Impact of Social Capital on Economic Growth in Nigeria: 1995-2022

[1]yahaya Masaud[2] Shehu Anfani Musa

[1]masaudyahaya1250@gmail.com[2]shehumusaanfani@gmail.com
+2347036869135+2348030739822

[1]**Department of Economics, Ahmadu Bello University-Zaria, Nigeria.**

[2]Department of Economics IBB University Lapai Niger State Nigeria.

Abstract

This research paper delves into the intricate relationship between "trust" and "association membership "as components of social capital on economic growth using panel data spanning the years 1995 to 2022. We used the dynamic panel ARDL to unveil both the long-term and short-term dynamics between these variables. According to the study's findings, there is a noteworthy absence of a long-run relationship between social capital and economic growth. Surprisingly, this outcome holds consistent across the diverse sample of member countries. As a result, this study firmly concludes that social capital does not exert significant influence on economic growth in both short-run and the long run. Subsequently, the paper put forth the following suggestions: Governments should prioritize the development of social capital as a central policy objective. This strategic focus will improve investor confidence and civic trust, which will improve the country's economic prospects .Secondly, states should leverage their inherent growth potentials, which will undoubtedly increase social capital fostering a positive cycle of growth and societal cohesion.

Key words: Social capital, Economic Growth, Trust.

1. Introduction

A large chunk of growth literature has been devoted on unearthing the role of conventional factors on explaining the growth process of nations. These include the human and physical capitals as well as technological development. However, the world is still reluctant to incorporate the unconventional aspects that might have a stake in the growth process of nations. Inspite of the tramendous accumulation of such aforesaid inputs, by so many countries, their income remains barely unchanged. Thus, the causes of the persistence of uneven growth across nations remains the question that growth literature is yet to answer. Nigeria has met a lot of the conventional factors worthy of effecting sustainable growth, but still battling with growth challenges. Just like many other countries.

The world real growth data seem to obviously counter the neoclassical growth model catching-up and cutting-edge predictions. For instance, between 1999 and 2011, Africa and Latin American developing regions recorded 0.5% and -1.5% growth rates respectively, with per capita income of $1700 and $8100 within same period (United Nations, 2018). The Sub- saharan Africa

(SSA) region in particular recorded per capita income growth rate of 0.3%, while Europe and central Asia region had achieved per capita growth rates of 1.2% between 2014 and 2017. Between 2014 and 2015, Canada, France and Germany recorded GDP growth rates of 0.1% , 1.3% and 1.7%, and per capita growth rates of 0.9% across the board. Nigeria, Niger Republic and Congo republic recorded per capita growth rates of 0.0%, -0.5% and 0.1% respectively, within same period (World Bank, 2017).

Most of the preceding literature that investigated the nexus between social capital and economic growth are associated with one methodological weakness or the other. For instance, prior to 2012, researchers in this strand relied upon cross-section model specification. Data limitation made panel specification impractical. Knack and Keefer (1997); La Porta et al. (1997); Zak and Knack (2001); Beugelsdik et al. (2004) among others are example of such studies. However, the cross-section model results are not necessarily robust to a panel specification. In some cases, significant parameter in cross-section analysis become insignificant when placed in panel framework. A famous example of this parameter instability is human capital. in their cross-section framework, Mankiw, Romer and Weil (1992) revealed that human capital component is significant in Augmented Solow Model. However, Islam (1995) found it insignificant when employed in a panel framework. The panel specification adopted by this study has potential to yield greater insights with regards to preceding cross-section results

Second, the few exceptional studies that employed panel specification mostly sidelined developing economies. Thus, they focused on developed economies, particularly the organization for economic cooperation and development (OECD) member countries and other European countries. Dearmon and Grier (2009); Algan and Cahuch (2013) and Kasmaoui et al. (2018), among others, are the studies. Thus, there seem to be a total or partial neglect of developing economies, particularly the Sub-Saharan economies in the studies of this sort. Meanwhile, there is some evidence that social capital indicators' elasticity to economic growth might vary between developing and developed countries. That is, the efficacy of certain measures of social capital to development might vary according to income level. This study intends to provide insghts as to the elasticity of development to social capital indicators in the Sub-Saharan region relative to other part of the world, particularly the high income countries.

Conceptual Issues

Social capital is defined as the features of social organizations such as trust, norms, networks and institutions that facilitate coordination and cooperation for mutual benefits. It is multidimensional concept that consists of Local organizations, firms, civil societies and formal institutions. Each component was defined separately. The local organizations are social groups found within family cycle, friends, neighborhood, business and religious denominations. They include among others choral societies, literary clubs, and youths clubs like scout and footballclubs. They are inherently good in that they give families and communities a sense of identity and common purpose (Woolcock and Narayan, 2006). Members of these groups learn to trust and cooperate with one another in order to achieve common goals (Putnam, 1993).

The trust is the mutual faithfulness on which all social relationships depend. It is more basic for the constitution of civic groups than even a sense of moral obligation. It is a mechanism for economic choice and risk management (Yan and Holtmanns, 2007). It is simply a qualified belief by a trust or with respect to the competence, honesty, security and dependability of a trustee within a special context. Trust reduces asymmetric information, risk and uncertainty problems embedded in most investments processes by increasing efficiency in information sharing. Loans, like contracts, occur over a period of time. Increasing level of information sharing as a result of trust would allow the financial institutions to identify more successful projects. An increase in the number of successful projects would increase the

efficiency of bank loans, ceteris paribus (Dearmon and Grier, 2009). Thus, the trust mitigates both contractual and legal costs.

Review of Empirical Literature

Maksimovic *et al.* (2023) explored the role that social capital plays in boosting small businesses. Using a primary data collected through distributed questionnaire, findings revealed small businesses exploit opportunity to grow better in areas with established social capital. Kanini*et al* (2022) investigated the nexus between social capital and performance of micro, small and medium manufacturing ventures in Kenya. Having used the descriptive and inferential statistics, the findings revealed the emergence of positive correlation between social capital and performance of micro, small and medium manufacturing enterprises.

Akintimehin, Eniola, Alabi, Eluyela, Okere, and Ozordi (2019) used cross sectional data on a sample size of 650 informal business owners to explore the relationship between social capital and business performance in Nigeria using structural equation modeling (SEM) with the partial least squares (PLS) method. Results indicates that internal social capital had a significant effect on non-financial performance but not on financial performance. The paper concludes by underscoring the significance of social capital resources in influencing the performance of informal enterprises. The findings suggest that internal social capital plays a crucial role in enhancing both financial and non-financial performance, emphasizing the importance of leveraging relationships with family, friends, and employees in driving business success.

Kasmaoui*et al.* (2018) studied the influence of trust on economic growth of the Arab world. The main objective of the study was to examine the role that trust is playing in promoting or hampering economic growth in the Arab world in the time of uprising and political upheavals. The Barrotype model was adopted for the study. Data for dependent and control variables were sourced from World Bank and World Development Indicators. The data for trust were sourced from World Values Survey (WVS).

Both the OLS and 2SLS were used as a result of perceivedendogeneity between trust and GDP per capita. The findings indicated positive correlation between generalized trust and economic growth. The effect seemed to be weaker in the Middle East and North Africa region, compared with the rest of the world. A fall in public trust arising from uprising can have a dampening effect on region's growth.

Al-Omoush, Simón-Moya andSendra-García (2020) investigated the influence of social capital and collaborative knowledge creation on e-business proactiveness and organizational agility in responding to the COVID-19 crisis. The findings of the analyzed primary data indicated the emergence of the positive correlation between the variables.Moreover, Lins, Servaes& Tamayo (2017)unearthed the impact of corporate social responsibility (CSR) as a distinct form of social capital on corporate profitability and sales growth. Their primary data analyzed results revealed the eistene of the positive correlation between corporate social responsibility and corporate return in terms profitability and sales growth.

Malebana (2016) investigated the influence of social capital on the formation of enterpreneurial intention. Crossectional survey was used to collect data. The findings showed the presence of positive correlation between social capital and ormation of enterpreneurial intention.Delić, Saric and Osmanovic (2017) carried out a study titled "Significance of Social Capital on Socio-Economic Development of Bosnia and Herzegovina", to identify and analyse the status of social capital components in socio-economic development of Bosnia and Herzegovina. Primary data were collected through field research survey, from 100 top management team of SMEs in Bosnia and Herzegovina. The multiple regression model estimates showed that the role of social capital dimensions used in the study in economic development of the duo states are insignificant. They therefore recommended the socio-economic policy makers to put more effort in the development of social capital.

Methodology and Data

In order to address the methodological weaknesses that engulfed the social capital literature and produce a robust parameter, we adopt a cross country panel study with fairly long time frame, which is between 1995 and 2022. Our explanatory variable is social trust as noted earlier, to represent social capital. This is due partly to the prominence the trust receives in the literature as social capital component, and partly the relative availability of data compared to other components, while the dependent variable is economic growth measured as real growth domestic products of the sample member countries. All factors included in the Augmented Solow model are captured as control variables to enable us verify the explanatory power of the social capital on economic growth.

Model Specification

This paper adapts the Augmented Solow model as modified by Mankiw*et al.*(1992) and Barro (1991); and by factoring human capital and suggested the technological development be endogeneous factor of the model. Thus, by incorporating the social capital indicator (trust), the specified output becomes the function of labour, previous output, physical, human and social capital investments. The transformed model is given by:

$$Log \; RGDP_{it} = b0 + b_{1i} + b_2\, TRUST_{it} + bLogRGDP_{it-1}$$
$$HCI_{it} + w_{it}$$

$$+ b_4 LogLF_{it} \; + b_5 Log \; GFCF_{it} + b_6 Log$$

of lagged dependent variable among the regressors as well as Individual effects which causes heterogeneity among the cross-section units. The implication of these cases is that they render both the fixed effects and random effect GLS estimators biased and inconsistent. For the fixed effect, the within estimator wipes out the individual effect such that it makes the lagged dependent variable correlated with error term component. Also, given the small size of our sample (N) and time frame (T), the estimator will still remain inconsistent (Baltagi, 2005).

For the random effect GLS estimator, the instrument IV will still produce inefficient parameter in that it does not make use of all the available moment conditions. It also doesnt take into account the differenced structure on the residual disturbamce (Baltagi, 2005). The solution to these inefficiencies is to adopt the panel autoregressive distributed lag (p, q, q,..., q) specification. Its generic form is given by:

$$y_{it} = \sum_{j=i}^{p} \lambda_{ij}\, y_{it-1} + \sum_{j=i}^{q} \delta_i\, X_{it-1}$$
$$+ \mu_i + \; e_{it}$$

Where the number of groups $_i$ =1, 2, ..., N, the number of periods t=1,2,...,T, X_{it} is K*1 vextor of explanatory variables, δ_{it} are the K*1 coefficients vector, λ_{it} are scalars and $ì_i$ is the group specific

Moreover, given the presence of lagged dependent variable in the specification, fixed sample size (N) and large time series (T), the analytical model is identified to be a heterogenous dynamic panel model, which is popularly known as autoregressive distributed lag (ARDL) panel. Unlike static panel model, dynamic model investigates the dynamic adjustment of parameter. This is because the model consists of two sources of persistence over time: Autocorrelation due to the presence effect. The relative size of time series enables the model to be fitted for each group separately. If the variables in the model are of I(1) order, and cointegrated, the error term, then is I(0) process for all groups. Moreover, the principal feature of cointegrated variables is thier responsiveness to any deviation from long-run equilibrium. This feature implies an error correction model in which the short-run dynamics of the variables in the system are influenced by the deviation from equilibrium. This stresses the need to re-parameterize the generic equation stated above into the error correction equation given by:

$$\Delta Y_{it} = \theta_i + (Y_{it-1} - \lambda_i X_{it}) + \sum_{j=i}^{p-1} \square \gamma_{ij} + \Delta Y_{it-1} + \sum_{j-i}^{q-1} \varphi_{ij} \Delta X_{it-1} + \text{Ʊ}_i + \varepsilon_{it} \quad 3.3.2$$

Where $\theta = -(1 - \sum_\square^{p \, j=i} \lambda_{ij})$, $\lambda_i = \sum^{q \, j=0} \delta_{ij} / (1 - \sum^k_\square \lambda_{ik})$, $\lambda*_{ij} = -\sum^{pm=j+1}_\square \lambda_{im}$, $j = 1,2,....,p\text{-}1$ and $\delta*_{ij} = -\sum q$, $m = j+1 \, \delta_{im}$, $j = 1,2,...,q\text{-}1$. The parameter θ_i is the error correcting speed of adjustment. If $\theta_i = 0$, then there would be no evidence of long-run relationship. This parameter is expected to be significantly negative under the a priori assumption that the variables show a return to long-run equilibrium.Of particular importance is the vector λ_{ij} which contains the long-run relationship of the variables. These two parameters are of primary interest, as far as ARDL model is concerned. $(Y_{it-1} - \lambda_i X_{it})$ is error correction term, while γ_{ij} and $\varphi_{ij}$are short-run parameters. Ʊ is individual specific effect, $\varepsilon_{it}$is error term and $_{it}$ and $_{it-1}$ subscripts simply denote current and lag variables subscripts respectively.

In this regard, our growth model can be specified as follows:

$$\Delta RGDP_{it} = \theta_i + (RGDP_{it-1} - \lambda_{0i} - \lambda_{1i} TRUST_{it} - \lambda_{2i} GFCF_{it} - \lambda_{3i} HC_{it} - \lambda_{4i} LF_{it}) +$$
$$\varphi_{11} \Delta RGDP_{it-1} + \varphi_{21} \Delta TRUST_{it-1} + \varphi_{31} \Delta GFCF_{it\text{-}1} + \varphi_{41} \Delta HC_{it\text{-}1} + \varphi_{51} \Delta LF_{it\,\text{-}1} + \text{Ʊ}_i + \varepsilon_{it}$$

More recently, Pesaran, Shin and Smith (1997, 1999) proposed another estimator that suits a heterogeneous dynamic panel model. The pooled mean group is an intermediating technique that combines the pooling feature of fixed effect estimator and averaging feature of mean group estimator. It allows intercepts, short-run coefficients and error variance to differ across the groups (as would the mean group estimator) but constrains the long-run coefficients to be equal across the sample (as would the fixed effect estimator). This pooling across countries yields efficient and consistent estimates when the restrictions are true.

If however, the true model is heterogenous, the PMG estimates are inconsistent in either case. Often only the long run parameter is of interest. The default result of the PMG option include the long run parameter estimates and the average short run estimates. Since the error correction model above is nonlinear in the parameters, Pesaran, Shin and Smith (1999) developed a maximum likelihood to estimate the parameters, expressing the likelihood as the product of each cross-section's likelihood, and taking the log yields:

$1T(\lambda, \degree, \sigma) = -T2 \sum_{\square}^{N \, i=1} \ln(2\pi\sigma 2i) \, 12N \sum_{\square}^{l=1 \, I\sigma 2l} \{\Delta y_i - \theta_i \Sigma_i(\lambda)\}, \, H_i\{\Delta y_i - \theta_i \, \Sigma_i(\lambda)\}$ 3.3.6

for i = 1, 2, ..., N, $\Sigma_i(\lambda) = y_{it-1} - x_i \lambda_i$, $H_i = IT - W_i (W_{I\,i} W_i) W_i$, IT is an identity matrix of order T, $W_i = (\Delta y_{t-1}, ..., \Delta y_{it-p+1}, \Delta x_{it}, \Delta x_{it-1}, ..., \Delta x_{it-q+1})$.

The parameter estimates from iterated conditional likelihood maximization are asymptotically identical to those from full information maximum likelihood. But the estimated covariance matrix is not. However, since the distribution of the PMG is known, the full covariance matrix for all estimated parameters can be recovered.

Table 1.0 Estimation of Panel ARDL

Long-run Equation

Variables	Coefficients	Standard Error	t-statistic	Prob
TRUST	-100.4106	13446.59	-0.007467	0.9941
DMEM	121928.0	115787.6	1.053031	0.2949
DLF	-0.017936	0.009074	-1.976713	0.0509

Short-run Equation

Variables	Coefficients	Standard Error	t-statistic	Prob
COINTEQ01	-0.935444	0.163250	-5.600173	0.0000
D(TRUST)	2649768	644185.1	-0.761067	0.4484
	-376501.9	555329.3	-0.677979	0.4994
D(DMEM)				
	-3732.495	3732.514	-0.999995	0.3198
D(DLF) C	35820.88	14239.38	2.515621	0.0135

Results and Discussion

In Table 1.0, TRUST has a negative coefficient of -100.4106. The negative coefficient and the t-statistic close to zero suggest that trust has no statistically significant impact on economic growth, at least in the long run. The coefficient of DMEM is 121928.0 while its associated p-value is 0.2949. Although both the coefficient and p-value are positive, however the relationship between membership and the economic growth are not significant at any conventional level.

DLF has a negative coefficient of -0.017936 and a p-value of 0.0509 suggesting that the relationship between the labor force and the economic growth is negative but statistically significant at 5% level indicating that labor force have a statistically significant impact on economic growth in the long-run.

In Table 1.1, the error correction term (CointEQ01) has a coefficient of -0.935444 and a positive p-value of 0.0000 indicating that CointEQ01 plays a crucial role in the short-run adjustment process towards the long-run equilibrium considering the positive and statistically significant value at conventional level.

Moreover, trust (TRUST), changes in membership (D(DMEM)) and changes in the labor force (D(DLF)) do not have statistically significant short-term effects.

This is in contrast with preceding studies such as Helliwell (1995); Keefer& Knack (1997); Putnam (1995); Sabatini (2007). This might be attributed to their methodological flaws, that influenced their findings.The findings however conform with Roth (2009) who found negative correlation between trust and economic growth in his study.This view further supportstudiesby Algan and Cahuch (2013) andHelliwell *et al.* (2016) who found positive correlation between generalized trust, well-being and life satisfaction as development measure. It also validates the works of Bjornskov (2006) and Roth (2009), Algan and Cahuch (2013) as well as Helliwell *et al.* (2016).

The results also lend credence to Helliwell (1995) who could not find any significant relationship to exist between trust and growth, and consequently concluded that the findings account for the fact that trust, as an indicator of quality social relationship, has more to do with well-being aspect of development rather than income. This equally supports the argument that economic evelopment is poorly measured by income per capita alone, without incorporating the well-being measures, which essentially depend on quality social relationship, and not individual income.

Conclusion

This study represents a deeper step in understanding the nexus between social capital and economic growth having employed a larger aggregate approach and fairly longer time frame. The paper concludes that *"trust" and "association membership"*as a component of social capital does not appear to labor force (DLF) has a negative but statistically significant relationship with economic growth in the long run. The study also acknowledged the complexity of the relationship between social capital and economic growth and hence maintained that more research is needed to better understand this connection.

Recommendations

Governments should prioritize the development of social capital as a central policy objective. This strategic focus will cultivate trust among citizens and instill confidence in investors, thereby bolstering the nation's economic prospects. Secondly, states should leverage their inherent growth potentials, as this will invariably contribute to the augmentation of social capital, fostering a positive cycle of growth and societal cohesion.

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