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HUMAN CAPITAL AND INDUSTRIALIZATION ARE KEY DETERMINANTS OF ECONOMIC GROWTH: EVIDENCE FROM SELECTED DEVELOPING COUNTRIES

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ABSTRACT

Human capital has been considered as a major source of economic growth. It surely contributes to enhancing economic growth and development. Considering this, we have examined the key determinants of economic growth in nine developing economies. For this, the authors have used data from 2011 to 2020 from selected developing nations. In this research, GDP per capita is taken as the dependent variable. The random effect results highlight that industrialization and human capital lead to enhanced growth of economies. Moreover, the role of urbanization in promoting growth potential is also positive. Finally, foreign direct investment also seems to be increasing the economic growth in the concerned economies. The study findings recommend that these economies should focus more on free-of-cost higher education for boosting economic growth. There is also a need for a stable financial and political environment for attracting more industrialization and foreign direct investment.

Keywords: Human capital; Foreign direct investment; Industrialization; Developing countries.
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INTRODUCTION

Endogenous growth theory signifies that economic growth is the primary outcome of internal forces. Additionally, it also substantiates the pre-eminence of acquaintance, novelty, and human capital and their donation to economic growth. This theory has emphasized too on the optimism and frame over influences of awareness and understanding, which eventually cause a developed economy (Köhler et al., 2006). Economic growth has been debated so many times by policymakers. However, Kuznets (1955) indicated that income disparity tends to increase in the initial phases of development, particularly from changing from a rural to an industrial organization, and afterward tends to reduce when the up-to-date organization has been pierced by a totally socio-economic surface. Industrialization enhanced economic growth very successfully and it seems very beneficial for the people of the economies. It gives a lot of advantages to the nation's industrial sectors all the way through budding novel ways of producing things enhances job chances by creating many opportunities, and results in lessening poverty (Pernia & Quising, 2003).

Human capital can be defined as skills, education, capability to produce innovative goods, and know-how of labor (De Oliveira et al., 2000). Human capital has also been seen as a basic way for high production and growth. It leads to an increase entire level of production and possible incomes from the workforce (Robeyns, 2006) Great involvement of human capital in science, education, and management results in much improvement, social comfort, impartiality, amplified output, and superior rates of partaking, all of which make a payment towards growth.

Castelló-Climent (2004) used panel data to find an association between income inequality and human capital inequality. Findings showed that income disparity led to increased economic growth. The study also found a positive association between human capital disparity and growth. Dominics et al. (2008) also highlighted the importance of inequality in determining growth. They focused that research should be made on growth by focusing on the role of income inequality by using country-level data. Andrews (2010) assessed how aid influenced growth. It was found that foreign aid would result in much growth and development. The study suggested for proper usage of such kind of foreign aid for more growth and development. Kim (2011) showed a link between trade and the growth of nations. By using the regression technique, it was found that trade liberalization increased financial development and economic growth in rich nations.

By using data from 14 OECD nations, Ceccobelli et al. (2012) assessed how information communication technology affected growth. Results pointed out that information communication and technology contributed much to enhancing the growth of economies. Herzer and Vollmer (2012) focused on how income disparity influenced economic growth in 46 nations from 1970 to 1995. The findings indicated that income inequality has tended to decrease growth. Again pointing out how inequality affected growth, Scheuermeyer and Grundler (2015) highlighted that income disparity decreased the average and overall growth of the economy. Le and Nguyen (2019) used the theoretical model and found that ways by which income disparity increased economic growth were offset by the contrasting means by which disparity decreased growth. Studies suggest narrowing the gap between rich and poor. By using data from 1980 to 2017, Qayyum and Zaman (2019) found how trade influenced Pakistan's economy. The result found a unidirectional causality from trade openness to gross fixed capital formation and total labor to economic growth.

Considering the significance of trade and workforce involvement, Asmare and Haiyum (2020) showed that trade openness increased the economic growth and human capital of the Ethiopian economy. It was also found that physical capital, labor force involvement, and exchange rate also enhanced economic growth. Foreign direct investment and information and communication and technology also affect growth among nations indicated by Rehman et al. (2022). The study concluded that foreign investment and technology led to enhanced growth of Pakistan's economy. Ali et al. (2022) have analyzed the influence of trade openness, education, and government spending on growth in OIC economies. It was found that trade openness, human capital Government spending, and institutional quality enhanced the growth of OIC countries in the long run. Ogbuabor et al. (2023) focused on how industrialization, trade openness, and workforce involvement affected the productivity level of the African economy. The data were drawn from 2000 to 2018. The major conclusion was that industrialization, trade openness, and labor force involvement enhanced the productive capacity of Africa. Sharma and Samuel (2024) checked the influence of increased inflation and unemployment on economic growth in India. Results showed that the misery index resulted in less growth in the economy.

The existing research has emphasized the major determinants such as human capital, industrialization, urbanization, and foreign direct investment of economic growth in selected developing economies. Our work will also provide suggestions for further courses of action.

Significance of the Study

Great work has been done on the role of trade liberalization, unemployment, institutional quality, and employment in determining the growth potential of nations. However, our study has focused on the major drivers such as industrialization, human capital, urbanization, and foreign direct investment influencing the economic growth of developing countries.

Research Hypothesis

The major hypothesis of this research work has been shown as:

H1: Human capital is positively associated with economic growth.

H 2: The higher the industrialization, the higher the economic growth.

H 3: The urban population is expected to enhance the economic growth of developing economies.

H 4: Foreign direct investment and economic growth are positively associated.

METHODOLOGY

The recent research is an endeavor highlighting the main drivers of economic growth. For this purpose, we have taken data from 2011 to 2020 for important variables contributing to the growth of developing economies. We have drawn data from 9 developing economies such as Bangladesh, India, Indonesia, Iran, Jordan, Malaysia, Pakistan, the Philippines and Sri Lanka. Data on the variables have been taken from world development indicators. GDP per capita) was taken as the dependent variable. However, explanatory variables were taken as human capital, industrialization, urbanization and foreign direct investment. We have used the random effect technique to check the contribution of industrialization with other factors on economic growth.

The econometric model is presented as:

The equation is:

$$LGDPPC = \beta 0 + \beta 1\ SSENRit + \beta\ 2INDUSit + \beta\ 3\ URBANit + \beta\ 4\ FDINit + uit \quad (1)$$

LGDPPC= Log Economic growth (GDP per capita)

SSENVR= Secondary school enrolment ratio % of GDP

Indus= Manufacturing value-added growth

URBAN= urban population % of the total population

FDINV= Foreign direct investment (% of GDP)

it = (time trend)

uit= (error term)

RESULTS AND EMPIRICAL ANALYSIS

This section presents the descriptive results of the factors associated with each other in developing countries. Table 1 reveals that on average, GDP is 6402.824 percent. The GDP contains a range from 11.6723 to 127897.6 percent in the sample. It has also been noted that SSENR is 74.93146 percent. Moreover, urbanization seemed as 51.144 percent in the concerned nations. Finally, FDIN has been observed as 1.8886 percent. There have also been observed variations from 0.38 to 5.912049 percent of foreign direct investment.

Table 1. Summary statistics of variables influencing growth.

Variables	Observations	Mean	Standard deviation	Minimum	Maximum
GDP	90	6402.824	18585.27	11.6723	127897.6
SSENR	90	74.93146	17.2624	33.1797	99.48949
URBAN	90	51.144	22.4848	18.196	91.418
FDINV	90	1.8886	1.3283	0.3828	5.912049

Table 2 highlights the probability value of Chi2 as 0.6746 which is in favor of the random effect technique.

Table 2. Random effect results and GDP per capita is the dependent variable.

Variables	Coefficients, Standard Errors and z-values
SSENR	0.0068*
	0.0007
	(9.37)
INDUS	0.0105*
	0.0022
	(4.79)
URBAN	0.0109 *
	0.0021
	(5.25)
FDINV	0.0061 ***
	0.0040
	(1.53)
C	2.5761
	0.1249
	(20.62)
Wald chi2	251.88
Probability	0.0000
R2 Within	0.80
R2 Between	0.65
R2 Overall	0.65

z-values are in parentheses; ** p<0.05, * p<0.1.

The study findings from the GMM technique are shown in Table 2. Human capital improves economic growth and also boosts up living standard of the population of the developing economies. Highly expert labor is an asset of an economy as it partakes in economic actions very efficiently and causes high production, employment, and growth. Findings indicate that a one percent increase in secondary school enrolment results in increased growth of 0.0068 percent in developing economies. The result is supported by Ali et al. (2022). Industry also contributes to achieving a high level of growth of the communities in developing countries. People indulged in industry enhance growth by performing efficiently in industries, especially in urban areas. The result shows that a one percent increase in manufacturing value-added growth causes for increased growth of 0.0105 percent in selected developing countries. The result is favoured by Ogbuabor et al. (2023).

Moreover, urbanization also seems to affect growth in a positive way. The urban population has enhanced living standards by earning much and getting a lot of earning chances in cities. It has a tremendous role in the growing development of economies. The result points out that the one percent increased urban population has enhanced growth by 0.0109 percent in developing countries. Finally, foreign direct investment also helps in increasing the growth potential of the developing nations of the world. People find earning chances in line with their capabilities and partake in economic actions that resultantly enhance the growth of the nation's being analyzed. The study result points out the positive and marginally significant impact of foreign direct investment on economic growth in developing countries (Rehman et al., 2022).

CONCLUSIONS

The existing work makes an effort to point out human capital, industrialization, and urbanization as major drivers of economic growth in some chosen developing nations by using data from 2011 to 2020. We have taken GDP per capita as the dependent variable and human capital, industrialization and urbanization, and foreign direct investment as the main explanatory factors. Findings highlight that industrialization along

with human capital and urban population may influence growth very positively which is better for the economies. The study result concluded that human capital, industrialization, and urbanization led to enhanced growth of the underdeveloped nations. Considering the main findings, the study recommends more free-of-cost higher education for the welfare of the human capital of nations. Moreover, there is a need to improve the industrial sector to absorb more urban population to create employment and increase economic growth. Finally, there is a serious need for a stable environment to attract more foreign direct investment to enhance the growth and development of the concerned nations.

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