COMPARATIVE ADVANTAGE-DEFYING STRATEGY: AN ELUSIVE QUEST FOR INCLUSIVE GROWTH IN LAGGING ECONOMIES

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ABSTRACT
Despite the "improved" political institutions of governance in the wake of enthronement of democracies, the resource-endowed developing countries still remain largely the most lagging economies in the world. It is with such quest to break the mold of laggedly daunting development challenges of pervasive poverty, huge inequalities and joblessness that this paper examined the structural linkage between institutional quality, the preferred development strategy and broad-based productive employment growth in Nigeria during the period 1998-2017, employing Auto-regressive Distributed Lag (ARDL) bounds testing to cointegration technique. The results of the study revealed that institutional quality had an overall significant impact on the real GDP per person employed. However, contrary to its a-priori expectation, the technology choice index was positively signed, indicative of the country's adoption of an inappropriate development strategy. Meanwhile, all other explanatory variables were found to exert a positive statistically significant impact on inclusive growth in Nigeria both in the short-run and the long-run. The findings of the analysis showed that the state institution remains the major reference point in the conceptualization of a dynamic inclusive growth. Given her relatively labour-abundant resource endowment, building certain degrees of institutional capacity and character is much needed to harness the conversion of the nation's socio-economic potentialities into realities of sustainable broad-based productive employment growth. Therefore, a comparative advantage-conforming development strategy should become the policy priority of the Nigerian government. This would lift millions out of poverty and bridge the long standing huge inequality gaps amongst the citizens.

Keywords: Institutions, Development strategies, Financial inclusion, Productive employment, Inclusive growth, Comparative advantage
JEL Classification: O43, G21, P28, O15

1. INTRODUCTION

The spectacular failure of breaking the molds of inordinately rising levels of penuries, inequalities and unemployment quagmires in many low-income-income African countries, as in other parts of the world, still remains the most challenging puzzles in the contemporary development discourse. The long-standing war against the tripartite socio-economic problems of pervasive poverty, huge inequality gaps and jobless growth characterizing most the resource-endowed low-income developing countries (R-ELIDCs) can thus be decisively fought and won given the state's embedded autonomy and its resilience in terms of capacity and character (Stiglitz, 2016). However, for Nigeria, with the estimate of 3.2% population growth over the last 61 years of independence; and estimated national unemployment rate of about 33%, coupled with over 70% poverty rate and the huge inequality gaps, it seems inevitably expedient that the country can no longer afford a growth path that does not conform to her comparative advantage by defying the usage of her abundant human capital resource base (Olanrewaju, 2019).

Lin and Chang (2014) asserted that governments in developing countries are expected to functionally perform such a strategic role of pragmatically recognizing and exploiting the existing potentials for industrial/technological transformation and upgrading. This is because a nation's political institutions of governance fundamentally play such a catalytic role of evolving development strategies in relation to the country's area of comparative advantage endowment structure. But, any deviation from adopting the right development approach which reflects a nation's structural endowments would stall the laying of foundation for a realistic and sustainable development that could provide a triple-win solution to the trilemma of socio-economic development concerns of the developing world (Ghatak, 2003; Lin & Wang, 2020).

Interestingly, by virtue of its embedded autonomy and resilience in terms of capacity and character, the state institution has always remained the major source of economic development; having the capacities to foster equitable economic opportunities along with equal access to them by all, particularly those hitherto excluded (i.e the extremely poor and the vulnerable households in society) from the growth process. This accordingly provides a more convincing impetus to the adoption of alternative strategies for socio-structural economic transformations and development in the lagged-developing economies (Lin, 2004; Garba, Kassey-Garba & Ada, 2015).

To this end, the state institutional quality in the process of industrialization and socio-economic transformation can hardly be over-emphasized. Gleaning from the historical hindsight, none of the contemporary advanced nations of the world could lay any claim to having remarkable attainment of development without 'religiously' pursuing and adhering to the areas of her comparative advantage and structural endowments. Corroborating the fact that in any nation, 'everything rises and falls' with the kind of political leadership that is in place; governing the exploitation of its endowment structures and its comparative advantage shifting. Thus, development is structurally conceptualized and as such a country's endowment structure would always form the 'fulcrum' upon which all developmental dimensions of inclusive growth (balanced growth, secured growth, sustainable growth, and all the like) would thrive.

Notably therefore, despite the Nigeria's gigantic resource-endowments of both human and natural spanning across the six geo-political zones, how particularly her decades of the 'improved' political governance in the wake of enthronement of democracy in 1999 has influenced the adoption of right industry/technology for a broad-based growth and development. Or else, what needs to be done to achieve a sustainable development in the contexts of nations' endowment structures. Can we then say that the socio-economic and development challenges in many resource-rich economies especially Nigeria, are largely structural, cyclical or institutional? How

has the quality of institutional governance affected the development strategies in the Nigerian context? Are there causal links among the variables of institutional quality, technology choices and a broad-based productive employment growth as measured by the real GDP per person employed in Nigeria? Lastly, to what extent has institutional quality impacted on the link between development strategies and inclusive development? By what channel is the link of institutional quality transmitted to growth inclusiveness? Most importantly, this study will investigate how 'the new growth path' constitutes the key means to addressing the highlighted triune socio-economic problems, particularly as it relates to what is now understood as inclusive growth in the resource-rich and lagging low-income developing economies.

Bridging this potential gap, the study focuses on the capacity and character of the state institution in harnessing its resource endowment for a broad-based productive employment generation and thereby providing a triple-win solution to the tripartite socio-economic problems commonly associated with the most low-income developing countries. The paper employed the ARDL bounds testing to cointegration approach to objectively examine the impact of institutional quality on broad-based productive employment growth in Nigeria. The present study empirically investigates finance-inclusive growth nexus within the governance analytical framework (GAF).

The paper is structured as follows: Section 2 presents the review of literature on relationship between inclusive growth and institutional quality. Section 3 describes the data and methodology. Section 4 presents and discusses the empirical results while Section 5 concludes.

2. LITERATURE REVIEW

At the core of global challenge of the growth-redistribution dichotomy, is the need to enhance society's, and particularly the poor and marginalized groups' access to productive opportunities, thereby finding decent jobs, maintaining or promoting their small businesses for overall economic productivity. The key elements in inclusive growth therefore, are productive employment, development in human capabilities, social safety nets and coupled with the state's targeted interventions. The broad-based growth approach takes a longer term perspective as the focus is on productive employment rather than on direct output and income redistribution or pro-poor growth. Thus, the state institution still remains the only viable agent having the capacity to harness the nation's resources endowment for a broad-based socio-economic development.

The earlier theories hardly considered the critical role of political factors in economic growth and development. This is because those growth models were purely based on the assumption that the markets were perfect and there were no frictions. However, the extant empirical research has established the links between resource-abundance and choice of development strategy and the state institutional factors. However, in both the theoretical and empirical literature, it is generally assumed that there is a positive relationship between inclusive productive growth (the problem) and institutional governance (the analytical tools), as well as other control variables, such as financial inclusion, human capital development, civil society (Levy & Fukuyama, 2010). While the quality of institutional governance itself is determined by the context of either a historical or environmental, the interlinkage relationship in the course of influencing inclusive productive growth (dependent variable) is assumed to be determined by a larger process.

La Porta, *et al.,* (1998) attempted to assess the determinants of the quality of governments in 152 countries using government performance measures such as public sector efficiency, public good provision, size of government, and political freedom. The study found that countries that are poor, close to the equator, ethnolinguistically heterogeneous, use French or socialist laws, or have high proportions of Catholics or Muslims exhibit inferior government performance. Moreover, the

author consistently finds that the larger governments tend to be the better their performance and vice versa. In addition, the importance of historical factors such as, the economic, political, and cultural theories of institutions, explain the variations in government performance across countries. Correspondingly, Ajayi (2002) examined the theory and facts of how the quality of institutions and policies applied to the African situation. He observed that the missing link in Africa's growth process is the absence of adequate policies and efficient institutions. He found that corruption; ethno-linguistic fractionalization and civil strife as the institutional quality measures which have deleterious effects on growth. He also found that the conventional economic factors responsible for growth in Africa generally, and Nigeria in particular, do not fully explain its growth process. The study is relevant to the present as it has created useful insight into the problem which the present study sets out to solve.

Consistent with Ajayi's advocacy, Sachs (2005) described the less developed countries (LDCs) as being caught in a structural poverty trap due to severe underdevelopment of their productive forces compounded by asymmetric globalization. He argues that in spite of these odds, these countries still have a latent potential for evolving national inclusive, sustainable development strategies, capable of breaking the vicious circle of underdevelopment and poverty within the framework of mixed economies, properly regulated by lean, clean and democratic developmental states. He strongly opines that 'development from within is the best, if not the unique opportunity; and that genuine development of Africa cannot happen by replicating foreign models' (Sachs, 2005). The Policy implication of his findings is that a 'home grown' inclusive framework is much needed for triple-win solutions to the tripartite socio-economic problems of these lagged economies.

Applying a simple classification framework under the widely used world governance indicators (WGIs), Zhuang, de Dios and Lagman-Marrtin (2010) assessed the role of institutional quality measurement and direction of causality between institutional development and economic development in the developing Asian countries. The authors found that with government effectiveness, regulatory quality, and rule of law scored above the global means and grew faster on average during the period 1998-2008 in the Asian countries than those economies below the global means. In effect, their findings are consistent with Levy and Fukuyama (2010) that, improving governance in these three dimensions could be used as potential entry points of development strategies for many other developing economies in the region and elsewhere.

In another comparative study, Ajakaiye and Jerome (2011) examined the role of institutions in the transformative agenda of the Nigerian economy, drawing on the rich literature on institutions and the related experiences of Indonesia and Nigeria. However, the analysis of both countries reveals that the economic institutions and political framework were stronger in Indonesia than Nigeria. But over time, given the reforms in various sectors in the Nigerian economic space, the country is expected to place itself on the path of prosperity if she places her emphasis on institutional strengthening and manufacturing sector development which has been regarded as a key driver of structural transformation.

Lin (2012) empirically tested the effects of both the CAC and CAD strategies on economic performance, on a sample of 122 countries in the period from 1962 to 1999. As a proxy variable for CAD, the author uses the relative size of capital-intensive production while also including a variety of institutional control variables (index of economic freedom, the costs of starting a business, ratio of trade dependence etc.). The results obtained indicate that the CAD strategy indeed has a statistically significant negative effect on growth and leads to an increase in inequality. The author asserts that while CAC or CAD development strategy cannot be assessed an institutional vacuum, a country should follow its comparative advantage in order to develop.

Moreover, the government that adopts a CAD as against CAC, encouraging firms to ignore the existing comparative advantages of the economy will be full of rent-seeking and unproductive profit-seeking activities which hinder economic growth and development. The relevance of this to the present study is that a low-income developing country must identify an appropriate development strategy in order to catch-up.

From the finance development perspective, Fadun (2014) evaluated financial inclusion as a tool for alleviating poverty and redistributing income in developing countries, with special reference to Nigeria. The study, in view of the financial inclusion efforts at the global level, highlights the various financial inclusion strategies developed in Nigeria to decrease the number of Nigerians that are excluded from financial services. Considering the low levels of financial penetration and deepening in developing countries, including Nigeria, financial exclusion still remains an area of great concern, as the study reveal that 39.2 million adult Nigerians representing 46.3% of the adult population of 84.7 million were financially excluded in 2012**.** Further analysis also show that 54.4% of the excluded populations were women, 73.8% were aged less than 45 years, 34% had no formal education, and 80.4% reside in rural areas. The findings indicate that financial inclusion constitutes important tool for alleviating poverty and redistribution of income in developing countries, particularly in Nigeria.

Drawing on Lin (2012)'s, Siddique (2016) examined the effects of adopting a Comparative Advantage-Defying (CAD) development strategy using data for the period of 1963 to 1999 (cross-section average over this time period) and 1980 to 2000 (panel with 5 years interval) for 113 countries are used in the analysis. This paper also examines how this effect of CAD differs with the level of an economy's financial development, which is the most important channel for the effects of CAD on poverty to manifest themselves. The policy recommendation by this paper is to adopt Comparative Advantage-Conforming (CAC) development strategy, which facilitates the actors' entry into an industry according to the economy's existing comparative advantages in order to effectively combat the incidences of poverty, inequalities and unemployment.

In consonance with the Lin's comparative advantage development strategy prescription for resource-rich developing economies, Lectard and Rougier (2018) employed a dynamic panel of developing countries over the period 1992-2012 to test whether defying comparative advantage actually promote export diversification and sophistication. The results of their estimation show that the impact of distance to comparative advantage on productive transformation is strongly determined by the size of FDI stocks. Thus, defying comparative advantage has both a positive impact on the exportable manufacturing goods, and a detrimental effect on the percentage of domestic manufacturing value-added. The policy implications and relevance of these findings is that when a country defies her comparative advantage by adopting CAD as opposed to CAC development strategy, it would lead to a superficial and unsustainable transformation pattern of the productive structure.

Furthermore, Gnangnon (2020) investigates the effect of both CAF/CAD development strategy, and Aid for Trade (AfT) on structural change in production. The main findings of the analysis shows that the coefficient of the variable capturing AfT was negative and statistically significant, whereas the interaction term was though found positive, but not statistically significant at the conventional levels. Thus, on average, there exists no combined effect of AfT and development strategy (CAF or CAD) on the extent of structural change in production. However, it was therefore suggested that Aid for productive capacity building from the international financial institutions and donor countries must be accompanied by the adoption of the CAF development strategy for

the achievement of economic diversification and structural transformations in production in the developing economies.

In another theoretical exploratory study, Alonso, Garcimartin & Kvedaras (2020) employed a newly built dataset considered as the underlying variables which are linked with the quality of institutions (static and dynamic efficiency, predictability, and legitimacy). These variables were development level, income distribution, tax revenue, trade openness and education. They investigated the determinants of institutional quality for the period 1990 to 2010 utilizing more appropriate dynamic econometric tools, which seems adequate to deal with problems of endogeneity associated with most of the variables. The results show that institutional quality is conditioned by variables that can be manipulated by public policy, such as income per capita trade openness, education, taxation, and patterns of income redistribution. However, the authors conclude that per capita income, taxation and trade openness as well as income redistribution rather than mere inequality condition institutional quality.

Khan *et al.* (2020) examine the role of institutional quality in financial development using the latest dynamic global panel models including generalized method of moment (GMM). The study utilized sample datasets of 189 developing and emerging countries. The main findings show that while the institutional quality variables such as political stability and regulatory quality enhance financial development positively, other governance indicators like rule of law, control of corruption and government effectiveness have no significant effect on financial development in developing countries. However, the study suggests that quality institutions of political governance are key drivers of financial and economic development in both developing and emerging economies.

Additionally, Evrensel (2021) investigates the question of whether constitutions are proxy for institutional quality based on the OLS and 2-stage least squares estimates. The results of the study revealed that while there exists a statistically significant correlation between measures of institutional quality, a negative statistically significant effect was found on income per capita when institutional quality-related variables are replaced by constitutional scores which emphasize the regimes. This conclusion suggests the case of resource cursed situations as being the lots of many resource-rich low-income developing countries like Nigeria.

Notably, studies that have addressed the issues of structural linkage between institutional quality and inclusive growth were found to still suffer from a number of empirical problems. One major impediment which still deserves a special attention is the inability to see the state's institutional capacity as the critical missing link between structural endowments and broad-based productive growth of many of the resource-rich developing economies. Apparently, no study has considered the combined effects of real GDP per person employed, financial inclusion and institutional quality which could condition growth inclusiveness in Nigeria. Therefore, studying the links between a broad-based financial system and institutional quality in a resource-endowed and lagged developing economy like Nigeria would help a great deal in proffering the triple-win solution to the aforementioned mounting tripartite socio-economic problems.

3. METHODOLOGY

This study adopts the structurally modified form of Tobin (1955)'s dynamic aggregative production model and Lin (2012)'s growth identification and facilitation framework (GIFF). The model incorporates the state's preferred development strategy and institutional capacity as the key drivers of productive employment growth for resource-rich and labour-abundant low income developing countries. It is generally assumed that real GDP per person employed is a linear function of aggregate capital stocks and institutional quality. The model does not only consider

the importance of natural resources but the role of monetary component in determining the degree of factors' intensity in the economic growth process. Therefore, focuses not on the constant returns to scale in capital and labour but on rather a constant-returns-to-scale in aggregate production function in which the level of output is dependent on three factors; capital, labour and resources of the form:

$$Y = f(k, g) = A(1 - T)(KLR)^{1-\alpha} g^{\alpha}) \quad (1)$$

where, *Y* is output, '*k'* is a generic terms for the stocks of capital, both physical and financial (*K*), human (*L*) and natural resources (*R*) respectively. *'g'* is a vector of the country's institutional capital (g), comprising of governance effectiveness, rule of law or judicial efficiency, democracy, control of corruption, voice and accountability, social and physical infrastructure, etc.). All technological change is assumed to be factor-augmenting, and A_i is the augmentation level of factor *i*. '*A'* refers to technological progress, and '*t'* refers to technology choice index; $t \in (0, T)$, $T > 0$ indicates inappropriate development strategy and T is a point at which institutional quality is deteriorated to such an extent that modeling framework ceases to apply. However, with strong institutions, the value of technology is less than zero i.e $T < 0$, but with weak institution the value of T is positive. The production function is assumed to be homogenous of degree one. In general, resources might be renewable and augmentable, like capital, or exhaustible like stocks of minerals. Moreover, we equally assume that inclusive growth is endogenously determined by the country's institutional quality, if the coefficient of the explanatory variable is positive and statistically significant.

The interdependent relationships among the key variables of inclusive growth (RGDPE), financial inclusion (IFI), preferred development strategy (TCI) and institutional capacity of the state (GEF), interactions of institutional quality with index of financial inclusion (IFI*GEF) and real GDP per person employed (RGDPE*GEF) can explicitly be expressed using the semi-double logged growth model:

$$\ln RGDPE_t = \alpha + \gamma \ln RGDPE_{t-1} + \beta_1 IFI_t + \beta_2 GEF_t + \beta_3 TCI_t + \beta_4 RGDPE * GEF_t + \beta_6 IFI * GEF_t + \varepsilon_t \quad (2)$$

While the real GDP per person employed (RGDPE) is our dependent variable and proxy for inclusive growth, institutional quality (GEF) index represents the standardized worldwide composite governance indicators (voice and accountability (VA), rule of law (RL), political stability (PS), government effectiveness (GE), regulatory quality (RQ) and control of corruption (CC) due to Kaufumann, Kraay and Mastruzzi (2010). The constructed index of financial inclusion (IFI) to capture the three dimensions (availability, accessibility and usage) of formal financial services, Other aggregate proxy indicator is technology choice index (TCI) constructed as the value-added to labour ratio in manufacturing over the total value-added to aggregate labour force ratio.

We employ the autoregressive distributed lag (ARDL) bounds testing approach to cointegration developed by Pesaran et al. (2001) to explore the existence of long run relationship among the specified variables of interest. The bounds testing approach is applicable irrespective of whether variables are purely *I*(0), purely *I*(1) or fractionally integrated. Besides the econometric advantages of this approach, the ARDL technique provides unbiased estimates of the long-run model (Harris & Sollis, 2003), even in the presence of endogeneity resulting from the reverse causality that may exist among the variables. Moreover, a dynamic unrestricted error correction model (UECM) derived from the bounds testing through a simple linear transformation integrates both the short run dynamics with the long run equilibrium without losing any long run information. The UECM formulations of equation (2) are therefore expressed as follows:

$$\Delta \ln RGDPE_t = \beta_0 + \sum_{h=1}^{p} \beta_{1h} \Delta lnRGDPE_{t-h} + \sum_{i=1}^{q} \beta_{2i} \Delta IFI_{t-i} + \sum_{j=1}^{r} \beta_{3j} \Delta GEF_{t-j} + \sum_{k=1}^{s} \beta_{4k} \Delta TCI_{t-k} + \sum_{m=1}^{t} \beta_{5m} \Delta (RGDPE * GEF)_{t-m} \sum_{l=1}^{u} \beta_{6l} \Delta IFI * GEF_{t-l} + + \alpha_1 IFI_{t-1} + \alpha_2 TCI_{t-1} + \alpha_3 GEF_{t-1} + \alpha_4 (RGDPE * GEF)_{t-1} + \alpha_5 IFI * GEF_{t-1} + + \varepsilon_{1t} \quad (3)$$

where, Δ is the first difference operator. *p, q, r, s, T and u* represent the optimal lag lengths, and ∑ is the summation sign. The residuals ε_{it} are assumed to be normally distributed and stochastic. β_0 is the drift component, and $\beta_1 - \beta_6$ denote the short-run coefficients, while α_i's represent the long-run coefficients.

The time series annual data between 1998 and 2017 sourced from various editions of the Central Bank of Nigeria (CBN) statistical bulletin and annual reports and statements of account; the Annual Accounts of National Bureau of Statistics (NBS), World Development indicators database (World Bank), International Financial Statistics (IFS), and the World Governance Indicators (WGIs) were used. The time dimension of this study coincides with the preparations towards ushering in of democratic governance, and post financial liberalisation regimes.

The bounds testing approach to cointegration within the autoregressive distributed lag (ARDL) framework was employed to verify the long-run equilibrating relationships among the variables. The test is mainly based on the joint Wald- test (*F*-statistic) which asymptotic distribution is non-standard under the null hypothesis of no cointegration among the variables. That is:

$$H_0: \beta_1 = \beta_2 = \beta_3 = \beta_4 = \beta_5 = \beta_6 = 0$$

$$H_0: \beta_1 \neq \beta_2 \neq \beta_3 \neq \beta_4 \neq \beta_5 \neq \beta_6 \neq 0 \quad \text{for i = 1, 2, 3,…,6}$$

This cointegration test involves two sets of critical values. One, the lower critical bound which assumes that all variables in the model are I*(0)*, implying a no cointegration relationship. Two, the upper critical bound assumes that all the variables in the model are I*(1)*, indicating the existence of cointegration. Thus, if the *F*-statistic is less than the lower critical bound value, the null hypothesis H_0 cannot be rejected. Conversely, if the *F*-statistic should exceed the upper critical bound value, then there is evidence of cointegration and H_0 should be rejected. Thus, if there is evidence in support of a long-run relationship or cointegration among the variables included, and then equation (3) becomes our estimable model. However, when the *F*-statistic lied between the two critical bound values, the test was rendered inconclusive, and therefore, other econometric analysis then become applicable.

The theoretical a-priori expectations of the relationships are as follows expressed algebraically:

$$\frac{\partial RGDPE}{\partial GEF} > 0; \frac{\partial RGDPE}{\partial IFI} > 0; \frac{\partial RGDPE}{\partial RGDPE * GEF} > 0; \frac{\partial RGDPE}{\partial IFI * GEF} > 0; \; and \frac{\partial RGDPE}{\partial TCI} < 0 \quad (4)$$

Following Bruno, *et al.* (2015), neither the CAD nor CAC development strategy can be assessed in an institutional vacuum. Thus, the literature provides evidence of an association between TCI and institutional governance quality (GEF), especially in the low-income developing and resource-

rich and labour-abundant countries. The TCI as proxy for CAC development strategy is therefore computed as follows:

$$TCI_t = \frac{AVM_t/LM_t}{GDP_t/L_t} \quad (5)$$

where AVM_t is the added value of manufacturing sector of the economy at time *t*, GDP_t is the total added value of the economy, LM_t is the labour in the manufacturing industry and L_t is the total labour force.

Most time series data are non-stationary and using them in a model might lead to spurious regressions (Engel & Granger, 1987). Therefore, to empirically investigate the institutional quality imperative of inclusive growth, we examined the stochastic properties of each variable in the model employing the conventional Augmented Dickey-Fuller (ADF) (1979, 1981) and Phillips-Perron (1988) (PP) unit root tests to investigate the order of integration of the variables in the model. As noted by Djezou (2014) that the PP's unit root test is an automatic correction to the ADF test because it is relatively sensitive to any incorrect establishment of lag parameter and tends to under-reject the null hypothesis. The equation (1) which include an intercept and trend term was applied.

$$\Delta y_t = \alpha_0 + \alpha y_{t-1} + \alpha_2 T + \sum_{j=1}^{p} \beta j \Delta y_{t-j} + \mu_t \quad (6)$$

where Δy_t denotes the first difference of y_t representing RGDPE, and *p* is the lag length of the augmented terms for y_t. Equation (6) permits the test to determine if the variable y_t is a stationary series. The null hypothesis of ADF and PP tests is that y_t is non-stationary or has a unit root. If the regressand or dependent variable in the model is found to be integrated of the same order with the regressors or explanatory variables, the co-integration test will be carried out to determine their long-run equilibrium relationships.

4. RESULTS AND DISCUSSION OF FINDINGS

The paper deployed conventional unit root tests such as Augmented Dickey Fuller (ADF) and Phillips-Perron (PP) techniques to test for the presence of unit root in the series. Table I shows that all the series with the exception of log of the technology choice index (TCI), are not found to be stationary at level with constant and time trends. This shows that the variables LRGDPE, IFI, GEFe, RGDPE*GEFe and IFI*GEFe are stationary at first difference. However none of the variables is integrated at *I(2)*. Therefore, since the data does not contain *I(2)* series, it lend support to the use of bounds testing approach to co-integration.

Table 1: Unit Root Tests (Augmented Dickey Fuller (ADF) and Philips-Perron (PP)

Variables/Tests	*t-statistics*	*Critical Value*	*t-statistics*	*Critical Value*	*Order of Integration*
	Levels		*First Difference*		
ADF Test					
LNRGDPE	-2.7966	-3.0300	-5.0119**	-3.0404	I(1)
IFI	-1.6285	-3.0404	-3.3672*	-3.0522	I(1)
TCI	-5.6494**	-3.8753	-5.3507**	-3.9334	1(0)
GEFe	-2.2221	-3.6908	-4.9752**	-3.0522	I(1)
RGDPEGEFe	-2.8151	-3.6908	-4.9904**	-3.7105	I(1)

IFIGEFe	-1.6729	-3.6908	-3.8433*	-3.0522	I(1)
PP Test					
LNRGDPE	-2.7966	-3.6736	-5.1247**	-3.0404	I(1)
IFI	-1.8030	-3.6908	-3.3766*	-3.2978	I(1)
TCI	-1.8218	-3.7332	-2.2895	-1.9684	I(1)
GEFe	-2.0175	-3.6908	-5.1945**	-3.7104	I(1)
RGDPEGEFe	-2.8151	-3.6908	-5.1956**	-3.7105	I(1)
IFIGEFe	-1.6729	-36908	-3.9092**	-3.7105	I(1)

Note: The asterisk (*,**,) denote the rejection of the unit root hypothesis at the 1%, 5% and 10% significance levels respectively.***

Source: Authors, 20222

Essentially, the null hypothesis for the presence of unit root was rejected for all the variables except the log of technology choice index (TCI) at levels, indicating that all the series were integrated but after differencing them.

4.1 Co-integration Test

The study employed the Autoregressive Distributed Lag (ARDL) Bounds testing co-integration procedure to estimate the long-run and short-run relationships as well as dynamic interactions among the variables of interest. Pesaran *et al.,* (2001) proposed an ARDL Bounds testing approach to investigate the existence of co-integration relationship among variables. This approach has certain econometric advantages in comparison to other co-integration procedures (Engel & Granger, 1987; Johansen 1988; Johansen & Juselius, 1990). One, the approach is applicable regardless of whether the underlying regressors are stationary at *I(0)* or *I(1)* or a mixture of both. Moreover, unlike most of these traditional co-integration procedures which are valid for large sample, the approach is not only suitable for small sample size study (Pesaran *et al.*, (2001), but it is of equally far more superior to them all (Narayan, 2005; Halicioglu, 2007). In addition, it provides unbiased estimates of the long-run model and valid *t*-statistics even when some of the regressors are endogenous (Harris & Sollis, 2003).

While the lag order of the variables is given in the second column of Table II, the Bounds test results are reported in the lower segment of the Table. The calculated *F*-statistics of 6.8033 found in the ARDL regressions exceeds the upper bounds critical values of 3.35, 3.79 and 4.68 for significance levels of 10%, 5% and 1% respectively. This implies that the null hypothesis of no co-integration can be rejected at the three conventional significance levels. In other words, there exists a long-run relationship among the studied variables. Thus, inclusive growth indicator (RGDPE), institutional quality index (GEFe), index of financial inclusion (IFI), proxy for the country's resource endowment and development strategy (TCI) and the interacted variables of both institutional quality and real GDP per person employed (RGDPEGEFe) and inclusive finance (IFIGEFe) are co-integrated or co-moving in Nigeria over the period of 1998 to 2017.

Table 2: Bounds testing to Cointegration **Diagnostic tests**

Estimated Models	**Optimal lag length**	***F*-statistics**	**R^2**	**Adj-R^2**
LNRGDPE = f(IFI, TCI, GFFe, RGDPEGEFe, IFIGEFe)	1, 1, 1, 1, 1, 1	6.80332*	0.948	0.937

Significant Level	**Critical Values**	
	Lower bounds (I(0)	**Upper bounds I(1)**
1%	3.41	4.68
5%	2.62	3.79
10%	2.26	3.35

Note: *, ** & *** represent significance at 1%, 5% & 10% level respectively
Source: Authors, (2022)

The short- run and long-run coefficients of the ARDL estimated model are presented in Table III and we found evidence to support the literature that indicator of financial inclusion and institutional quality factor are positively related to inclusive growth. This suggests that an improved institutional quality would bring about a rise in real GDP per person employed via broad-based financial inclusiveness in Nigeria. Interestingly, the relationship between the inclusive growth variable and the interaction of the financial inclusion with the institutional quality is both positive and statistically significant. Specifically, a 1% improvement in the quality of institutional governance can stimulate productive employment growth by 19% in the long run. However, the country's resources endowment indicator (TCI), in contrary to the a-priori expectation revealed positive and weakly statistically significant, indicative of the country's adoption of a comparative advantage defying (CAD) as opposed to the appropriate comparative advantage conforming (CAC) development strategy. Moreover, it was found that the long-run relationship between inclusive growth and the interaction of real GDP per person employed with the institutional variable is negative but statistically significant at 1% level.

Table 3: Short Run and Long Run Autoregressive Distributed Lag Models

Short-Run Estimates

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(IFI)	0.03	0.01	4.42	0.01
D(TCI)	0.14	0.03	4.41	0.01
D(GEFe)	0.26	0.11	2.36	0.08
D(RGDPEGEFe)	-1.01	0.05	-19.03	0.00
D(IFIGEFe)	0.03	0.01	4.12	0.01
CointEq(-1)	-1.28	0.12	-10.99	0.00

Long-Run Estimates

Variable	Coefficient	Std. Error	t-Statistic	Prob.
IFI	0.04	0.01	3.92	0.02

TCI	0.05	0.02	2.84	0.05
GEFe	0.19	0.09	2.07	0.01
RGDPEGEFe	-0.97	0.01	-103.49	0.00
IFIGEFe	0.03	0.01	3.67	0.02
C	-1.15	0.12	-9.83	0.00

Source: Authors, 2022

Looking at the short-run dynamics, the estimates of the error correction model presented in the Table III above support the results of the long-run estimates. The error term (ECM (-1)) is negative and highly statistically significant, thus corroborating the results of the cointegration tests of the existence of a stable long-run relationship among the variables. The value of error correction term at 1.28 shows that well over 100% (128%) of the previous year's deviation from log-run equilibrium will be restored within a year. Consistent with previous studies on governance and institutional quality (Zhuang, 2010; Chang, 2011; Acemoglu & Robinson, 2013), real GDP per person employed is positively related to governance effectiveness. Nevertheless, contrary to the a-*priori* expectation, the coefficient of the preferred development strategy (TCI) exhibits a positive statistically significant impact of institutional quality on the broad-based productive growth, thus revealing the failure of successive Nigerian governments to adopt appropriate development strategy so as to convert the nation's huge potentialities into realities of transformative development. Although, this finding appeared to be inconsistent with the most previous studies (Lin, 2009; Lin & Chang, 2014; Siddique, 2016, Mabasa & Mqolomba, 2016) using cross-country regressions, the results of the Nigeria-specific study confirmed the fact that the Nigerian government does not seem to have adopted the appropriate development strategy given the nation's factor-resource endowments (Advantage Conforming).

5. CONCLUSION AND POLICY RECOMMENDATIONS

The long standing tripartite socio-economic problems of poverty, inequality and unemployment as well as the dwindling living standards among the low-income developing countries have continued to remain one of the major international development concerns. Hence, this study was apt to consider the institutional-context of the exploitation of areas of comparative advantages and structural endowment in Nigeria. We therefore examined the structural linkage between institutional quality, financial inclusion and inclusive growth in Nigeria, both in the long-run and short-run, taking into account of the effect of the country's preferred development strategy. In the literature, issues on causality between financial sector development and economic growth and/or financial inclusion and economic performance have been extensively studied, but with no available country's specific empirical evidence tracing the links between country's endowment structures and inclusive growth to the underpinning-institutional quality factors. While the quality of institutional governance becomes a contemporary reality in causing the structural- inclusiveness linkage, it is of utmost significance to understand how institutional quality determines the interrelationships. Hence, in this paper, the country-specific analysis was highly imperative in order to provide pragmatic guidance to governments and policymakers as well as international community on the adoption of appropriate development strategies that conform to the country's endowment comparative advantage, as well as reflecting of the citizenry's changing needs.

The results of our analysis confirmed the existence of long-run equilibrating relationships among the variables. We found that institutional quality had overall statistically significant effects on both financial inclusion and inclusive growth in Nigeria. The positive relationship between indicator of

financial inclusion and institutional quality suggests that an improved institutional quality would bring about a rise in real GDP per person employed via broad-based financial inclusiveness in the country. However, TCI was found to be positive and weakly statistically significant, indicative of the country's adoption of an inappropriate development strategy.

In sum, the paper concludes that a radical institutional improvement in terms of capacity and character, beyond the present liberal democratic threshold is much needed to effectively harness the human capital resource base in Nigeria. Therefore, the CAC development strategy remains the only relevant and preferred alternative development approach over the Washington Consensus for a resource-rich developing country like Nigeria. This confirms the assertion that, no nation has ever developed historically without exploiting first its areas of comparative advantage and endowment structure. We recommend, therefore, that Nigerian government should adopt labor-intensive development strategy such that active poor households are comprehensively integrated into productive activity for optimal value-chain finance-growth inclusiveness. This would address the protracted tripartite socio-economic problems of poverty, inequality and unemployment in line with Lin's comparative advantage conforming hypothesis.

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