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Research Article

# Institutional Quality, Financial Inclusion and Income Inequality: A study of Selected Asian Countries

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## Abstract

Focusing on selected Asian countries offers a regional perspective on income inequality dynamics, contributing to a better understanding of the factors driving income disparities in diverse socio-economic contexts. Income inequality is a pervasive and pressing issue in many Asian countries, posing significant challenges to inclusive economic growth, social cohesion, and sustainable development. Despite efforts to address income disparities through various policy interventions, the factors contributing to lessening income inequality remain poorly understood, particularly in the context of institutional quality and financial inclusion. Therefore, there is a need for empirical research to examine the role of institutional quality and financial inclusion in mitigating income inequality across selected Asian countries. This study has investigated the impact of financial inclusion with institutional quality, economic growth, and foreign direct investment on income inequality in Asian emerging economies. The authors have used data from 2012 to 2020 to check the relationship between dependent and independent variables. We have used the Gini index as a dependent variable and financial inclusion, institutional quality, GDP per capita, and foreign direct investment are taken as independent variables. GMM results show that financial inclusion and institutional quality are contributing towards lessening poverty in these economies. Moreover, foreign direct investment and GDP per capita also decrease the income disparity of these nations. It is suggested for better financial services provision and a stable environment for high growth and foreign direct investment.

Keywords: Institutional quality, Financial inclusion, Income inequality, Asian countries.

## Introduction

This research is an endeavor that shows the influence of financial inclusion, institutional quality index, financial development, and information communication technology on the economic growth of selected Asian economies. It will have influential effects on growth and development. Financial inclusion predicts all initiatives that make proper financial services reachable and within the means, chiefly to low-income persons. In current years, financial inclusion has been supposed as an active instrument for achieving multidimensional macroeconomic constancy, maintainable and comprehensive economic growth, employment creation, poverty decrease, and income disparity for rich and underdeveloped nations. Inspired by decades of fast development in decreasing poverty and increasing affluence, a huge share of the Globe's poorer inhabitants even yet are struggling to attain a minimum living standard across emerging regions, particularly in Asia, Africa, Latin America, and the Caribbean. Improvement in dropping life-threatening poverty appears rough in the concerned areas due to geographical and country-specific aspects. The World Bank (2016) has reported

that Asia covers 42.7% of the world's poor. However, the entire region seems to have a strong historic performance in decreasing global poverty with the help of huge growth in developing nations.

Demirgüç-Kunt and Klapper (2013) theorized financial inclusion by way of the usage of official monetary facilities amongst diverse groups that give an advantage to the welfare of numerous persons. Sahay et al. (2015) have defined financial inclusion as access, practice, and transfer of financial facilities at reasonable charges to susceptible sections of society. However, Sarma (2012) provided a complete description of financial inclusion depending on numerous sizes comprising availability, obtaining ability, and use of the formal financial system for all people in a nation. Demirgüç-Kunt and Klapper (2013) investigated gender disparities in accessing credit across 98 developing nations and discovered a notable imbalance favoring men over women. Nonetheless, they observed a significant correlation between gender and the utilization of financial services. In economies where women encountered legal restrictions on employment opportunities, household leadership, residential choices, and inheritance rights, their ownership of financial accounts, as well as their saving and borrowing activities, remained markedly lower compared to men. Furthermore, Tiwari et al. (2013) utilized annual data spanning from 1965 to 2008 to demonstrate that economic growth, coupled with rising consumer prices, exacerbated the unequal distribution of income.

Denk and Cournede (2015) revealed that over the past three decades, expanded financial access in OECD economies has been associated with heightened income inequality. This trend can be attributed to elevated levels of credit intermediation and the influence of stock markets. Interestingly, the increased income inequality did not necessarily lead to a decline in the welfare of lower-income groups as long as their income growth remained unaffected. Park and Shin (2015) identified a U-shaped relationship between economic progress and income disparity based on data spanning 1960 to 2011 across 162 countries. Their findings suggested that initially, financial development contributed to a reduction in inequality but subsequently led to its increase. Furthermore, they noted that financial development had a more pronounced effect in reducing inequality in contexts where there was an increased ratio of primary schooling to total schooling, along with improvements in law and order. Baloch et al. (2017) conducted an analysis of the impact of gender equality on income inequality using the Generalized Method of Moments. Their findings underscored the significant influence of gender equality and its various sub-indices on income distribution. They observed that GDP per capita and inflation were contributing factors to increased disparity. Conversely, Rudra's (2004) regression analysis revealed that social spending across all categories had a beneficial effect on improving outcomes in advanced nations, whereas it had a less encouraging impact on underdeveloped countries.

Doan (2019) conducted a research study on the impact of trade liberalization and institutional quality on real income in 45 Sub-Saharan African countries spanning from 1980 to 2013. The results from multiple models revealed a positive effect of free trade on the growth of real income per capita. Additionally, the flow of information was found to influence real income, albeit with varying effects across different scenarios. The study highlighted that political globalization provided opportunities to enhance living standards. Ultimately, the analysis concluded that institutional quality emerged as the most crucial determinant of economic development in all circumstances. Analyzing data from 1988 to 2014, Blancheton and Chheron (2020) suggested that over time, public expenditure and institutional quality had the effect of reducing income disparity in Asia and the Pacific region. In a separate study, Le et al. (2021) investigated the impact of foreign direct investment on income inequality. Their results underscored that foreign direct investment contributed to increased income inequality, with variations observed based on education levels and institutional differences among host provinces.

The influence of institutions on income inequality has a significant attention in numerous studies. Two primary perspectives are driving this focus: firstly, the examination of the role that political institutions and democracy might play in addressing disparities in income distribution. Research has established a correlation between poor institutional quality and inequality (Gradstein & Milanovic, 2004).

### *Research Questions*

The research questions of the study are given below:

1. How does institutional quality lessen income inequality in Asian nations?
2. What is the influence of financial inclusion on income inequality?
3. How does economic growth reduce income inequality?
4. What is the effect of foreign direct investment on income inequality in selected Asian countries?

### *Significance of the Study*

The research has significant importance for addressing a critical issue of income inequality, which is prevalent in many Asian nations. By examining the role of institutional quality and financial inclusion on income distribution, the current study provides valuable insights for policymakers, governments, and international organizations to design effective policy interventions aimed at promoting more equitable economic growth. Moreover, focusing on selected Asian countries offers a regional perspective on income inequality dynamics, contributing to a better understanding of the factors driving income disparities in diverse socio-economic contexts. The empirical evidence generated by the study can inform evidence-based policy-making and practical strategies for fostering social cohesion, economic stability, and sustainable development in the region. Most of the research work has been done on factors such as foreign direct investment and financial development, foreign aid, economic growth, and other variables that have influenced economic growth. However, the current research work has focused on how financial inclusion with institutional quality and economic growth help in reducing income inequality in selected Asian countries.

### *Research Hypothesis*

The primary hypotheses of this research are given as follows.

H1: The number of commercial bank branches helps in reducing income inequality in Asian countries.

H 2: The higher the institutional quality, the lower the income inequality.

H 3: Foreign direct investment is negatively related to income inequality.

H 4: There is a negative relationship between economic growth and income inequality.

### *Problem Statement of the study*

Income inequality is a pervasive and pressing issue in many Asian countries, posing significant challenges to inclusive economic growth, social cohesion, and sustainable development. Despite efforts to address income disparities through various policy interventions, the factors contributing to lessening income inequality remain poorly understood, particularly in the context of institutional quality and financial inclusion. Therefore, there is a need for empirical research to examine the role of institutional quality and financial inclusion in mitigating income inequality across selected Asian countries. By identifying the mechanisms through which institutional quality and financial inclusion affect income distribution, this study seeks to provide insights into effective policy strategies for promoting more equitable economic outcomes in the region.

## Literature Review

This section shows many of the studies that play a role in determining economic growth in emerging and industrialized economies contributing towards growth. The connection between financial accessibility and inequality traces back to the seminal work of Kuznets (1955), who, through his renowned curve, posited a nonlinear relationship between economic development and income inequality. The Kuznets curve's shape showed that income inequality seemed to be increasing at an early stage of development. It happened due to increased migration and urbanization rate urbanization towards the industrial sector for high earnings. On the contrary, income inequality was observed to decline in an advanced stage of development.

Greenwood and Jovanovic's (1990) initial theory emphasized that financial development collaboratively contributes to forming an inverted U-shaped relationship with income inequality. Their theoretical model

showed that financial development encouraged economic development, which resultantly facilitated essential investments in the monetary substructure. Transactions were done by financial mediators which resulted in increased and protected profits. However, fixed costs, coupled with intermediary barriers, hindered the participation of low-income individuals. According to Banerjee and Newman (1993) and Galor and Zeira (1993), the failure of long-term income convergence between the affluent and the underprivileged was not solely due to imperfections in capital markets. Instead, they contended that disparities endured primarily because of the initial distribution of wealth. However, Li et al. (2000) identified an "inverted U"-shaped relationship between income inequalities and corruption levels. They observed that both high and low corruption levels were associated with lower income disparities, while intermediate corruption levels corresponded to higher disparities. Their argument centered on the notion that corruption influenced disparities through imperfections in capital markets, community disbursements, and asset distributions.

Easterly (2002) focused on the fact that foreign aid has not presented a better role in growth in nations having better financial policies in different times and economies. Despite the deficient positive link between aid and growth, the economists and officials emphasized on the straight influence of foreign aid and foreign direct investment on poverty and income inequality in beneficiary nations. Acemoglu and Robinson (2005) conducted a study revealing that political institutions had a significant impact on economic institutions, thereby influencing income inequality. They identified a link between inferior institutional quality or democracy and inequality, yet the consistency of this connection across all states was not universally robust (Gradstein & Milanovic, 2004). However, certain studies have demonstrated an inverse causality between a nation's income disparity and the strength of its institutions, as evidenced by the work of Chong and Gradstein (2007), and Kotschy and Sunde (2017). Hussey et al. (2020) found a nonlinear linkage between institutions and income inequality. Moreover, they stated that nations with the most inclusive political institutions had enjoyed high income levels in opposition to those formerly thought. Ngong et al. (2023) investigated the influence of financial inclusion on decreasing poverty and income disparity in 116 underdeveloped nations from 2004–2016. The study findings showed that financial inclusion pointedly has declined poverty rates and income inequality in underdeveloped nations, suggesting further availability and utilization of financial services.

Ogede et al. (2023) have worked on increased carbon emissions and high inequality in much of sub-Saharan African countries. They used cross-sectional augmented autoregressive distributed lags and augmented mean group techniques. The results found that environmental pollution has risen increasingly as the wealth difference was observed to increase in the 32 SSA nations. Moreover, the interaction term (INEQ*IQX) showed that institutional quality had affected negatively the $CO_2$, suggesting that institutional quality had a foremost influence on the inequality-$CO_2$ nexus. Ouechtati (2023) investigated how economic and political institutions played a part in moderating financial inclusion influence on inequality by collecting data in 110 countries from 2004 to 2018. It was found that financial inclusion and institutions have determined income inequality. The interplay between financial access and economic and political institutions has led to an increase in income equality.

## Methodology

We utilized data spanning from 2012 to 2020 encompassing variables pertinent to our research on income inequality across ten selected Asian countries: Bangladesh, India, Indonesia, Iran, Jordan, Malaysia, Pakistan, Sri Lanka, the Philippines, and China. These data were sourced from the World Development Indicators. Our dependent variable is income inequality, as indicated by the Gini Index. In contrast, our independent variables include log GDP per capita (in US dollars), institutional quality index (encompassing aspects such as voice and accountability, political stability and absence of violence, government effectiveness, control of corruption, rule of law, and regulatory quality), financial inclusion (measured by the number of commercial bank branches per 100,000 adults), and foreign direct investment flow (as a percentage of GDP).

The econometric model is shown as:

$$GINI = \beta_0 + \beta_1 IQINDit + \beta_2 NCBBRit + \beta_3 LGDPPit + \beta_3 FDINVit + uit \quad (1)$$

INSTQI= Institutional quality index

NCBBR= Number of commercial bank branches per 100,00 adults

LGDPPC= Log economic growth (GDP per capita)

FDINV = Foreign direct investment flow (% of GDP)

it = (time trend)

uit= (error term)

## Results and Discussion

Here, summary statistics of important factors have been highlighted. In this study, we have explained the impact of financial inclusion and institutional quality on income inequality in selected Asian economies.

Table 1 highlights that, on average, the number of commercial bank branches is 15.0278 percent in selected Asian economies. The sample covers range from 7.5468 to 32.3072 percent. On average, GNINI index is -0.5834 percent. Large differences are found as it ranges from -2.1381 to 0.6095 percent. The mean value of foreign direct investment is 2.0280 percent in the concerned economies. On average log GDP per capita is 2.0280 percent in selected Asian states.

Table 1. Summary statistics of main variables.

| Variables | Observations | Mean | Standard deviation | Minimum | Maximum |
|---|---|---|---|---|---|
| GINI | 76 | 0.6846 | 0.0829 | 0.526 | 0.802 |
| IQIND | 90 | -0.5834 | 0.6080 | -2.1381 | 0.6095 |
| NCBBR | 90 | 15.0278 | 6.7269 | 7.5468 | 32.3072 |
| LGDPP | 90 | 3.4838 | 0.3260 | 2.8927 | 4.0831 |
| FDINV | 90 | 2.0280 | 1.3948 | 0.3828 | 6.2225 |

GINI represents the Gini Index, a measure of income inequality. Table 1 shows that there are 76 observations with a mean of 0.6846 and a standard deviation of 0.0829. The minimum value observed is 0.526, while the maximum is 0.802. IQIND denotes the Institutional Quality Index. There are 90 observations with a mean of -0.5834 and a standard deviation of 0.6080. The minimum value recorded is -2.1381, and the maximum is 0.6095. NCBBR represents the Number of Commercial Bank Branches per 100,000 Adults. There are 90 observations with a mean of 15.0278 and a standard deviation of 6.7269. The minimum observed value is 7.5468, while the maximum is 32.3072. LGDPP variable stands for the log GDP per capita (in US dollars). There are 90 observations with a mean of 3.4838 and a standard deviation of 0.3260. The minimum value recorded is 2.8927, and the maximum is 4.0831. FDINV represents the Foreign Direct Investment Flow as a percentage of GDP. There are 90 observations with a mean of 2.0280 and a standard deviation of 1.3948. The minimum value observed is 0.3828, while the maximum is 6.2225.

The results of using GMM methods are revealed in Table 2. The finding highlights that a one percent increase previous year's GINI results in increased Gini or income inequality by 0.6617 percent in Asian nations. Financial inclusion normally determines and promotes growth and development and lessens the income inequality of Asian states. Too much approach towards financial services and better utilization of these facilities will cause less income inequality. It is found that a one percent increased number of commercial bank branches will result in 0.0003 percent less income inequality in the concerned nations of Asia. The finding is consistent with the result by Ouechtati (2023). The role of institutions in lessening income inequality cannot be ignored. It has been observed that improved and better-quality institutions reduce poverty and income

disparity among people of these emerging economies. The study result reveals that a one-unit increase in institutional quality will lead to a decrease in income inequality by 0.0009 percent. The reason may be that high quality of ignitions may increase growth, justice, proper distribution, and living standards which results in less disparity. Our result is favoured by Ouechtati (2023).

Table 2. GMM results, the dependent variable is GINI Index.

| Variables | Coefficients, Standard Errors and Z-values |
|---|---|
| L1GINI | -0.6617** |
| | 0.2792 |
| | (-2.37) |
| L2GINI | 0.3712 |
| | 0.3924 |
| | (0.95) |
| IQIND | -0.0009*** |
| | 0.0005 |
| | (-1.81) |
| NCBBR | -0.0003** |
| | 0.0001 |
| | (-2.10) |
| LGDPP | -0.1526* |
| | 0.0493 |
| | (-3.09) |
| FDINV | -0.0003*** |
| | 0.0001 |
| | (-1.83) |
| AR1 | 0.05 |
| AR2 | 0.31 |
| Hanson test | 0.34 |

t-values are in parentheses; ** p<0.05, * p<0.1,***p< 0.01

Economic growth has a substantial role in making strong the economy. High production and exports will make injustice and disparity less in any society. The result reveals that a one percent increased log GDP per capita will make less income inequality by 0.1526 percent. The result is consistent with the finding by Easterly (2002). Foreign direct investment has played a big part in promoting economic development and lessening income inequality in selected Asian economies. Foreign direct investment provides more chances for more investment, more earnings, and high living standards. All this resultantly decreases income inequality in these nations.

## Conclusions and Recommendations

This study makes an effort to show how income inequality can be lessened by using financial inclusion, instructional quality, GDP per capita, and foreign direct investment in selected Asian nations. The indicator of financial inclusion such as a number of commercial bank branches has been used in this study. In this study, we have highlighted the role of foreign direct investment and GDP per capita in reducing the income disparity. Furthermore, the Gini index and institutional quality index are used in this study. The GMM result shows that financial inclusion and institutional quality along with foreign direct investment and GDP per capita are major determinants for reducing income inequality in emerging Asian nations. On the basis of the findings, it is recommended that there should be more access to financial services for high development and less poverty

and inequality. Governments of these economies must focus on high and improved quality institutions for better distribution and income inequality. There should be a stable environment for high production, specialization, investments, and high earning and living stand to lessen the poverty and income disparity in these Asian economies.

Governments should prioritize policies that promote greater access to financial services for all segments of society, particularly focusing on marginalized communities and regions with limited banking infrastructure. This could involve initiatives such as expanding the reach of commercial bank branches, promoting mobile banking services, and implementing financial literacy programs to ensure effective utilization of financial resources. Investing in education is crucial for reducing income inequality. Governments should prioritize enhancing the quality of education at all levels, ensuring equitable access to high-quality education regardless of socioeconomic background. This could involve measures such as increasing funding for education, improving teacher training programs, and updating the curriculum to align with the needs of the modern economy. Encouraging FDI inflows can stimulate economic growth and create employment opportunities, which are essential for reducing income inequality. Governments should create a conducive environment for foreign investors by implementing business-friendly policies, streamlining bureaucratic processes, and offering incentives to attract FDI in key sectors that have the potential to generate significant employment and income opportunities. Institutional quality plays a critical role in ensuring effective governance, the rule of law, and the protection of property rights, all of which are essential for reducing income inequality. Governments should focus on strengthening institutions through reforms aimed at improving transparency, accountability, and efficiency in public administration. This could involve measures such as combating corruption, enhancing judicial independence, and promoting regulatory reforms to create a level playing field for all participants in the economy. Stability and predictability are essential for attracting investments, promoting entrepreneurship, and fostering economic growth. Governments should prioritize maintaining macroeconomic stability through sound fiscal and monetary policies, ensuring political stability, and minimizing external risks that could disrupt economic activities. Additionally, efforts should be made to promote inclusive growth by creating opportunities for small and medium enterprises (SMEs), supporting innovation and entrepreneurship, and investing in infrastructure development to facilitate economic diversification and regional integration.

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