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Research Article

# Financial Inclusion, Foreign Direct Investment and Human Development: An Analysis from Middle-Income Countries

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## Abstract

Human development is vital for human welfare and for the overall development of a country. Current work highlights the role of important variables affecting human development in middle-income countries. We have used a panel data set and the OLS technique for the analysis. Human development was used as a dependent variable, and financial inclusion, ICT, economic growth, urban population, and foreign direct investment were taken as independent variables. OLS regression results show that financial inclusion, information communication, and technology seem to be enhancing human development in the economies. Moreover, economic growth, urban population, and foreign direct investment also contributed positively to human development. The study recommends more ICT opportunities in countries to achieve more human development. Much focus should be made on investments and growth to boost human development. Finally, there should be a more stable financial and political system to attract investments.

Keywords: Financial inclusion, Economic growth, ICT, Human development.

## Introduction

With the emergent significance of human development, the sustainable development objectives have overtly merged human development in its four aims (no poverty, fine physical condition and welfare, quality good qualification and well-brought-up job) and not directly in the course of two (zero food shortage and peace), to be attained by the year 2030. These objectives, if recognized, are predictable to ratify human development ultimately. Contrarily, while the global financial system turns into further combined, excessive care is certain to fiscal insertion, which is well-thought-out an inclination subject not only for worldwide economic organizations, for instance, the World Bank and the International Monetary Fund, but then again too for administrations and regulators in numerous nations. Financial inclusion is supposed by way of an enabler for 7 of the World Bank's 17 SDGs. Furthermore, the G20 is dedicated to encouraging financial inclusion and applying the G20 High-Level Principles for Digital Financial Inclusion. In late 2010, more than 55 nations committed to attaining extraordinary financial inclusion stages, and more than 60 states have started or expressed nationwide financial inclusion plans (World Bank, 2018). Financial inclusion recognizes the accessibility to equally persons and corporations of pertinent and profitable financial goods and services that meet their requirements for acquisitions, expenditures, credits, loaning, and coverage that are delivered sustainably and correctly (Yin et al., 2019).

Financial inclusion helps grow facilities that aid the expansion of financial competence. Financial inclusion shows an identical approach to financial facilities decided by the world to entirely all adult associates in their main expenses. Furthermore, in the progressive phase of financial inclusion, persons take financial risks without any reluctance owing to the availability of insurance (Liu et al., 2022). The Human Development Index defines and assesses how people can follow their potential in a definite setting and how this environment regulates them. It is more than just profits, prosperity, or commodity production and capital accumulation. Approaching resources is certainly an indispensable fragment of human development, but it is not the only objective of human development energies. In line with UNDP, the HDI was shaped to highlight that people and their competences should be the final standard for assessing a state's development, not just economic growth (UNDP, 2023).

ICT has redesigned the globe in terms of saving time and wealth, exceeding freedom and immediacy, and improving the approach to information and education. Attaining data and facts authorizes persons by affecting their learning aptitude, discerning authority, and ability to work together with others (Coleho et al., 2015). Folks from the countryside and with inadequate income frequently face problems in gain access to quality learning opportunities, where information communication and technology endorse concrete and valuable methods to alleviate issues of getting education through home-grown teaching and teaching through e-learning. Consequently, ICT potentially gets rid of obstacles in common endures and improves their living standards (Palvia et al., 2015; Migliaccio, 2016), given that necessity-based chance, similar to approaches to schooling and health-related information.

In this work, we have emphasized the role of financial inclusion, information communication and technology, economic growth, urban population, and foreign direct investment in enhancing human development of middle-income countries. Our work provides further policies and suggestions for development.

### *Significance of the Study*

Numerous variables have been observed affecting economic growth and human development. These are inflation, money supply, corruption, tax revenue, government expenditures, etc. Though we focus on the role of financial inclusion, ICT, economic growth, urban population, and foreign direct investment in determining and enhancing the human development of middle-income countries.

### *Research Hypotheses*

The hypotheses of the work are presented here:

H1: Financial inclusion and human development are positively associated.

H2: A positive link may be found between information communication technology and human development.

H 3: The Higher the GDP, the higher the human development.

H 4: Urban population is positively related to human development.

H 5: Foreign direct investment and human development are positively associated.

## Literature Review

Much of the research work focuses on the significance of the variables such as inflation, unemployment, population, taxation, etc., in economic growth and human development. However, our research highlights important variables as financial inclusion, economic growth, with other variables affecting human development in middle-income countries. Levine (1997) points out how did financial sector affected innovation and production, where savings were pooled with the assistance of the financial sector. And finally, the financial sector led to enhanced economic growth and development. Sarma and Pais (2008) found that financial inclusion affected human development in 49 developing economies in 2004. Findings showed that financial inclusion resulted in increased human development in these economies.

Considering the role of information communication and technology, Ojo (2012) selected Ghana to highlight the significance of ICT. It was found that ICT helped or assisted in health, education, and economic growth,

which has enhanced the living standard of the population. Adenle et al. (2015) also pointed out that ICT growth was noteworthy in the dissemination of technology, which enhanced innovation, reduced manufacturing expenses, increased manufacturing excellence, and facilitated firms' decision-making power, which ultimately improved human life. Matekenya et al. (2020) also showed an association of financial inclusion and human development in Sub-Saharan Africa on the basis of data used from 2004 to 2017. It was found that financial development and financial inclusion led to enhanced human development in African economies.

Khan et al. (2019) also showed that information communication and technology and human development relationship till 2014. They used ARDL and VECM techniques. It was found that economic growth contributed more to human development. Moreover, urbanization, trade, and FDI discouraged human development in Pakistan. Mohieldin et al. (2019) emphasized the role of financial sector development in economic growth in Egypt by using data from 1980 to 2016. It was found that the money supply has boosted up economic growth of developing countries. Ababio et al. (2020) used data from 2005 to 2014 in 20 developing countries. The GMM results showed that financial inclusion increased human development. The study suggested that financial inclusion through the banking sector would result in stimulating human development. Behera and Sahoo (2022) examined the association of ICT, globalization, and human development in India by using data from 1991 to 2019. It was found that more globalization resulted in more human development in the long run. Moreover, the use of the internet contributed more to human development. Moreover, the global financial crisis of 2008 tended to decrease human development. The study recommended promoting both globalization and ICT for achieving high human development.

Abdelghaffar et al. (2023) highlighted the relationship between financial inclusion and human development for the nations from 2009 to 2019. The authors used the GMM technique for the analysis. Findings indicated that financial inclusion in low and lower-middle-income countries affected highly the human development. Öztürk and Tavares Silva (2024) used data from 2004 to 2017 from 32 European countries to highlight factors affecting human development. The study findings showed that information, communication, and technology fostered human development of the economies.

## Methodology

We have focused on the role of financial inclusion with other factors affecting human development in middle-income countries. For this, we have used data from 2005 to 2021 and used the OLS regression method for the analysis with control variables in these countries. Data were taken from countries such as Bangladesh, India, Indonesia, Iran, Jordan, Malaysia, Pakistan, and the Philippines. The human development index was taken as the dependent variable. But, financial inclusion, information communication and technology, economic growth, urban population, and foreign direct investment were taken as independent variables. Data on the variables were taken from World Development Indicators.

### *Model Specifications*

The econometric model is formulated as:

$$HDVIND = \beta_0 + \beta_1 FINCit + \beta\ 2ICTINDXit + \beta_3 GDPPC\ it + \beta_4 URBNPOPit + \beta_5 FDINVit + uit \quad (1)$$

HDVIND= Human Development Index stately by life expectancy at birth, literacy rate, and standard of living measured by GNI per capita

ICTINDX= Information Communication and Technology index (i.e., Fixed telephone subscriptions (per 100 people plus Mobile cellular subscriptions (per 100 people

Urbnp= Urban population % of total population

LGDPPC= Log economic growth (GDP per capita)

FDINV= Foreign direct investment (% of gdp)

uit= (error term)

## Results and Empirical Analysis

Table 1 shows descriptive statistics of the significant factors influencing human development in middle-income countries.

Table 1. Summary statistics.

| Variables | Observations | Mean | Standard deviation | Minimum | Maximum |
|---|---|---|---|---|---|
| HDVIND | 112 | 0.6628 | 0.0920 | 0.486 | 0.805 |
| FINC | 112 | 36.4213 | 24.4843 | 7.2718 | 119.7394 |
| ICTINDX | 112 | 0.2745 | 0.8584 | -1.4632 | 2.2436 |
| GDPPC | 112 | 3589.933 | 2939.128 | 617.5427 | 12109.49 |
| URBPOP | 112 | 9.52E+07 | 1.20e+08 | 5582815 | 4.60e+08 |
| FDINV | 112 | 2.59027 | 3.2465 | 0.0567 | 23.5374 |

It has been observed that on average, the human development index is 0.6628 percent in these countries, and its standard deviation is 0.0920, which is less than the mean. It shows stability and normality of data. However, financial inclusion has been noticed as 36.4213 percent in the concerned nation. Its range is from 7.2718 percent to 119.7394 which shows variations. On average, ICTINDX is 0.2745 percent. Though its range is -1.4632 to 2.2436 percent. GDPPC is 3589.933 percent in these selected nations. Finally, foreign direct investment has been observed as 2.59027 percent in these countries.

### *Empirical Estimations*

Table 2 highlights the OLS method. Financial inclusion is a very significant variable that enhances human development in middle-income countries. A one percent increase in financial inclusion resulted in increased human development of Asian countries by 0.0004 percent. The reason may be that people can make use of funds easily and with full accessibility. In this way, human development increases. The result is supported by Abdelghaffar et al. (2023).

Table 2. Ordinary least squares results.

| Variables | Coefficients, Standard Errors, and t-values |
|---|---|
| FINC | 0.0004** |
| | 0.0002 |
| | (2.00) |
| ICTIND | 0.0124* |
| | 0.0039 |
| | (3.19) |
| GDPPC | 0.1898* |
| | 0.0133 |
| | (14.28) |
| URBPOP | 0.0226 * |
| | 0.0065 |
| | (3.50) |
| FDINV | 0.0015 * * * |
| | 0.0009 |
| | (1.62) |

| | |
|---|---|
| C | 0.1678 |
| | 0.0731 |
| | (2.30) |
| F Statistics | 259.35 |
| Probability | 0.000 |
| R-Square | 0.92 |
| Adjusted R-Square | 0.92 |

Dependent variable is human development index; ** p<0.05, * p<0.1 and*** p< 0.01.

Information, communication, and technology also contribute to human development in middle-income countries. People with full utilization of the internet and phones make communication more possible, and all this enhances productivity, earnings, transportation, growth, and overall development of middle-income countries. Our findings show that a one percent increase in ITCIND results in increased human development of middle-income countries by 0.0124. The finding is inconsistent with Behera and Sahoo (2022).

High economic growth may also lead to more human development in middle-income countries. People may have more earnings, employment, and improved living standards with more economic growth in their countries. It is found that a one percent increase in growth resulted in more human development by 0.1898 percent in middle-income countries. The outcome is supported by Khan et al. (2019).

The urban population also contributes positively to the development of middle-income countries. Many highly qualified people are involved in urban investment, employment, production, and growth. All this results in more human development in middle-income countries. The result reveals that the one percent increase in urban population has caused more human development by 0.0226 percent.

The role of foreign direct investment cannot be ignored. It also provides more chances for earnings and employment to all segments of the population. The result highlighted that a one percent increase in foreign direct investment has caused more human development by 0.0015 percent in middle-income countries. The result is consistent with Khan et al. (2019).

## Conclusions

We have examined the role of financial inclusion, information communication and technology, economic growth, urban population, and foreign direct investment in enhancing human development of 8 middle-income countries. It has been used the human dvelopemnt index as a dependent variable, and economic growth, financial inclusion, with other control variables such as foreign direct investment, financial development, ICT index, and urban population as explanatory variables. The OLS results point out that economic growth and the ICT index contribute positively to human development in these countries. Moreover, the role of the urban population and foreign direct investment is also tremendous and noteworthy in this regard. The study has concluded that more growth results in more highly educated people partaking in more earning activities and enhances human development, which is better for the welfare of the economies. The study has recommended that the Government should ensure to provide financial, educational facilities, and opportunities to the people for having more growth and development. Moreover, there should be more ICT facilities and chances to be given to the public. More growth should be the major task of every economy. The government must provide a more stable environment for attracting more investment from abroad.

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