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RESEARCH PAPER

# The Impact of Institutional Quality on Inclusive Growth in Developing Countries

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**ABSTRACT**

Inclusive growth offers a new perspective on measuring progress of a country. In many developing nations, despite experiencing economic growth, poverty and income inequality remain either on the rise or stagnate. This paper investigates the impact of institutional quality on inclusive growth in 91 developing countries over the period of 2008 to 2021 and employed System Generalized method of moments (GMM). To measure growth inclusiveness, the study construct an inclusive growth index using Social opportunity function. Additionally, six different indicators are used to measure institutional quality. The empirical results of this study shows that there is positive and statistically significant impact of institutional quality on inclusive growth. Moreover, the paper also constructs indifference curves for selected developing countries to check their inclusiveness. Finally, it is suggested that developing economies developing countries should prioritize strengthening their institutions as the foundation for fostering inclusive growth, improving public trust, and ensuring long-term social and economic stability.

**KEYWORDS** Inclusive growth, Institutional Quality, System GMM, Social Opportunity Function

## Introduction

Inclusive growth is a new way to look at the progress of a nation. It is defined as rapid poverty reduction that allows every individual to add to and benefit from economic expansions (Corrigan, et al., 2015). Inclusive growth is a concept that takes into consideration equity, equality in opportunities, and protection of market and employment (Habito, 2009). It not only takes into account the creation of employment but also productive growth. Bhalla, (2007) defined the concept of inclusive growth, which increases employment, decreases poverty, and improves productivity. Inclusive growth is a broader concept than growth and pro-poor growth.

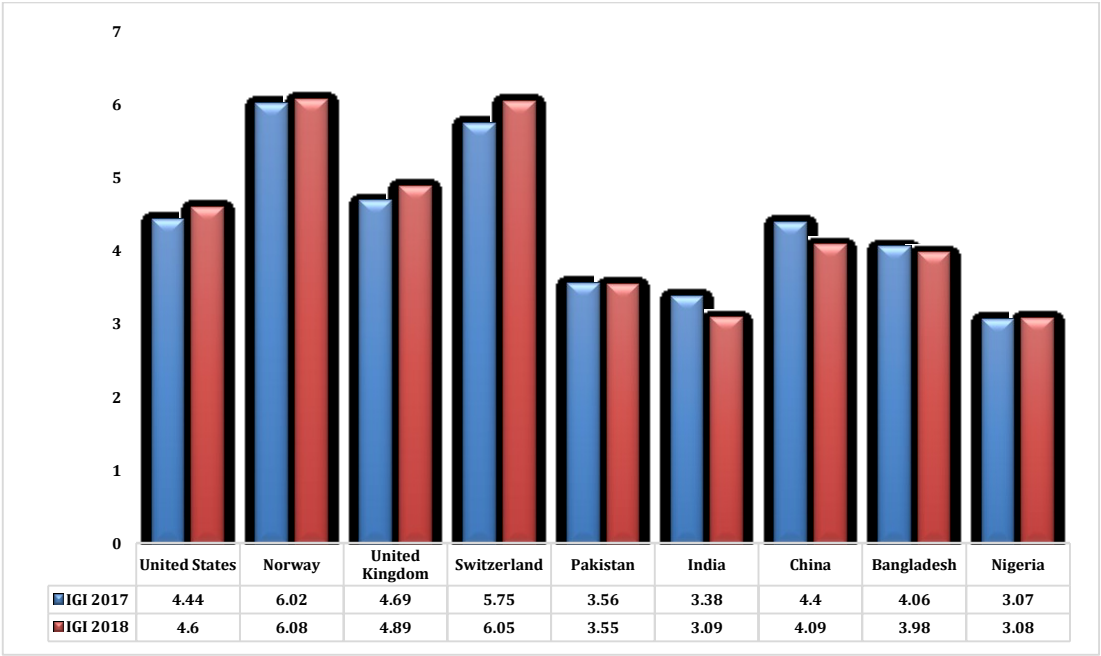
The growth in GDP does not necessarily benefit every segment of society and pro-poor growth only benefits the poor but does not improve others' living standards. Inclusive growth takes into account the problems faced by sustained and long-run growth which benefits everyone (Chang, 2014). Inclusive growth not only includes the real GDP per capita but includes 4 main dimensions with accurate indicators (Chattopadhyay et al., 2013). Inclusive growth concentrates on sustainable and broad-based economic growth across every sector that guarantees poverty reduction and benefits every segment of society. Inclusive growth focuses on sector-wise improvement rather than just a decrease in unemployment (Garrido, 2011).

In most developing economies policy policymakers are diverting their attention toward inclusive growth rather than simple growth because of increasing inequality, increasing unemployment, massive poverty, and a decrease in factor productivity which are taking place in the presence of positive economic growth. Thus the idea of inclusive

growth is fundamental to consider which not only takes into account the increase in quantities but defines the concept of well-being in a broader term (Khan et al., 2016).

The economic growth that guarantees the improvement of the social well-being of the citizens is less observed in developing countries. This is because economic growth is not sufficient always. The growth to be equally beneficial and have a long-run impact needs to be sustained and inclusive. Inclusive growth requires economic expansions to be equal for all, reduce poverty, improve every sector equally, reduce inequality, improve the standard of every citizen, and improve sectoral productivity (Kolawole, 2016). Growth itself does not guarantee poverty reduction, reduce inequality, and improve social well-being the relationship between growth and poverty reduction and inequality is ambiguous in much literature, (Corrigan, et al, 2015).

Inclusive growth (IGI) performance of selected developed and developing nations is presented in Figure 1. IGI ranges from 1-7, with 1 showing less inclusive growth while 7 showing high inclusive growth. Data Show that from 2017 to 2018 the IGI of developed economies increased, on the other hand in the case of developing economies only Nigerian inclusive growth has risen slightly from 3.07 to 3.08, while IGI in Pakistan, Bangladesh, China, and India have decreased.




| | United States | Norway | United Kingdom | Switzerland | Pakistan | India | China | Bangladesh | Nigeria |
|---|---|---|---|---|---|---|---|---|---|
| IGI 2017 | 4.44 | 6.02 | 4.69 | 5.75 | 3.56 | 3.38 | 4.4 | 4.06 | 3.07 |
| IGI 2018 | 4.6 | 6.08 | 4.89 | 6.05 | 3.55 | 3.09 | 4.09 | 3.98 | 3.08 |

**Figure 1: IGI of selected developed and developing economies.**

Data source: WEF inclusive development report, (2018).

In developing nations, economic expansions are mostly pro-rich, or the impact of growth on equality and poverty reduction is negligible, according to the World Values Survey (2018) and the World Economic Forum. Economic indicators show that growth in developing nations mostly does not benefit the poor population. It is not possible to achieve long-run and sustained economic development until the fruit of the economic expansion is provided to all segments of society (Chaudhry & Razzaq, 2012).

The average growth of development, growth, and inclusive growth are shown in Figure 2. The trend shows that low-income countries have a positive average growth in GDP growth and development from 2013 to 2017, at the same time the average inclusive growth trend for low-income countries is negative WEF, inclusive development index

(2018). World Economic Forum. Data presented in Figure 1 reveal a negative association between growth and development with inclusive growth.

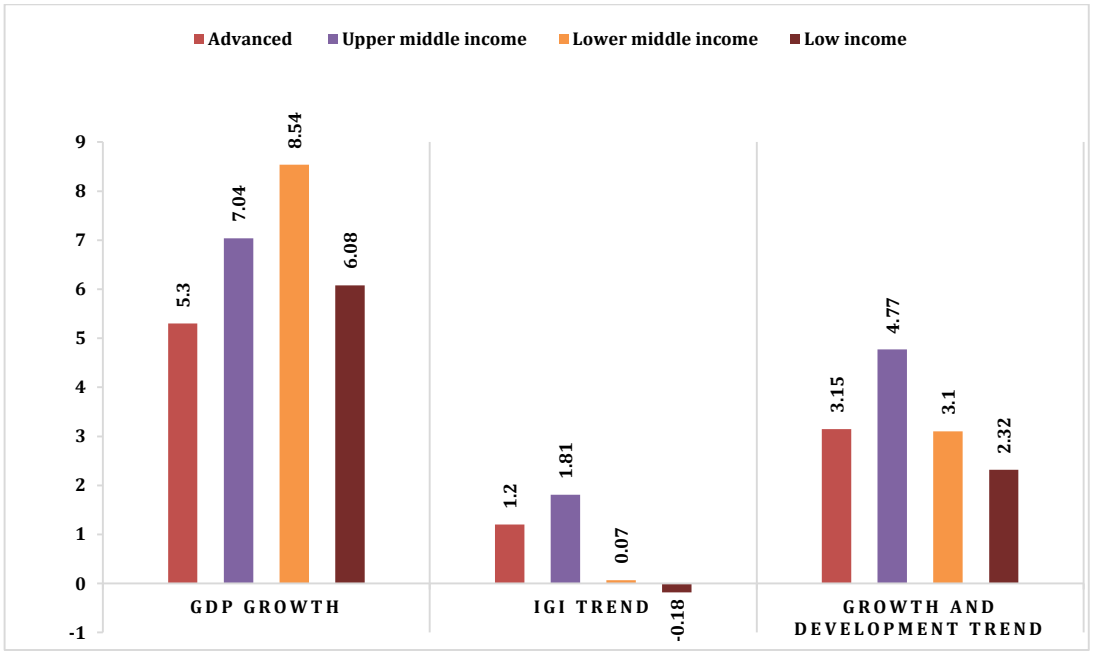



**Figure 1: Growth, development, and inclusive growth last five years trend by income groups**

Data source: WEF inclusive development report, (2018).

Institution quality plays a significant role in economic progress. Bianchini & Pellegrino, (2019) showed that the relationship of institution quality with growth and development is positive in the case of developing nations. The paper argued that good institutions improve the standard of living through better distribution of economic expansions which leads to improved living standards and then economic development. Similarly, Constantine & Khemraj, (2019) showed a positive link between economic growth and institutions. The distribution of income in any economy is also considered to depend on political factors for a long time, increase in inequality in many countries during the past three decades has resulted in a large number Our contribution to the existing literature lies to explain high pre-tax inequality and unfair redistribution through visible institutional inertia about rapid technological and corporate changes, which influence the nature of distributional conflict (Josifidis et al., 2017).

The third most important indicator in the inclusive growth index is improvement in sector-wise employment which is also positively linked with institutional quality. Better political institutions will discourage corruption and encourage merit-based employment, which then will result in better economic institutions equality is another important indicator of inclusive growth. The link between institutional quality and equality is widely discussed in the literature and institutional quality is proven to be a very important and significant determinant of equality. Improvements in institutional quality such as property rights, the court system, and women's rights are nothing but equality and equity which is given 15% weight in the inclusive growth index.

## Literature Review

Aslam & Zulfiqar, (2016) employing the VAR model revealed that income inequality is positively associated with GDP growth, according to this study a 1% growth in GDP brings about a 0.05% reduction in inequality. Economic growth in Pakistan doesn't

seem to be inclusive it also showed that the fiscal policies bring more inequality in Pakistan, Development expenditure in Pakistan did not show any significant impact on inclusive growth. Similarly, education expenditure and poverty reduction are positively associated, one-unit increment in education spending cut the poverty by about 0.020 units on average. Tax policy is also negatively related to inclusive growth by affecting equality, on average a 1-unit increment in direct tax in Pakistan leads to an increase the income inequality by 0.045 units. Additionally, indirect tax has a negative but insignificant effect on income inequality. Direct tax is found to reduce poverty significantly in Pakistan a 1% increase in Direct tax reduces poverty by 0.21% on average. While indirect tax leads to an increase the poverty but this relation was insignificant.

Similarly, Nawaz, Iqbal, & Khan, (2014) by employing the panel data analysis of 35 Asian countries from the time period 1996 to 2012 and dividing them into two groups i.e. developing Asia and developed Asia based on income level categorized by World Bank, using the Fixed effect model the results revealed that the institutional quality has a positive relationship with long term economic growth of Asian countries which means in case of Asian countries better institutional quality is growth enhancing. Further, the coefficient of institutional quality of the model was 0.7, which means a 1 percent increase in institutional quality will boost the economic growth by 0.7 percent on average keeping the impact of another variable on economic growth constant. Similarly, North, (1990) also shows that there is a positive link between the quality of institutions and economic growth and productivity additionally, he claims that the improved institutions upsurge the productivity of factor input.

Bülow, (2015) using OLS empirically verified that there is a positive relationship between institutional quality and firm performance. According to him property rights and other economic and political institutions encourage investors to invest which improves the performance of the firm which then opens many doors for better jobs and increases productivity. Similarly, Doucouliagos & Ulubasoglu, (2007) using the simultaneous econometric model for analysis of 119 countries using political and economic freedom for institution proxy revealed that institutions are positively connected with human capital, total factor productivity, and physical capital. Furthermore, Piva et al., (2005) using a fixed effect SYS-GMM estimation technique for the panel of 35 Asian countries revealed that the impact of institutional quality on the long-run economy is positive. The empirical evidence further showed that the impact of institution quality is relatively higher in developed Asia than the developing Asia. Bruinshoofd, (2016) empirically proved that institutional quality not only increases the income level and economic growth but it leads to long-term income convergence. Similarly, in the contribution of Góes, (2015) makes the connection between institutional quality and economic performance more explicit according to him better institutional quality leads to higher real income per capita in a county his findings are in line with (Acemoglu et al., 2014).

Essentially, (Zhuang, et al., 2012) observationally found institutional quality found a positive connection between the institutional quality and per capita genuine GDP, further, they observed the Government viability to be progressively associated with per capita genuine GDP with a coefficient of 0.6145 with R-squared of 0.649 guidelines of law and voice of responsibility, government adequacy is observed to be profoundly related with salary and voice of responsibility observed to be the least compelling pointer of organization to the pay.

Bruinshoofd, (2016) empirically proved that institutional quality not only increases the real per capita income level and economic growth but it leads to long-term income convergence. Nguyen, Su, & Nguyen, (2018) Discovered the influence of institutional quality on economic performance which includes income per capita, real GDP growth, and FDI in the case of 29 developing economies from the period 2002 to 2015 by using GMM methodology conclude that the institutional quality increases the economic

growth by stimulating the economic activities, on the other hand they find that improvement in institutional quality has a positive impact on the economic growth effect of trade openness. Moreover, Yıldırım & Gökalp, (2016); Zubair et al., (2014); and Iheonu et al., (2017) found the same results.

According to Nawaz et al., (2014) weak institutions will divert countries' resources to unproductive sectors from productive sectors and then promote rent-seeking activities, while, good institutions will reduce the chance of rent-seeking and quicken the economic growth and factor productivity, which then will improve the sector-wise employment and weak institutions promotes the rent seeking through which by shifting the economy from productive to the unproductive sector will negatively affect the sector wise employment and reduce the productivity efficiency and income equality.

Bülow, (2015) examined the impact of institutional quality on firm proficiency, business level, and venture of 16105 firms from 42 creating nations by utilizing the GMM-SYS method, the study utilized quality of government as the proxy for institutional quality, and he found a positive link between the institutional quality and firm by and large execution, as indicated by this examination a 0.1 increment in quality of government increase firm profitability by 0.47 USD per worker keeping other variable fixed, further, study found that a 0.1 increment in the quality of government expands the business level of the firm by 0.01 percent. So also, a 0.1 upsurge in the quality of government will help the firm development up by 0.0.4 rate.

Similarly, linking inequality with growth through institutions that the role of governance and institutions in economic progress can be improved by the connection between equality and growth. This connection is found in the renowned work by Simon Kuznets (1955) inverted U hypothesizes that economic growth initially roots an increase to a certain point and then decreases inequality, this theory is generally accepted. Similarly, Zhuang, et al., (2012) found a positive link between institutional quality and per capita income, further study found that Government effectiveness to be more correlated with per capita real GDP with a coefficient of 0.6145 with R-squared of 0.649 rules of law and voice of accountability, government effectiveness is found to be highly correlated with income and voice of accountability found to be the least effective indicator of institution to the income.

## Material and Methods

To estimate the models in this study, system generalized method of moments (GMM) estimators were used, given the nature of the data and the diagnostic tests performed. When addressing endogeneity issues, various approaches and methods can be applied. However, in dynamic panel settings where the number of cross-sectional units (N) exceeds the number of time periods (T), system GMM is considered particularly effective (Roodman, 2009). GMM relies on lagged values as instruments and employs moment conditions to estimate parameters while controlling for unobserved heterogeneity. The differenced GMM, introduced by Arellano & Bond, (1991)and the system GMM, developed by Arellano & Bover, (1995), are common variations. System GMM is generally preferred over differenced GMM for several reasons: it permits a larger number of instruments, enhances efficiency, better handles unbalanced panels, and preserves fixed effects. These estimators are robust and do not assume normality, making them versatile and applicable to various types of data (Greene, 2002; Piper, 2014; Roodman, 2009).

**Table 1**
**Description and Sources of Data**

| Variable | Description | Source | Year |
|---|---|---|---|
| Inclusive Growth index | Growth adjusted for equity. | Author construction using PovcalNet and WIID database | 2008-2020 |

| | | | |
|---|---|---|---|
| Institutional Quality | Average of six indications | World Bank | 2008-2020 |
| GFCF | Gross Fixed capital formation (annual %) | World Bank | 2008-2020 |
| GS | Government final consumption expenditure (annual %) | World Bank | 2008-2020 |
| FDI | Inflows (% of GDP) | World Bank | 2008-2020 |

**Model specification**

$$IGI_{it} = \beta_0 + \beta_1 INST_{it} + \beta_2 CPI_{it} + \beta_3 GS_{it} + \mu_{it}$$

Where subscript $t$ and $i$ represent the years and country respectively, $i = 1 \dots \dots N$ and $t = 1 \dots \dots T$.

$IGI$= inclusive growth, $INST$= Institutional Quality, $GS$=Government final consumption expenditure and CPI= Consumer price index.

**Measurement of Inclusive growth**

(Ali & Son, 2007) introduced the idea of a generalized concentration curve, also known as a social mobility curve (SMC), denoted as $Sc$:

$$Sc \approx \left[y_1, \frac{y_1+y_2}{2}, \dots \dots \dots, \frac{y_1+y_2+\cdots y_n}{n}\right] \quad (1)$$

Where $n$ is the number of persons in the population with incomes $y_1, y_2, y_3 \dots \dots \dots y_n$, where $y_1$ is the poorest person and $y_n$ the richest person

To calculate the magnitude of income distribution (Anand et al., 2013) use a simple form of social mobility function to calculate the social mobility index from the area under the social mobility curve.

$$\bar{y}^* = \int_0^{100} \bar{y}_i di \quad (2)$$

When $\bar{y}^*$ is higher, it indicates higher income levels across the population. Conversely, if all individuals have equal income, $\bar{y}^*$will match the mean income $\bar{y}_i$. However, if $\bar{y}^*$ is lower than $\bar{y}_i$ it suggests an unequal distribution of income.

(Ali & Son, 2007) proposed the income equity index (IEI):

$$\omega = \frac{\bar{y}^*}{\bar{y}_i} \quad (3)$$

Which ranges from 0 to 1. Where 1 indicates the perfect equal distribution and 0 indicates the perfect unequal distribution: by rearranging equation (3) we obtain

$$\bar{y}^* = \omega * \bar{y}_i$$
(4)

To obtain an inclusive growth equation, differentiate equation (4):

$$d\bar{y}^* = \omega * d\bar{y} + d\omega * \bar{y} \quad (5)$$

Where, $d\bar{y}^*$ is a change in inclusive growth, if $d\bar{y}^* > 0$ growth is considered inclusive and vice versa.

Rearrange equation (5)

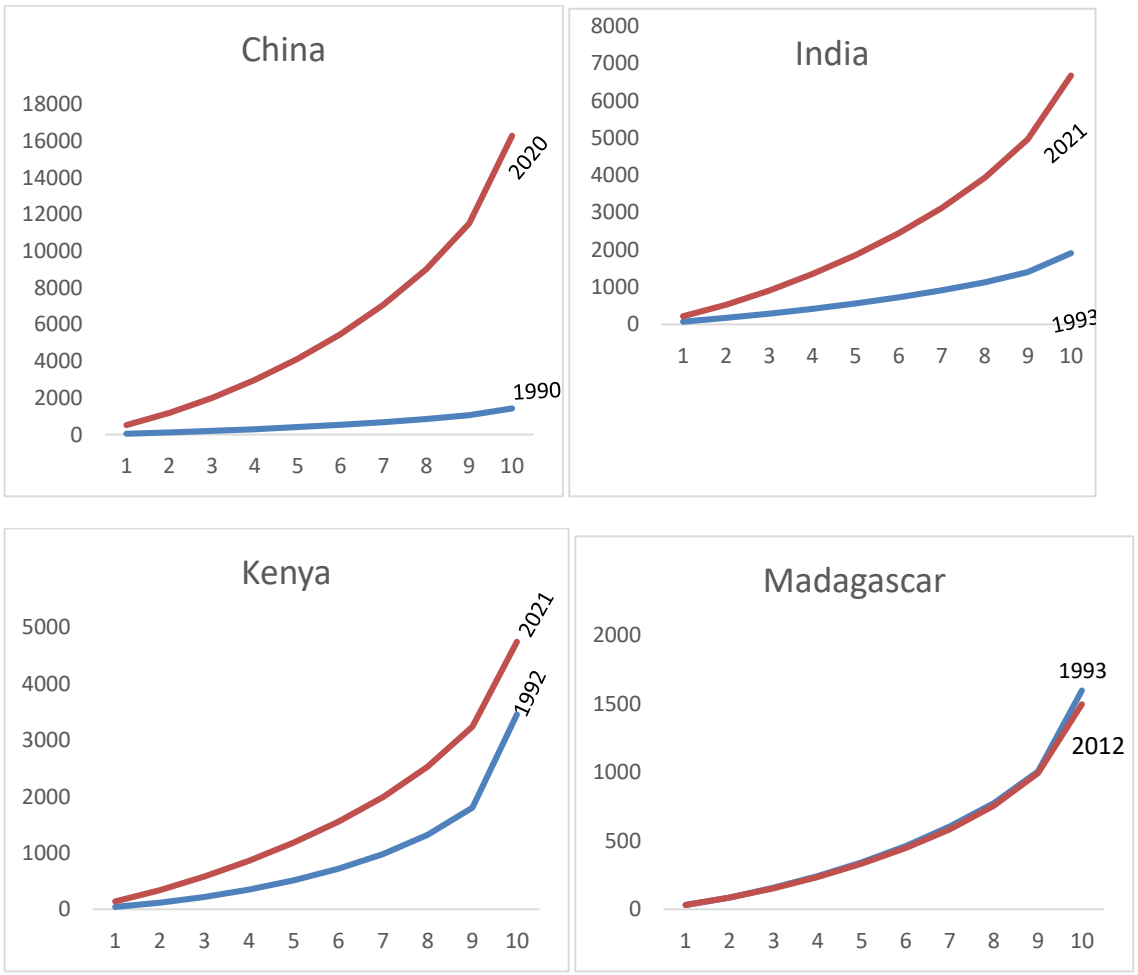
$$\frac{d\bar{y}^*}{\bar{y}^*} = \frac{d\bar{y}}{\bar{y}} + \frac{d\omega}{\omega} \quad (6)$$

Equation (6) is the equation that combines GDP per capita growth and equity index growth into a unified measure of inclusive growth that can be compared over time. Inclusive growth can be attained by: (i) raising average income growth, (ii) increasing the income equity index growth, or (iii) a combination of both.

**Results and Discussions**

Figure 1 presents the indifference curves for several developing countries, derived using the social mobility curve methodology proposed by (Ali & Son, 2007; Anand et al., 2013). The y-axis represents the cumulative average GDP per capita for each population decile, while the x-axis shows the population deciles, ordered from 1 to 10.

The average income per decile is calculated by multiplying the income share by the GDP per capita (adjusted for purchasing power parity, constant 2017 international dollars) and dividing by the population share. The figure reveals varying levels of inclusiveness in growth among the selected countries. While overall economic growth has occurred, the extent to which this growth has been inclusive differs. For example, in China, growth has benefited all segments of the population, but the gains have been disproportionately larger for higher-income earners compared to the lower deciles. In contrast, Kenya shows a flatter curvature in the indifference curves for the wealthiest 20%, suggesting that income growth has been more favorable to the poorer segments of the population than to the wealthy.



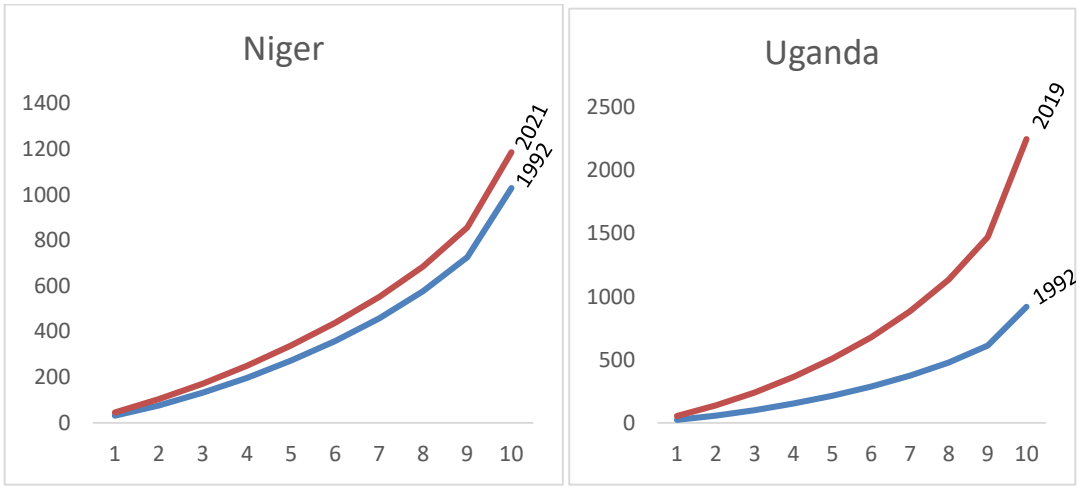



Figure 3: Indifference curves of selected developing countries

Source: Author's calculation using World Bank, PovcalNet database

**Table 2**
**GMM result, Inclusive growth index is dependent variable**

| Variables | Coefficients |
|---|---|
| Inclusive growth (-1) | 0.270*<br>(0.137) |
| Institutional Quality | 0.578**<br>(0.275) |
| Investment | 1.864**<br>(0.831) |
| Inflation | -0.055**<br>(0.023) |
| Govt Spending | -1.13**<br>(0.52) |
| AR (1) [p-value] | -3.38[0.001] |
| AR (2) [p-value] | -0.30[0.761] |

**Note:** All values in parentheses represent robust standard errors, while values in brackets indicate probability values. The one-step system GMM estimation method is applied.

**Interpretation of the result**

We used an average of six indicators to measure institutional quality such as Political stability, the rule of law, control of corruption, regulatory quality, Voice and accountability and government effectiveness. Results showed a positive and statistically significant relationship between institutional quality and inclusive growth. Table 1 shows that a one percent increase in institutional quality increases inclusive growth index by 0.578 units. In addition to this, investment, inflation and government spending are used as control variables. The coefficient of investment is showing that one percent increase in investment increases inclusive growth by 1.864 units.

Conversely, inflation and government spending are found to be negatively associated with inclusive growth. The coefficients indicate that a one percent increase in inflation and government spending reduces inclusive growth by 0.055 and 1.13 percent respectively. In general, most of the findings are consistent with previous findings.

We also check the diagnostics of the GMM results. The probability value for AR(1) or first-order autocorrelation is below the significance level, indicating the presence of first-order autocorrelation. However, the probability value for AR(2) or second-order autocorrelation is above the 5% significance level, indicating that there is no second-order

autocorrelation. This suggests that there are no diagnostic issues in the estimated model and the Hansen J test shows that the instruments used in both models are valid. (see Roodman, 2009).

## Conclusion

A plethora of literature is available on the impact of institutional quality on economic growth in developing countries. However, the impact of institutional quality on inclusive growth has received little attention in the literature. This study contributes in two ways, first, the study constructs the indifference curve for selected developing countries to access the inclusiveness in growth and second, the study employed a dynamic panel model (Sys-GMM) to check the impact of innovation on inclusive growth.

## Recommendations

The results affirm that better institutional quality leads to an increase in overall inclusive growth. Thus, the study recommends that policies should be implemented in developing countries to foster better institutional quality that benefits not only the top-income holders but also the bottom-income holders, aiming to achieve inclusiveness. This approach ensures that the benefits of better institutions are more equitably distributed across society, narrowing the income gap and promoting economic and social development for all segments of the society.

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