when SC is below the threshold level; (iii) higher-income countries tend not to benefit from the SC-finance-growth trilogy. These results suggest that the influence of SC on growth trajectory is exaggerated in the literature. The study recommends that policymakers should pursue other sources of economic growth aside SC, while ensuring that the level of SC does not deteriorate.

Keywords: Economic growth, Financial development, Social capital, and Threshold effect
JEL classification: O43; G20

1 Introduction

The relationship between finance and growth is one of the most widely researched topics in the developmental and international finance literature. There are three main strands of the literature in this nexus. The first strand confirms the positive association between these variables. Another set of studies concludes that improvement in the financial systems retards economic growth (Law and Singh, 2014; and Arcand et al., 2015), while the last strand is of the argument that the causal relationship is conditional on some intervening factors and/or variables (Eschenbach, 2004; and Acaravci et al., 2009 provide excellent literature survey). Overall, it seems a more direct way of ensuring the significant effect of financial development on economic growth is to consider the role of intervening variable(s). The simplicity of this approach poses a further challenge: identification of the appropriate intervening variable can be unnerving. We posit that there are certain conditions such intervening variables shouldhave: (i) encompassing; (ii) have direct effects on the two variables of interest (i.e., finance and growth); and (iii) devoid of measurement problems. The term "encompassing" implies that such intervening variable should capture all its existing components. In other words, the conditional variable should have a direct theoretical linkage with both economic growth and financial development. The available proxies/measures of the intervening variable should be generally acceptable. It should be noted that the inability to fulfil the first condition might incapacitate achieving the third condition.

A host of variables have been linked to act as the intervening variable. The popularity of the trilogy among economic growth, institutions, and financial development was first confirmed by Demetriades and Law (2006) and other succeeding studies (see Fernandez and Tamayo, 2015 for literature survey).Relating the conditions stated above to this literature, there seems to be evidence to support the argument that institutions act as a poor viable option. For instance, available measures of institutions are limited to the formal settings (see Knowles, 2005). This thus ignores the conclusion of North (1990) about the importance of the informal segment of the institutions, which cannot be over-emphasized, in the growth trajectory of countries. North went further to argue that the western world follows an unwritten principle that formal rules dictate life, whereas their actions are oftentimes guided by informal constraints (North, 1990 p. 36).

Ensuing from the above, it would not be fundamentally wrong to infer that existing studies that have captured the formal measure of institutions have excluded some important segments of the institutions. Hence, in liberal terms, caution must be exercised when interpreting the results of these studies; in strict terms, such results could be discarded. A plausible solution to this malign scenario is to find variable(s) that is/are devoid of such criticisms.

In this study, we hypothesize that social capital (SC) is a plausible candidate to explore. There is no generally accepted definition of SC, but for the purpose of our inquiry, it is conceived as shared norms that facilitate cooperation between two or more individuals (Coleman, 1988; Ostrom,1999; and Fukuyama,1999). Shared norms lubricate the functioning of society by fostering trust and reducing the incentive to cheat. Aside from this, SC has equally been argued to be a mechanism for understanding socio-economic phenomena (Durlauf, 2002). The importance of the interaction among economic agents, on whose basis SC is formed, cannot be overemphasized. Hence the need for a better understanding of socio-economic outcomes and further explaining social phenomena. This is because it can substitute missing formal institutions or complement existing ones in facilitating growth-inducing processes. Similarly, it has been posited that in environments where institutions are not binding, SC- in the form of trust- serves as a lubricant that increases efficiency in economic exchange (Fafchamps and Minten, 1999). Thus, enhancing the level of prevailing SC remains one of the mechanisms by which financial development affects economic efficiency. This sounds plausible, as posited by Coleman (1990) and Spagnolo (1999), that people may trust each other more in high-SC communities because the network in their community provides better opportunities to punish deviants.

In light of this, since financial contracts constitute the ultimate trust-intensive contracts, social capital should expect to have major effects on the development of financial markets (Guiso et al., 2004). Furthermore, financing has been argued to be nothing but an exchange of a sum of money in the future. However, such exchange isdetermined not only by legal enforceability but also by the extent to which the financier trusts the financee. Furthermore, financial institutions and other finance-related matters are also largely challenged by information asymmetries and coordination problems. Thus, the existence of information asymmetries and coordination failures creates room for social capital to improve efficiency. SC could help resolve this in two major ways. First, it addresses information problems, hence serving as a deterrent to trade of goods and services and the exchange of information.

Second, it also reduces transaction costs such as search and monitoring costs. Search and trust are considered sacrosanct in economic exchange (see, Hayek, 1945; Akerlof, 1970). The willingness of people to save more enhances the availability of resources to investors in countries that boast of efficient and reliable financial institutions, particularly the banks, and vice-versa (Aghion and Howitt. 2008).

Hypothesis 1: SC is important in the finance-growth nexus

So far, we have built a case for the supposedly positive relationship between SC and FD. One side of the argument is the identification of SC as a "deep" determinant of per capita income rather than the "proximate" determinant (Glaeser et al. 2004; and Knowles, 2005). While the proximate determinants appear in the aggregate production function, the deep determinants are seen to affect the proximate determinants. Whiteley (2002) reasoned that the efficiency and effectiveness of the formal form of institutions could be enhanced with the aid of the SC, which would increase the growth rate of per capita income. Countries with a higher level of trust and social norms tend to be richer (Knack and Keefer, 1997; and Zak and Knack, 2001). Sabatini (2007) and Fine (2011) provide excellent literature surveys on the connection between SC and economic growth, with the majority of the studies and/or theories confirming positive association.

Unarguably, many studies have examined how formal institutions have shaped financial contracts and market outcomes. This notwithstanding, several authors have equally argued that certain norms and patterns of social interactions other than legislation also determine the patterns of financial exchange and the development of financial interactions. SC is termed as a double-edged sword whose influence hovers on financial development and economic growth. It is on this basis that this present study unravels the connection between financial development and economic growth via SC channel. Hence, we hypothesize that financial development, augmented with SC, would lead to higher economic growth. We also inquire whether the level of SC is important to the nexus.

Hypothesis 2: There is a threshold effect of SC in the finance-growth nexus

Some studies have shown that such a relationship is not monotonic (Guiso et al. 2004). Plainly, Guiso et al. show that countries that boast of a high level of social trust tend to

enhance the efficiency of the financial sector by (i) transfer of cash holdings to stock market investment; (ii) increase in the demand and usage of financial services (e.g., cheques, bank drafts, among others); (iii) have greater access to institutional credit, and make less use of informal credit. Hence, the incentive for a higher level of social norms is the further improvement of SC. This implicitly assumes that the relationship among the model is not monotonic. Should it be the case we confirm a nonlinear relationship, this raises the issues of threshold effects. The threshold effects in the FD-economic growth nexus have been documented in the literature (Law, et al. 2013; Raheem and Oyinlola, 2013; Arcand et al., 2015; and Slesman et al., 2019). The main conclusion is that until a certain threshold is reached, the positive relationship in the nexus is uncertain. To date, studies have ignored the threshold role of SC in growth literature.

Hypothesis 3: The countries' income level affects the SC-finance-growth trilogy

A section of the literature has cautioned against generalizing the effect of SC on growth between rich and poor countries. On the one hand, some studies have found that poorer countries benefit more from SC (classical examples include Knack and Keefer, 1997; Ahlerup et al., 2009). On the other hand, Putnam (1993) concluded that the importance of SC increases as countries experience economic development.

This study contributes to extant literature at least in threemajor ways. First, we are not aware of any empirical study that has considered social capital's role in the finance-growth nexus debate. At best, studies have been limited to the consideration of the formal form of institutions. Thus, this aspect of informal institutions and their relation in the finance-growth nexus deserves special attention. Second, the study uses various measures of SC, including SC data constructed by Lee et al. (2011) and trust data from the World Value Surveys, in order to have a broader perspective of the dynamics in the model. Prior studies have mainly considered a single measure of SC. Third, no paper we are aware of has modelled the threshold effect of social capital-economic growth nexus[1].

[1]An exception is Roth (2009). Similarly, studies have examined the threshold effect of SC on innovation/inventive (Rost, 2011; Echebarria and Barrutia, 2013; Akçomak and Müller-Zick, 2018). There are three major problems with these studies: (i) threshold framework is based the squared term of SC in their empirical model; (ii) they were unable to report any threshold value; (iii) Europe is the central focus on these studies, which thus inhibit generalization of results to other regions. However, we improved on these perceived shortcomings by using a more robust methodology, the Threshold Auto Regression (TAR) that endogenously determine the threshold value(s). Another advantage of the model is its ability to examine the consequences of exceeding or shortfall of the thre

Previewing the results, we show that: (i) financial development and SC individually promote economic growth (i.e. growth-enhancing); (ii) the interaction of variables upturned the positive effect; (iii) SC is non-monotonically related to per capita income, thus confirming the existence of a nonlinear relation; and (iv) below the threshold point of SC, financial development enhances economic growth. The rest of the paper is structured as follows. In the next section, the literature review is undertaken, while section three details the empirical framework and data issues. Section four discusses estimation results. Finally, section five gives the concluding remarks with some policy lessons.

2.0 Literature Review

The connection among growth, SC, and financial development can be decomposed into four strands: finance-growth nexus; SC-growth nexus; finance-SC nexus; and growth-finance-SC trilogy. The number of studies relating to the first three strands listed above is huge and unending. To avoid duplication of effort and for want of space, this literature review would only focus on the important issues and refer the readers to some selected literature survey, where possible.

2.1 Finance-Growth Nexus

The studies on the finance-growth nexus can be categorized into two strands: linear and nonlinear-based studies. Hitherto, studies have mainly focused on the linear relationship- a situation probably attributable to simplicity in the usage of the then-available statistical tools. The linear approach has been examined based on two approaches: impact analysis and causality analysis. The impact analysis examines the relationship (positive or negative) that exists in the nexus. The major weakness of these studies is that it imposes some assumptions such as exogenously identifying the independent(finance) and the dependent(growth) variables. The causality-based studies improved on this shortcoming. Three directions of causality have been established in the relationship between finance-growth nexus. The first is unidirectional if the causality runs from finance to growth or from growth to finance. By implication, the direction could turn out to be supply-leading or demand-leading; it could run from finance to growth at the early stages of development and later stages from growth to

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shold value.

finance (bidirectional). It may also seem to be no causality between the two at all. For literature survey, see Eschenbach (2004), and Acaravci et al. (2009).

The nonlinear studies pitched their argument on the notion that finance is only good for growth up to a certain point. Beyond this point, finance becomes a burden to growth trajectories (Cecchetti and Kharroubi, 2012; Law and Singh, 2014; Arcand et al., 2015;Samargandi et al., 2015). In fact, Cecchetti and Kharrouni (2012) likened the situation to someone who has eaten too much and starts to feel uncomfortable and unwell. This stance is the infamous "inverted U-shape" in the relationship between finance and growth. Hence, the notion of "more finance, more growth" has been refuted and replaced with "better finance, more growth" (Raheem, 2016).

2.2 Social Capital-Growth Nexus

The economic growth puzzle has led to the emergence of some interesting studies[2]. Studies have identified two sources of growth to explain the plausible differences in income across countries and regions. The "proximate" determinants are economic variables in the aggregate production function: e.g., labour, capital, and technology. The "deep" determinants are essential in explaining the evolution and influence of the proximate determinants[3]. Hence, the deep determinants are of superior influence and havetheir root in sociology. The classic examples of the social determinants include social norms, trust, network, and associational membership. These examples are termed "social capital". The seminal article of Putnam et al. (1993) entitled "*Making Democracy Work*" arouse renewed interest in the dynamics of SC and economic growth. The first strand of studies concludes that SC has a positive and significant effect on growth (influential papers include: La Porta et al., 1997; Knack and

[2] Examples of growth puzzle include: (i) difference in the level of GDP and the rate of growth across countries; (ii) income differences seem to be increasing, but Gini coefficient is on the decrease; (iii) some countries have st agnated economic growth, i.e. near zero economic growth, whereas other countries record high annual growth ra te (as high as 10% e.g. China); (iv) technology is commonly available, yet some countries reap its benefit more t han the others.

[3]There are many theoretical and empirical studies that have made significant advancements in growth theories (s ee Rogers (2003) and Diebold and Montels (2000) for literature survey). The main problem with these studies is the change in focus, as they have laid more emphasis on econometrics (i.e. statistical significance of the growth models) (Capolupo, 2005), thus leaving out main issue. More worrisome is the fact that the econometric specific ations poorly capture the mechanisms of growth stressed by these theories and the measures used as proxies of i mportant determinants of growth are not accurate. For instance, human capital is proxied by average years of sc hooling and TFP either is not measured at all or is measured with imprecision. Another critic of the growth theor y is that they tend to assume growth depends on only one factor, whereas economic growth is achieved through a combination of factors that interact together (Temple, 2000, 2003).

Keefer, 1997; Zak and Knack, 2001; Beugelsdijk et al., 2005; Doh and McNeely, 2011; Horvath, 2012; Bjornskov and Meon, 2015).

The inability of these studies to explain the mechanisms, dynamics, and operationalization of this relationship gives room to the second strand. Several mechanisms have been identified in the literature: human capital (Coleman 1988; Israel and Beaulieu, 1995; Buchel and Duncan, 1998 and Neira et al., 2009); innovation (prominent papers include Grossman and Helpman, 1991; Aghion and Howitt, 1992 and Beugelsdijk et al., 2004); inequality and poverty (Olson, 1994); institutional development (Zak and Knack 2001; Dasgupta 2000; Boulila et al. 2008).

The extant literature in this regard is divided into two groups: direct and indirect relationship. In the first group, studies are more interestedin whether SC is important in recording economic growth. To this end, the majority of studies have concluded that positive relationships ensue. The nature of SC confirms its importance in driving economic growth compared to the other "proximate" sources of economic growth, which are widely used in the aggregate production function.

2.3 SC-Finance Nexus

Because there are a majority of studies confirming the positive relationship in the finance-growth nexus, factors that influence the dynamics of finance become an important issue for academics, practitioners, and policymakers. Literature posits there are two forms of determinants of finance: short-terms (macroeconomic fundamentals) and long-term (geography and culture, to mention a few) (Elkhuizen et al., 2017). In line with the objective of this study, the emphasis of this sub-section would be based on the long-term determinant. The SC-finance nexus has predominantly feature micro-credit studies. The SC financialization has focused on the root of finance rather than large finance as obtained in the finance-growth literature[4].There are three strands of the literature on this issue. The first relates to trust and credibility. Economic agents located in areas identified to be trustworthy tend to avail themselves to credit when they need it. Also, economic agents living in this area prefer to diversify their portfolios to the stock markets (Guiso et al., 2004 and 2008, Hong et al., 2004). Another angle considered in the literature is the advisory role the financial institutions render to the economic agent (Georgarakos and Inderst, 2014; Cruz-Garcia and

[4]We thank the anonymous reviewer for bringing this point to our attention.

Peiro-Palomino, 2019). Second, SC ameliorates information asymmetry and policy coordination problems, which enhance improvement in the efficiency of the financial sector (Aghion and Howitt, 2008). Third, group lending (microfinance) operates on trust and social ties among members and is responsible for the repayment of the groups' loans. Studies have confirmed a high repayment rate on microfinance loans (Karlan, 2007; Dufhues et al., 2013 and Postelnicu and Hermes, 2016).

2.4. Growth-SC-Finance Trilogy

The trilogy has not been explicitly considered in the literature. What is common in the literature is to examine the similarity/substitutability between SC and the formal measures of institutions. The conclusion is that the effect of finance on growth is conditional on some intervening variables. The first set of studies were silent about the level of development of institutions needed to ensure the effect of finance can manifest on growth (Ahgion et al. 2005; Demetriades and Laws, 2006; Ahlin and Pang, 2008; Anwar and Cooray, 2012). More recently, attention has shifted to the fact that the level of institutions is of utmost importance. Hence, institutional quality should be developed to a particular level prior to the effective operationalization of the finance-growth dynamics (Slesman et al., 2019). This strand's focus is on the nonlinear relationship. The commonly used methodological approach is the Dynamic Panel Threshold Autoregression (DPTR) or Panel Smooth Transition Regression (PSTR)

3.0 Empirical Strategy and Data

3.1 Model and Methodology

To explore the relationship among financial development, SC, and economic growth, we consider as a starting point the direct effect of finance on economic growth by specifying the standard growth regression model as follows:

$$Growth_{i,t} = \beta_0 Growth_{i,t-1} + \beta_1 Soc_{i,t} + \beta_2 FD_{i,t} + \beta_3 X'_{i,t} + \tau_t + \sigma_i + \varepsilon_{i,t} \quad (1)$$

Growth is the growth rate of GDP per capita;FD captures measures of financial development and Soc denotes social capital variable. $X'_{i,t}$ is a matrix of control variables: income, investment, inflation, trade openness human capital and formal institutions,istands for a

country and t represents a time period. τ_t is time dummies to account for time -specific effects, σ_i is an unobserved country-specific effects and $\varepsilon_{i,t}$ is an idiosyncratic error term.

It would be recalled that among the hypotheses of this present study is to examine whether the effect of finance on growth is conditional upon the level of SC. Hence, the need to augment equation 1 with the interaction of finance and SC.

$$Growth_{i,t} = \beta_0 Growth_{i,t-1} + \beta_1 Soc_{i,t} + \beta_2 FD_{i,t} + \beta_3 [FD * Soc]_{it} + \beta_4 X'_{i,t} + \tau_t + \sigma_i + \varepsilon_{i,t} \quad (2)$$

The significance of β_3 implies the validity of our hypothesis. The outcome of the sign on the coefficient of the interaction term will determine whether finance and social capital variables are complements or substitutes in the growth equation. Estimation is based on system Generalized method of moments (SGMM) of Arellano and Bond (1991) and Arellano and Bover (1995). This method, as compared to pooled OLS, is more superior and reliable. This stance is reached based on the ability of the former to address issues surrounding endogeneity (reverse causality, measurement error, and omitted variable bias). Also, the method accounts for the problem of weak instruments more efficiently in relation to the difference GMM (Ajide and Raheem, 2016).

The threshold model is based on the DPTR of Kremer et al. (2013). Among the advantages of this methodology is the freedom it gives to data to search for threshold restriction, rather than pre-impose apriori conditional restrictions, as would be the case in the linear model (Slesman et al., 2019, offer more details). The DPTR combines both the Hansen (1999) non-dynamic panel threshold regression and the Cancer and Hansen (2004) instrumental variable threshold method. These two methods correct the endogeneity issue arising from the inclusion of the lag of the dependent variable. There are two sets of regressors in the application of DPTR: exogenous and endogenous variables. Like previous studies, we chose the lag of GDP per capita as the endogenous variable, while the remaining variables are treated as exogenous. SC is the regime-dependent variable. A detailed procedure in estimating DPTR is offered by Kremer et al. The DPTR model is specifies below:

$$Growth_{i,t} = \beta_1 Growth_{i,t-1} + \beta_1 Finance_{i,t} I(Soc_{i,t} \leq \varphi) + \beta_2 Finance_{i,t} I(Soc_{i,t} \leq \varphi) + \theta X'_{i,t} + \beta_3 [Finance * Soc]_{it} + \tau_t + \sigma_i + \varepsilon_{i,t} \quad (3)$$

The indication function I(.) implies the long-run effect of finance on growth to two possible cases: when $Soc_{i,t}$ is below and above the estimated threshold variable. In the case of the former, SC splits the sample into the low regime, while the latter is the sample split into the high regime.

To examine whether our results are sensitive to the income level of countries, we use quantile regression. We denote the regressors in the previous equation a Z. Hence, the quantile regression is expressed as:

$$Growth_{i,t} = \alpha + \beta_\tau Z_{i,t} + \varepsilon_{\tau,t} \quad (4)$$

Where β is the unknown parameter that is linked to the τ^{th}quantile.$\varepsilon_{\tau t}$ is the error term and is assumed to satisfy the constrain $\varepsilon_{\tau t} Quant_\tau(\varepsilon_{\tau t}|Z_t) = 0$ and that the errors have zero conditional mean. The τ^{th} regression $0<1>\tau>0$ helps solve the minimization problem.

$$\min_{\beta_\tau} \frac{1}{n}\left(\sum_{t:C_{it}\geq\beta_\tau Z_t} \tau|\, C_{it} - \beta_\tau Z_t + \sum_{:C_{it}<\beta_\tau Z_t}(1-\tau)|\, C_{it} - \beta_\tau Z_t\right) \quad (5)$$

3.2 Data and measurement issues

The scope of this study is based on 70 developed and developing countries for the period 1996-2017. As the norm in the determinant of growth literature, we use 5-years non-overlapping data. The list of the countries is presented in the appendix. The three variables of interest are economic growth, financial development, and social capital.

There are two sources of data for SC. The first data is from Lee et al. (2011) by extracting the principal components from 44 variables spanning for major components of social capital, namely: social trust, norms, networks, and social structure. The index is scaled from the value of 0-10, with higher values showing higher levels of social capital. The second dataset is the trust indicator from World Values Survey. Trust is measured from responses to the following question: "Generally speaking, would you say that most people can be trusted, or that you cannot be too careful in dealing with people?". Two possible answers are provided, namely: (i) "most people can be trusted"; and (ii) "can't be too careful". An index of trust is then constructed from the percentage of respondents who answered: "most people can be

trusted". For more information and description of SC, please consult Lee et al. (2011) and World Values Survey, respectively.

Financial development measures are related to bank-based indicators. The developmental problems of the developing countries' stock marketsare widely acknowledged, which is in addition to the reliability of data emanating from such markets, explains the exclusion of the stock market-related measures. Four proxies of financial development are considered. These proxies address the depth and efficiency segments of the financial index (Sahay et al., 2015). The financial depth measures are: (i) domestic credit provided to the private sector; (ii) domestic credit provided to the private sector by the banking sector; and (iii) liquid liability (i.e. broad money supply). All these proxies are measured in proportion to GDP. The fourth is financial efficiency that measures the ratio of banks' capital to assets[5]. Data are collected from World Development Indicators (WDI).

In aligning with the standard practice in growth models, the study uses the growth of real GDP per capita as a measure of economic development. Other control variables used are: log of GDP per capita to capture possible convergence effect; investment proxied by the ratio of gross fixed capital formation to GDP-this is used to depict the extent of physical capital accumulation; trade openness is captured by the sum of imports and exports to GDP.

4.0 Empirical Results

Table 1 presents the descriptive statistics. For want of space, discussions would be limited to the variables of interest. An overview of the Table shows that the average GDP growth stood at about 2.7%. There is a wide dispersion in the growth rate of countries under investigation, as indicated by the difference between the minimum and maximum values. Of the finance measures, domestic credit to the private sector has the highest mean and is simultaneously the most volatile. The average value of SC is about 5 and 2.7 based on Data from Lee et al. (2011) and WVS, respectively.

[5] We acknowledge that there are indicators that measures access to financial development. The decision to ignor e such indicators is based on data availability, as some countries in our sample size have no reported data.

Table 1: Descriptive Statistics

Variable	Mean	Std Dev.	Min	Max
GDP	2.752	3.142	-2.156	8.249
INCOME	3.782	0.601	3.118	3.309
SC	4.966	1.683	1.620	8.290
SOC	27.466	16.222	0.280	10.800
ASSET	9.020	3.944	2.840	22.900
LIQ	69.857	40.373	23.185	120.254
PRI	72.187	47.834	25.026	132.412
BANK	63.054	43.887	22.185	124.226
INV	22.891	4.743	7.505	44.470
TRA	23.026	18.546	18.454	72.65
SCHL	81.182	17.16	12.182	97.853

Source: Authors' computation

Note: GDP=Growth rate of GDP; SC= Social capital using Lee et al. (2011); SOC= Social C apital using World Value Survey (WVS); INCOME= Initial Income; ASSET= Ratio of bank capital to assets; LIQ=Liquid liabilities; PRI=domestic credit provided to the private sector; BANK=domestic credit provided to the private sector by the banking sector; INV=Investmen t (Gross fixed capital formation); TRA=Trade openness; and SCHL=Secondary School enrol ment.

Table 2 presents the results of the baseline model. Results show that SC has weak negative ef fects on economic growth, as the estimated coefficient is rarely statistically significant. These results are robust to the alternative measures of social capital. The coefficients ranged from -1.326 to 0.075. These results give the first indication that the role of SC in the growth process seems to be exaggerated. Otherwise, one would have expected SC to have a consistent positi ve effect on growth. The mixed impact of SC on growth also validates the Putnam and Olson hypothesis. The extant literature has supported similar results. For instance, studies have esta blisheda negative correlation between these variables (Miguel et al., 2005; Pryor, 2005; Coate s et al., 2011; Trumbell, 2012). Our results implicitly suggest that SC's eventual growth effec t depends on other factors in the model. Across the board, except financial efficiency measure , there is either an unconditional negative or weak effect of finance on growth. The implicatio n is that credits extended by banks and non-bank financial institutions to private sectors are n ot growth-enhancing. The reason for this outcome may not be far-fetched from the fact that s uch funds are not often channelled to productive segments of the economy by the private sect ors. This result is consistent with that of Narayan and Narayan (2013), Grassa and Gazdar (20 14), Mhadhbi (2014), and Ayadi et al. (2015). A section of the literature has argued that the g rowth impact of finance is heterogeneous to measures of finance. Thus, the efficiency measur

es of finance are postulated to have more growth-enhancing tendencies than the other forms o f finance (Beck, 2015; Raheem, 2016; Ito Kawai, 2018).

The first hypothesis of the study seeks to inquire about the conditional effect of SC on the fin ance-growth literature. This is achieved by the interaction of finance and SC, which helps to e xamine the marginal effect of both FD and SC at different values. We believe that a compreh ensive evaluation of the marginal effects of both SC and FD would offer some interesting insi ght into how the interactive effect works. We start by examining the marginal effect of FD gi ven different levels of SC, i.e.; we examine the conditional effect of SC on the marginal effec t of FD on growth $\partial GDP_{it}/\partial \boldsymbol{FD_{it}} = \boldsymbol{\beta_2} + \boldsymbol{\beta_3 SC_{it}}$. We evaluate the entire sample range of *SC* ($\in$[1.62, 8.62]). Table 3 presents the results of the marginal effects. An overview of the Table shows that FD has a negative and statistically significant effect on growth at low levels of SC , specifically when SC ranges between 1.62 – 3.62. However, the effect turns positive when t here is an improvement in the level of SC (i.e., 4.62 – 8.62). These findings hold for the depth measures of financial development (i.e., when FD is proxied by LIQ, PRI, and BANK). A se ction of the literature has also reported similar findings by arguing that the beneficial effect of finance on growth is conditional upon a certain level of intervening variables, among which i nclude institutions. A caveat placed by these studies is that the intervening variable should be developed to a certain high level (Law et al., 2013 and Slesman et al., 2019). For instance, Sl esman et al. (2019) show that countries with a high level of political institutions benefit more from financial development. The efficiency-based measure of FD shows that FD has a margin ally positive effect irrespective of the level of SC. This stance supports the argument that the efficiency-based finance indicators enhance more economic growth rate. Results obtained are similar to previous articles (e.g.,Ahgion et al. 2005; Demetriades and Laws, 2006; Ahlin and Pang, 2008; Anwar and Cooray, 2012)[6]. However, the magnitude of the effects diminishes as SC increases.

[6]These studies used formal form institutions.

Table 2: Baseline Regression

	Social Capital = Lee et al. (2011)				Social Capital = World Values Survey			
	FD = LIQ	FD=PRI	FD=BANK	FD=ASSET	FD = LIQ	FD=PRI	FD=BANK	FD=ASSET
L.GDP	1.124 (0.801)	0.054 (0.313)	0.166 (0.342)	0.213 (0.327)	0.291 (0.542)	0.175 (0.381)	0.265 (0.396)	-0.374 (0.447)
FD	0.019 (0.032)	-0.012 (0.020)	-0.009 (0.018)	0.326[c] (0.184)	-0.011 (0.011)	0.003 (0.023)	-0.020[c] (0.005)	0.503[b] (0.192)
SOC	-1.326[c] (0.751)	-0.565 (0.715)	-0.698 (0.681)	-0.732 (0.458)	-0.003 (0.021)	-0.018[b] (0.008)	0.075 (0.023)	0.029 (0.026)
Constant	6.151[c] (2.239)	6.330[b] (2.661)	6.725[b] (2.579)	3.442[b] (1.258)	3.167[c] (1.856)	3.444 (2.901)	3.098[b] (1.313)	-0.658 (2.648)
F-Test (*p*-value)	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.005
AR(2) Test (*p*-value)	0.173	0.398	0.362	0.270	0.309	0.282	0.258	0.980
Hansen *J*-test (*p*-value)	0.315	0.042	0.077	0.371	0.334	0.396	0.309	0.618
Difference-in-Hansen Test (*p*-value)	0.959	0.933	0.724	0.916	0.852	0.985	0.942	0.808

Note: FD= Measures of Financial Development; SOC = social capital. Standard errors under the coefficients are in parentheses; [a], [b], [c] , implies level of statistical significance at 1%, 5%, and 10% level, respectively.

We now turn to the marginal effect of SC on different levels of FD, i.e. $\partial \text{GDP}_{it}/\partial SC_{it} = \beta_1 + \beta_3 FD_{it}$. We evaluate the entire sample range of *FD* ($\in [23.185, 132.412]$)[7]. SC has a negative marginal effect on growth at low levels of FD. However, the effect turns positive at a higher level of FD. It is instructive to state that a higher level of FD leads to higher marginal effects of SC on growth. This then supports a strand of the literature that concluded that "too much finance" will subsequently lead to "too much growth".

Table 3 suggests that the relationship among FD, SC and economic growth is nonlinear, as the exact marginal effect depends on the level of the intervening variables. More importantly, results presented so far suggest the ease at which the sign of the marginal effect could change once a certain level of SC or FD is exceeded. This could imply that there is a threshold effect in the relationship in the trilogy. Coincidentally, threshold analyses have been documented for: (i) SC-growth nexus (Roth, 2009); and (ii) FD-growth nexus (Cecchetti and Kharroubi, 2012; Law and Singh, 2014). This leads to the study's second hypothesis, which inquires whether there is a threshold effect in the relationship.

[7] For the efficiency based indicator, the sample range from BANK ([2.840, 22.900]). Hence, the marginal effect of SC_{it} at FD_{it} = 2.840, 4.840, 6.840, 8.840, … 20.840 and 22.900.

The results of the DPTR are presented in Table 4. The threshold values range between 3.4 an d 4.9. It should be noted that the threshold value for the ASSET model is considerably lower as compared to other models. This result is quite logical, as it has been documented that the e fficiency-basedfinancial development indicators are more growth-enhancing. Hypothetically, the level of SC needed to ensure growth would not be as high as other forms of finance consi dered to be less efficient. Taking the lower band of the threshold value, for instance, about 55 countries in our sample size exceed this value. Most of these countries have experienced a de cent and steady level of economic growth. This leads to the question of "what happens when countries go beyond this threshold value?" The decomposition of SC along the threshold valu es helps answer this question. Results show that more growth is established below the thresho ld value than the scenario when the SC level is higher than the threshold value. The coefficie nt assessment shows that the low SC-regime (countries whose SC level is lower than the thres hold variable. i.e.) have higher growth impact. For instance, based on the low regime and usin g bank credit as a measure of finance, a one percent increase in the level of SC attracts econo mic growth of about 1.3%. Whereas about 0.867% will be recorded when SC is beyond the th reshold value. Other measures of finance (PRI and BANK) constitute economic growth drag once the threshold level is exceeded. In such a scenario, SC is likened to a curse. Our results negate the popular notion that more finance leads to more economic growth in a good quality institutional environment.

This result is partly similar to William (2017), who shows that finance promotes growth in co untries with low institutions (political). Using a scale of 0 – 1, they show that the marginal eff ect of finance turns negative when the quality of institutions surpasses 0.87. Similarly, our res ult is supported by Piero-Palomino and Tortosa-Ausina (2013), who found that the impact of trust on income decreases as countries becomes richer. Law et al. (2013) and Slesman et al. (2019) found contrary results. These authors concluded that a higher level of institutions woul d lead to a higher marginal growth effect of finance.

Table 3: Main Result (Hypothesis 1) SOC= Lee et al. (2011)

	FD = LIQ	FD=PRI	FD=BANK	FD=ASSET
L.GDP	-0.501[c] (0.299)	-0.424[b] (0.208)	-0.384[c] (0.216)	0.071 (0.208)
FD	0.312[a] (0.095)	0.052 (0.037)	0.058 (0.037)	-0.048 (0.416)
SOC	5.106[a] (1.599)	1.857[b] (0.756)	1.549[b] (0.668)	-0.691 (0.700)
SOCFD	-0.067[a] (0.019)	-0.016[b] (0.006)	-0.015[b] (0.006)	0.100 (0.077)
Constant	-13.334[b] (7.211)		-3.125 (3.119)	2.881 (40357)
$\partial GDP_{it}/\partial FD_{it} = \beta_2 + \beta_3 SOC_{it}$				
Marginal effect of FD_{it} at SC_{it} = 1.62	-14.599[a] (5.386)	-3.716 (2.565)	-2.636 (2.273)	4.995[b] (2.387)
Marginal effect of FD_{it} at SC_{it} = 2.62	-9.493[b] (3.789)	-1.858 (1.812)	-1.087 (1.609)	4.304[b] (1.689)
Marginal effect of FD_{it} at SC_{it} = 3.62	-4.386[b] (2.195)	-0.0008 (1.064)	0.462 (0.950)	3.613[a] (0.996)
Marginal effect of FD_{it} at SC_{it} = 4.62	0.720 (0.631)	1.856[a] (0.355)	2.012[a] (0.334)	2.921[a] (0.334)
Marginal effect of FD_{it} at SC_{it} = 5.62	5.826[a] (1.043)	3.714[a] (0.516)	3.561[a] (0.460)	2.230[a] (0.460)
Marginal effect of FD_{it} at SC_{it} = 6.62	10.933[a] (2.625)	5.571[a] (1.245)	5.111[a] (1.098)	1.539 (1.137)
Marginal effect of FD_{it} at SC_{it} = 7.62	16.040[a] (4.220)	7.429[a] (1.995)	6.661[a] (1.758)	0.847 (1.832)
$\partial GDP_{it}/\partial SC_{it} = \beta_1 + \beta_3 FD_{it}$				
Marginal effect of SC_{it} at FD_{it} = 20	-13.977[a] (5.078)	-0.168 (1.857)	-0.088 (1.701)	2.985 (2.622)
Marginal effect of $SC_{it}FD_{it}$ =60	1.624[a] (0.364)	1.930[a] (0.419)	1.072 (0.955)	2.790[a] (0.967)
Marginal effect of $SC_{it}FD_{it}$ =80	7.865[a] (1.664)	2.980[a] (4.392)	2.813[a] (0.292)	2.596[a] (0.740)
Marginal effect of $SC_{it}FD_{it}$ =100	10.985[a] (2.618)	4.030[a] (1.143)	3.974[a] (0.981)	2.401 (2.390)
…	…	…	…	…
Marginal effect of $SC_{it}FD_{it}$ =150	29.708[a] (8.370)	5.080[a] (1.88)	6.875[b] (2.857)	2.207 (4.053)
Marginal effect of $SC_{it}FD_{it}$ =170	35.949[a] (10.289)	6.129[b] (2.627)	7.456[b] (3.234)	2.012 (5.718)
F-Test (*p*-value)	0.000	0.000	0.000	0.000
AR(2) Test (*p*-value)	0.106	0.210	0.168	0.185
Hansen *J*-test (*p*-value)	0.264	0.123	0.104	0.115
Difference-in-Hansen Test (*p*-value)	0.275	0.446	0.421	0.264

Source: Authors' computation

Note: FD= Measures of Financial Development; SOC = social capital. Standard errors under the coefficients are in parentheses; [a], [b], [c] , implies level of statistical significance at 1%, 5%, a nd 10% level, respectively.

Table 4: Threshold Regression (Hypothesis 2) SC = Lee et al. (2011)

	FD = LIQ	FD = PRI	FD=BANK	FD=ASSET
Threshold estimate with 95% confidenc e interval	4.9800 [4.9300 – 5.170 0]	4.416 [3.8100 – 4.50 0]	4.4160 [4.1650 – 4.500 0]	3.4300 [3.3500 – 3.680 0]
$\hat{\beta}_1(SC \leq \varphi)$	1.343 [b] (0.743)	0.477 [a] (0.024)	0.054 (0.471)	0.186 (0.366)
$\hat{\beta}_2(SC > \varphi)$	0.867 (0.376)	-0.476 (0.750)	-0.523 (0.743)	0.799[b] (0.330)

Source: Authors' Computation.Standard errors under the coefficients are in parentheses; [a], [b], [c] , implies level of statistical significance at 1%, 5%, and 10% level, respectively.

These results are quite intuitive and logical. A plausible explanation for our results is the und erlining nature of the concept of SC. Defining SC to be the degree of trust is whether agents h ave trust in someone or not. The lack of trust in someone would lead to avoidance of interacti ons of any form. However, once an economic agent earns society's trust, there will be cases o f several types of relationships and interactions. Of course, there is the possibility to increase the level of trust. However, this does not guarantee an increase in the level of relationship. A different picture emerges when SC is viewed in terms of cultural norms and heritage, where t here is no possibility of increasing this level. Hence, economic agents might be uncomfortabl e transacting with other agents who do not share the same clan. In all, SC could be regarded a s an "occultic" group. Once you are a member, you reap the associated benefits. However, ye ars of membership do not come with additional goodies. Another potential explanation could be linked to the concept of marginal utility, which states that utility decreases with the additio nal consumption of goods and services. Thus, once SC reaches its optimal level, the economy becomes saturated such that additional improvement or development in SC would not transla te to the development of the economy.

Taking a cue from Piero-Palomino and Tortosa-Ausina (2013), we relied on Quantile regressi on to examine whether income group classification of countries matters for the trilogy among SC, FD, and growth. Results of this exercise are presented in Table 5, which can be summari zed into three points. First, in most of the models, as countries become richer, the importance of SC on growth diminishes. This supports the findings of Piero-Palomino and Tortosa-Ausin a (2013). Second, richer countries can experience more of the benefit of finance. Some studie s have concluded that there is a positive correlation between income level and finance. Third, the net effect of economic growth on the interaction between SC and FD is negative but minu

te across the board. This suggests that that high level of SC and FD, singly or cumulatively, d oes not necessarily translate to economic growth[8].

We next seek to inquire whether the measures of SC are an important consideration to take no te of. Hence, an alternative measure of SC, WVS, was used, and we present the results in Tab le 6. More recent studies have resorted to this dataset (Piero-Palomino and Tortosa-Ausina 20 13; Bjornskov and Meon, 2015). Results of this inquiry are largely in contrast to those reporte d in Table 3. For instance, the new results found that both SC and FD have a negative and ins ignificant effect on growth. Some studies that have used similar measures of SC found simila r results (Westerlund and Adam, 2010 for literature survey). The marginal effect results show that a high level of SC will aid a negative relationship between finance and growth. On the ot her side of the coin, a higher level of FD will negatively affect the SC-growth nexus. In essen ce, low to moderate levels of FD and SC are consistent with economic growth.

Table 5: Quantile Regression (SC = Lee et al., 2011)

	Tau = 0.25	.50	.75	.95
FD = LIQ				
SOC	0.396[b]	0.290	0.209	-0.003
	(0.199)	(0.195)	(0.241)	(0.447)
FD	0.021	0.026	0.030[b]	0.040
	(0.016)	(0.014)	(0.015)	(0.027)
SOCFD	-0.005[c]	-0.006[a]	-0.007[a]	-0.010[b]
	(0.002)	(0.002)	(0.002)	(0.004)
Net Effect	-0.004	-0.003	-0.005	-0.009
FD = PRI				
SOC	0.035[a]	0.291[b]	0.240	0.106
	(0.118)	(0.141)	(0.207)	(0.426)
FD	0.005	0.018	0.028	0.055
	(0.008)	(0.011)	(0.017)	(0.035)
SOCFD	-0.003[b]	-0.004[b]	-0.006[a]	-0.011[b]
	(0.001)	(0.001)	(0.002)	(0.004)
Net Effect	-0.001	-0.002	-0.002	0.00004
FD = BANK				
SOC	0.332[a]	0.262[b]	0.207	0.053
	(0.116)	(0.131)	(0.183)	(0.376)
FD	0.005	0.021[c]	0.033[c]	0.068[c]
	(0.010)	(0.012)	(0.018)	(0.037)
SOCFD	-0.002[c]	-0.005[a]	-0.007[a]	-0.012[a]
	(0.001)	(0.001)	(0.002)	(0.004)
Net effect.	-0.004	-0.003	-0.001	0.008
FD = ASSET				

[8] The net effect is calculated as the (A*B) + C where A is the estimated coefficient of the interactive term, B is t he mean value of SC and C is the estimated coefficient of FD. This approach has been adopted by previous studi es (Asongu and Nwachukwu, 2016; Ibrahim and Ajide, 2020).

SOC	-0.305 (0.218)	-0.567[a] (0.207)	-0.834 [a] (0.276)	-1.335 [a] (0.506)
FD	-0.155 (0.155)	-0.170 (0.152)	-0.185 (0.209)	-0.213 (0.374)
SOCFD	0.030 (0.029)	0.057 [c] (0.032)	0.084 [c] (0.047)	0.135 (0.088)
Net Effect	-0.006	0.113	0.232	0.457

Source: Authors' computation. Standard errors under the coefficients are in parentheses; [a], [b], [c] , implies level of statistical significance at 1%, 5%, and 10% level, respectively.

Interestingly, there are some elements of similarities in the results of the two measures of SC. The first similarity is attributed to the threshold model. Table 7 infers that a positive relations hip ensues when SC is below the threshold value. On the flip side, exceeding this threshold v alue leads to a negative relationship. As such, "too much of trust" lead to growth

Table 6: Robustness Checks: Social Capital = World Value Survey

	FD = LIQ	FD=PRI	FD=BANK	FD=ASSET
L.GDP	-0.124 (0.324)	-0.226 (0.183)	-0.032 (0.213)	0.118 (0.225)
FD	-0.032 (0.130)	-0.03 (0.022)	-0.023 [b] (0.010)	0.111 (0.237)
SOC	-0.235 (0.303)	-0.044 (0.070)	-0.014 (0.028)	-0.056 (0.079)
SOCFD	0.0009 (0.004)	0.0002 (0.0006)	0.0001 (0.0002)	0.008 (0.009)
Constant	-23.265[a] (4.256)	-2.258 (1.065)	4.013 [a] (1.041)	1.631 (2.250)
$\partial GDP_{it}/\partial FD_{it} = \beta_2 + \beta_3 SC_{it}$				
Marginal effect of FD_{it} at SC_{it} =2.8	8.540 (7.470)	3.550 [c] (1.811)	2.885 [a] (0.742)	4.031 [b] (1.976)
Marginal effect of FD_{it} at SC_{it} =12.8	6.183 (4.435)	3.107 [a] (1.117)	2.742 [a] (0.470)	2.906 [a] (0.410)
Marginal effect of FD_{it} at SC_{it} =22.8	3.826[a] (1.417)	2.66 [a] (0.459)	2.598 [a] (0.221)	2.343 [a] (0.443)
Marginal effect of FD_{it} at SC_{it} =32.8	1.469 (1.680)	1.777 [c] (1.058)	2.455 [a] (0.188)	1.781 (1.219)
…				
Marginal effect of FD_{it} at SC_{it} =88.8	-12.670 (19.893)	-0.437 (4.562)	1.594 (1.811)	-1.030 (5.187)
Marginal effect of FD_{it} at SC_{it} =98.8	-15.027 (22.932)	-0.880 (5.267)	1.450 (2.092)	-1.592 (5.982)
Marginal effect of FD_{it} at SC_{it} =100.8	-17.384 (25.971)	-1.323 (5.971)	1.306 (2.373)	-2.155 (6.777)
Marginal effect of FD_{it} at SC_{it} =110.8	-19.741 (29.011)	-1.769 (6.676)	1.163 (2.654)	-2.717 (7.572)

$\partial GDP_{it}/\partial \square\square_{\square\square} = \square_{\square} + \square_{\square}\square\square_{\square\square}$				
Marginal effect of SC_{it} at FD_{it} =20	4.517 (6.937)	4.051 [a] (1.284)	3.601 [a] (0.509)	1.962 (1.501)
Marginal effect of SC_{it} at FD_{it} =40	3.859 (4.323)	3.428 [a] (0.838)	3.132 [a] (0.308)	2.408 [a] (0.565)
Marginal effect of SC_{it} at FD_{it} =60	3.201[c] (1.721)	2.493 [a] (0.270)	2.662 [a] (0.160)	2.855 [a] (0.436)
Marginal effect of SC_{it} at FD_{it} =80	2.543[a] (0.969)	1.870 [a] (0.423)	2.193 [a] (0.226)	3.302 [b] (1.366)
…				
Marginal effect of SC_{it} at FD_{it} =150	-0.088 (11.397)	-0.310 (1.966)	0.549 (0.942)	3.748 (2.312)
Marginal effect of SC_{it} at FD_{it} =170	-0.746 (14.014)	-0.933 (2.422)	0.080 (1.157)	4.195 (3.261)
F-Test (*p*-value)	0.000	0.000	0.000	0.000
AR(2) Test (*p*-value)	0.377	0.338	0303	0.168
Hansen *J*-test (*p*-value)	0.133	0.227	0.280	0.338
Difference-in-Hansen Test (*p*-value)	0.602	0.945	0.541	0.245

Source: Authors' computation. Standard errors under the coefficients are in parentheses; [a], [b], [c] , implies level of statistical significance at 1%, 5%, and 10% level, respectively.

drag. The second similarity is related to the quantile regression, whose results are presented i n Table 8.

Table 7: Threshold Regression (SC = World Value Survey)

	FD = LIQ	FD = PRI	FD=BANK	FD=ASSET
Threshold estimate with 95% confidence interval	17.6000 [16.120-18.220]	17.6000 [16.120-18.220]	17.6000 [16.120-18.220]	15.2200 [14.500 -15.800]
$\widehat{\square}_1(\square\square \leq \square)$	0.056 (0.078)	0.075 (0.078)	0.071 (0.078)	-0.108 [c] (0.062)
$\widehat{\square}_2(\square\square > \square)$	-0.014 (0.017)	-0.008 (0.016)	-0.010 (0.016)	-0.022 (0..018)

Source: Authors' computation. Standard errors under the coefficients are in parentheses; [a], [b], [c] , implies level of statistical significance at 1%, 5%, and 10% level, respectively.

As a robustness check, we allow for the inclusion of some control variables. Following the ex tant literature, we included some renowned growth determinant variables (see Table 1 for the list). The second check is to account for outlier effects. Countries with extremely high or low values of the variables of interest could override the effect of other countries. For want of spa ce, results of these checks are not presented herein but would be made available upon request.

Some post-estimation tests were conducted. The Arellano and Bond test shows that there is n o autocorrelation in the model. There is no evidence of over-identification restriction among t

he selected instruments. The Sargan test confirms the exogenous tendencies of the instrument s in the group.

5. Conclusion

This study examines the trilogy among economic growth, social capital (SC), and financial de velopment. It essentially argued that the finance-growth nexus is conditional upon the SC. Th e argument is further extended to account for the role of the threshold effect of SC on the nex us. The study also examined whether the income level of countries alters this relationship. Ba sed on Lee et al. (2011) data on SC, we built a dataset for 70 countries covering six continent s of the world. We show that financial development and SC individually promote economic g rowth. Results of the interaction, gauged by marginal effects, show that higher levels of these variables promote economic growth.Evidence also shows that below the threshold value of S C, financial development enhances more growth rate thanthescenario where the threshold val ue is exceeded. In addition, results show that higher income level of countries is associated w ith increasing negative net effect. Hence, the developed countries seem not to benefit from th e finance-SC dynamics. In all, we present new evidence of the exaggerating tendencies of SC in the economic growth trajectories. These results are robust to different empirical specificati ons and measures of finance. Our results negate the popular notion that more finance leads to more economic growth in a good quality institutional environment. We align this scenario to (i) the nature and concept of SC, which does not give room for improvements, and (ii) the co ncept of marginal utility in the sense that benefits derived from the improvement of SC declin e once SC has attained its optimal level.

One policy option from these results is that policymakers should devise means of improving t he quality of the SC in a moderate manner. Caution must be exercised when interpreting this suggestion. There is no need for excessive improvement as results have shown that an “exces s” level of SC could be detrimental to the economy. More so, 70% of the countries in our data set have their SC equalling the threshold values. In other words, policymakers should focus o n other sources of growth aside from SC. Another important policy implication of our results is the need for monetary authorities to ensure the continuous development of the financial effi ciency-based indicators, as they lead to more economic growth when compared to other indic ators. The most important policy suggestion is that policies that seek to improve financial dev elopment should go hand-in-hand with policy recommendations on SC. This is connected to t he complementary nature of these variables in the growth process of countries.

Table 8: Quantile Regression (SC= World Value Survey)

	Tau = 0.25	.50	.75	.95
FD = LIQ				
SOC	-0.017 (0.014)	-0.042 [b] (0.017)	-0.073 [a] (0.021)	-0.118 [a] (0.029)
FD	-0.016 (0.005)	-0.027 [a] (0.006)	-0.041 [a] (0.007)	-0.062 [a] (0.011)
SOCFD	0.0002 (0.0001)	0.0005 [a] (0.000)	0.0009 [a] (0.0002)	0.001 (0.0003)
Net Effect	-0.010	-0.013	-0.016	-0.034
FD = PRI				
SOC	0.001 (0.012)	0.001 (0.032)	0.0005 (0.050)	-0.001 (0.105)
FD	-0.007 (0.004)	-0.010 (0.010)	-0.013 (0.015)	-0.022 (0.032)
SOCFD	-0.0005 (0.015)	-0.0001 (0.003)	-0.00002 (0.0005)	-0.0006 (0.001)
Net Effect	-0.020	-0.0127	-0.013	-0.038
FD = BANK				
SOC	0.002 (0.012)	-0.004 (0.031)	-0.001 (0.049)	-0.007 (0.100)
FD	-0.007 (0.004)	-0.010 (0.010)	-0.012 (0.016)	-0.019 (0.035)
SOCFD	0.000008 (0.0001)	-0.0001 (0.0003)	-0.00002 (0.005)	-0.0003 (0.001)
Net Effect	-0.006	-0.012	-0.012	-0.027
FD = ASSET				
SOC	-0.005 (0.009)	0.007 (0.014)	0.019 (0.016)	0.040 (0.028)
FD	0.006 (0.060)	0.204 [a] (0.073)	0.396 [a] (0.111)	0.737 [a] (0.214)
SOCFD	-0.001 (0.011)	-0.018 (0.013)	-0.034 [c] (0.019)	-0.063 [c] (0.034)

Source: Authors' computation. Standard errors under the coefficients are in parentheses; [a], [b], [c] , implies level of statistical significance at 1%, 5%, and 10% level, respectively.

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Data Statement
The data that support the findings of this study are available from the corresponding author u pon reasonable request.

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Appendix: List of the 70 developed and developing countries

Albania, Algeria, Argentina, Australia, Austria, Bangladesh, Belarus, Belgium, Bosnia and H erzegovina, Brazil, Bulgaria, Burkina Faso, Canada, Chile, China, Colombia, Croatia, Cyprus , Czech Republic, Denmark, Egypt Arab Rep., Estonia, Finland, France, Germany, Greece, H ungary, Iceland, India, Indonesia, Iran Islamic Rep., Ireland, Italy, Japan, Jordan, Kyrgyz Rep

ublic, Latvia, Lithuania, Luxembourg, Malaysia, Malta, Mexico, Moldova, Morocco, Netherl ands, New Zealand, North Macedonia, Peru, Philippines, Poland, Portugal, Romania, Russian Federation, Serbia, Slovak Republic, Slovenia, South Africa, Spain, Sweden, Switzerland, T hailand, Trinidad and Tobago, Turkey, Uganda, Ukraine, United Kingdom, United States, Ve nezuela RB, Vietnam, and Zimbabwe.