

-RESEARCH ARTICLE-

THE IMPACT OF FOREIGN DIRECT INVESTMENT, EMPLOYMENT RATE, AND POPULATION GROWTH ON THE EG OF DEVELOPING COUNTRIES

Saharuddin Didu

Department Economics and development Studies,
University of Sultan Ageng Tirtayasa, Indonesia

Email: sahdidu@untirta.ac.id

<https://orcid.org/0000-0003-3258-6539>

Cep Jandi Anwar

Department Economics and development Studies,
University of Sultan Ageng Tirtayasa, Indonesia

Email: cepjandianwar@untirta.ac.id

<https://orcid.org/0000-0002-2806-401X>

Indra Suhendra

Department Economics and development Studies,
University of Sultan Ageng Tirtayasa, Indonesia

Email: indras_23@untirta.ac.id

<https://orcid.org/0000-0003-0055-7477>

Tony Santika Chendrawan

Department Economics and development Studies,
University of Sultan Ageng Tirtayasa, Indonesia

Email: tony.sc@untirta.ac.id

<https://orcid.org/0000-0001-9207-6181>

Lilis Nur Kholishoh

Master of Economics Study Program, University
of Sultan Ageng Tirtayasa, Indonesia

Email: lilis.nurkholishoh@gmail.com

<https://orcid.org/0000-0001-6226-5256>

Citation (APA): Didu, S., Anwar, C. J., Suhendra, I., Chendrawan, T. S., Kholishoh, L. N. (2022). The Impact of Foreign Direct Investment, Employment Rate, and Population Growth on The EG of Developing Countries. *International Journal of Economics and Finance Studies*, 14 (04), 202-218. doi:10.34111/ijefs. 20220111

—Abstract—

Because of the unpredictability of global economic situations, EG (EG) has garnered worldwide attention. Recent studies and policymakers must pay close attention to this element. Hence, this study investigates the effect of foreign direct investment (FDI), employment rate, population growth, inflation, and industrialization on the EG of developing nations. The researchers used secondary data from the World Development Indicators (WDI) database from 2011 to 2021. The researchers also utilized the cross-sectional augmented distributed lag (CS-ARDL) method to examine the association between the constructs under investigation. Results demonstrated a favorable relationship between FDI, employment rate, population growth, inflation, and industrialization and the EG of developing countries. The research assists policymakers in formulating strategies for achieving high EG through high FDI, employment, and population growth.

Keywords: Foreign direct investment, employment rate, population growth, inflation, industrialization, EG, developing countries

1. INTRODUCTION

The economic prosperity of a nation is dependent on its financial health. The financial conditions of a nation determine the future of the nation and its people. EG determines the economic health of the nation. If the country's economy grows, the citizens will enjoy a higher standard of living; otherwise, the opposite will be true. The ultimate goal of nations across the globe is to improve their citizens' standard of living. The economy is a fundamental distinction between developed and developing nations. Literature suggests that countries with stronger economies have higher per capita incomes, indicating that their citizens live better lives ([Abdollahi, 2020](#)).

The world has faced numerous problems over the past few decades, one of the most significant being the current economic crisis. Similarly, the Covid pandemic is one of the reasons that harm the global economy. The countries are working on getting their economies back on track. Developing nations face more challenges ([Seok et al., 2021](#)). The lack of resources in the developing nation prevents it from providing its citizens with a higher standard of living, and a pandemic further strains its economy. According to the literature, various elements impact the nation's economy. Investment, employment, population, industrialization, urbanization, inflation, stock market, human resource, and natural resource are determinants of economic development ([Bahrini et al., 2019](#); [Dinh et al., 2019](#); [Mahembe et al., 2019](#)). The current research focuses on FDI, employment, population, industrialization, and inflation in light of the preceding. A country's developed or developing status is determined by its per capita income. The top 10 developing economies in terms of per capita income are Burundi, Afghanistan, Somalia, South Sudan, the Central African Republic, Mozambique, Madagascar, Sierra Leone, Congo, and Niger ([Omar et al., 2020](#); [Sabir et al., 2019](#); [Sergi et al., 2019](#); [Sharif](#)

et al., 2020). If these nations wish to regain their economies, they must focus on foreign direct investment, employment, population, industrialization, and inflation. Figure 1 depicts the per capita income of the 10 leading emerging countries.

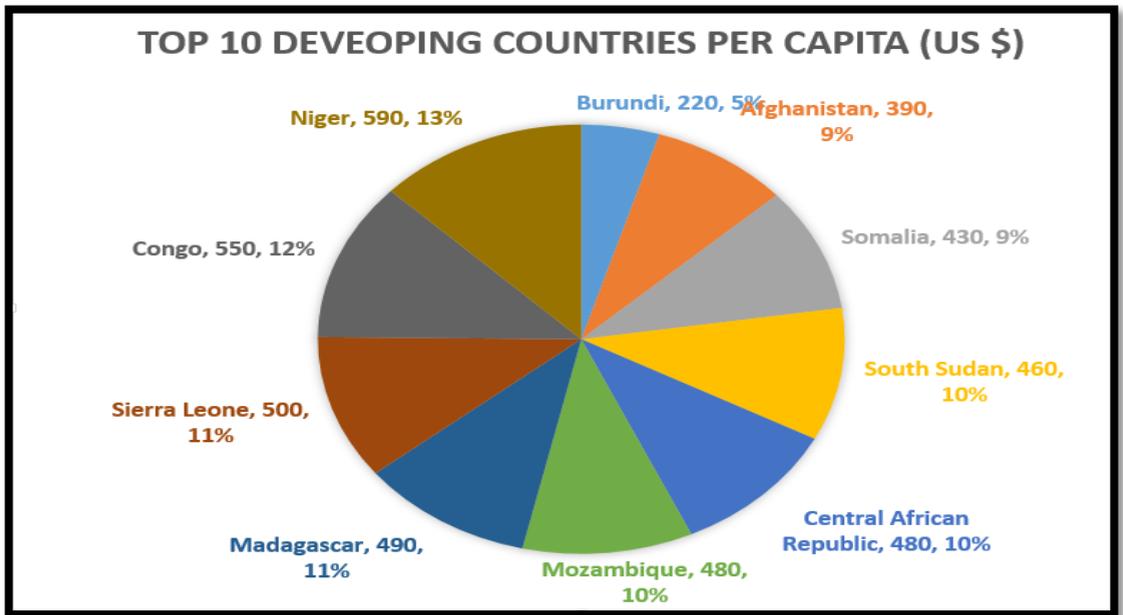


Figure 1: Per Capita Income of top 10 Developing Economies
 Source: World Data

Although much literature exists on EG, particularly in developing nations, many of its facets still need to be investigated. 2) Rafat (2018) and Fan et al. (2020) examined the relationship between FDI and EG; however, the current study will also examine this relationship with the addition of employment rate, population growth, inflation, and industrialization in the 10 developing economies of the world using a new data set. 3) The EG has conducted extensive research from the perspective of developing countries. Still, the equation containing foreign direct investment (FDI), employment rate, population growth, inflation, and industrialization in 10 developing countries, namely Burundi, Afghanistan, Somalia, South Sudan, Central African Republic, Mozambique, Madagascar, Sierra Leone, Congo, and Niger, has not been tested in recent years. 4) Radulescu et al. (2019) and Bhorat et al. (2016) studied if the employment rate has a relationship with EG; however, the current study will also work on it with the addition of FDI, population growth, inflation, and industrialization using a new sample set. 5) Ogunleye et al. (2018) and Peterson (2017) worked on population growth and EG. In contrast, the current study will also examine the relationship in conjunction with the addition of FDI, employment rate, inflation, and industrialization in Burundi, Afghanistan, Somalia, South Sudan, Central African Republic, Mozambique, Madagascar, Sierra Leone, Congo, and Niger using a new data set. 6) Tien (2021) and

Lopes da Veiga et al. (2016) investigated the relationship between inflation and EG. In contrast, using a new data set, the current study will investigate this relationship in addition to FDI, employment rate, population growth, and industrialization in 10 developing economies. 7) Wang et al. (2018) and Saba et al. (2022) worked on industrialization and EG. Still, the present study will examine the relationship between FDI, employment rate, population growth, and inflation using a new sample of data. Similarly, the other studies in the current study also have some significance, namely: 1) the current study emphasizes the need to investigate the EG with a view to the country's prosperity; 2) the current study adds to the literature on the EG, particularly in the context of the 10 developing economies of the world; and 3) the current study provides assistance to economy-related professionals so that they can review and improve their policies.

2. LITERATURE REVIEW

The economic situation of a country determines its level of prosperity. Only if the country's economy is stable can it provide its citizens with a higher living level. There are several contributors to EG, and foreign direct investment is one of them (FDI). Literature suggests a connection between FDI and EG. Rafat (2018) examined whether FDI relates to EG in this setting. The research was performed in Iran. The study sampled information from 23 years. The selected sample spans the years 1991 through 2014. The collected sample was evaluated using VAR analysis. The investigation results indicated that EG and FDI had a mutually beneficial effect on one another. In addition, the report advised that the country specializes in attracting FDI. In addition, Fan et al. (2020) investigated if FDI is associated with EG. The study was conducted in China. The study sampled information from 15 years.

The selected sample spans the years 2000 to 2015. The collected sample was evaluated using the VEC model. According to the analysis's findings, FDI has a favorable impact on China's environmental sector. In addition, Nasir et al. (2019) investigated if FDI has any relationship with EG. The study focused on the economies of ASEAN. The study sampled information from 32 years. The selected sample spans the years 1982 through 2014. The collected sample was evaluated using the DOLS model. According to the investigation results, FDI favorably impacts the EG. The greater the FDI, the greater the economic growth of the country. In addition, Gokmenolu et al. (2016) examined if FDI and energy CO₂ emissions had any relationship with EG. The research was performed in Turkey. The study sampled information spanning 36 years. The sample selected spans the years 1974 to 2010. The collected sample was evaluated using the EKC model. According to the investigation results, the rise in FDI benefits Iran's economic growth.

The ultimate goal of any nation is to improve its citizens' standard of living. Various elements, including money per capita, employment, and food, influence the living level. According to the research, employment has a connection to EG. Hence this study studies

engagement. [Radulescu et al. \(2019\)](#) examined whether employment is associated with EG in this scenario. The study was undertaken on the economy of the CEE nations. The study sampled information from 13 years. The selected sample spans the years 2004 through 2017. The collected sample was evaluated using PLS estimates. The results demonstrated a correlation between EG and employment in both the short and long term.

Moreover, both short- and long-term private consumption is related to the EG but does not generate employment possibilities. In addition, [Bhorat et al. \(2016\)](#) examined whether employment and education are associated with EG. The sample for the study consisted of twenty-year-old data. The selected sample spans the years 1998 to 2018. The collected sample was evaluated using the ARDL method. According to the investigation results, there is a close relationship between employment and EG. Similarly, [Makarings et al. \(2018\)](#) investigated if unemployment is associated with EG. The study sampled information from 22 years. The sample selected spans the years 1994 to 2016. The collected sample was evaluated using the ARDL method. According to the analysis's findings, there is a significant negative relationship between unemployment and EG. In addition, the report advised that the nation emphasize establishing employment opportunities. Furthermore, [Vázquez Vicente et al. \(2021\)](#) investigated if employment and sustainable tourism are related to EG. The research was performed in Spain. The study sampled information from the previous decade. The selected sample spans the years 2008 through 2018. The collected sample was evaluated using the ARDL method. According to the investigation results, there is a strong relationship between sustainable tourism and EG. However, there is no significant positive relationship between EG and employment.

Population growth is one of the elements that influence the EG of a country. Literature suggests a connection between population expansion and EG. In this regard, [Ogunleye et al. \(2018\)](#) analyzed the relationship between population increase and EG. The research was performed in Nigeria. The study sampled information from 34 years. The selected sample spans the years 1981 through 2015. The collected sample was evaluated using OLS regression. According to the investigation results, population increase, notably in Nigeria, has a significant positive correlation with EG. The research also recommended that considering Nigeria's economy, the country devote special attention to population growth.

Similarly, [Peterson \(2017\)](#) investigated whether or not population expansion is associated with EG. The study analyzes a data chart of the past two centuries. The investigation results suggested low population growth produces economic difficulties in low-income countries. On the other hand, significant population growth in low-income nations slows their EG. Therefore countries should pay particular attention to EG regulation. Moreover, [Haseeb et al. \(2019\)](#) investigated if population growth and supply chain performance had any relationship with EG. The research was performed in Indonesia. The sample for the study consisted of data from 200 economists. The use of

questionnaires collected the sample. According to the analysis's findings, there is a connection between population growth, supply chain performance, and EG. The study also suggested that population expansion significantly affects the country's EG.

Similarly, [Garza-Rodriguez et al. \(2016\)](#) investigated if population increase is associated with EG. The research was performed in Spain. As a sample, the study utilized data from 64 years. The selected sample spans the years 1960 to 2014. The collected material was evaluated by SBC analysis. According to the investigation results, a negative relationship exists between population increase and EG in the short term. Any nation's economy depends on financial factors such as FDI, inflation, and industrialization. Inflation is one of the economic elements connected to every other factor. Literature suggests a connection between inflation and EG. [Tien \(2021\)](#) examined the relationship between inflation and EG in this context. The research was performed in Vietnam. The study sampled information over the past four decades. The selected sample spans the years 1975 through 2015. The collected sample was evaluated using the EKC model. According to the investigation results, there is a nonlinear relationship between inflation and EG. To improve the EG, the study advised that the Vietnamese economy give special attention to the lower inflation rate of 6%. Similarly, [Lopes do Veiga et al. \(2016\)](#) investigated whether or not inflation is associated with EG. The analysis was undertaken on the 52 African economies.

The study sampled information from 72 years. The selected sample spans the years 1950 through 2012. According to the analysis, inflation has a substantial relationship with EG. In addition, [Madurapperuma \(2016\)](#) investigated if inflation has any relationship with EG. The study sampled information from 28 years. The selected sample spans the years 1988 through 2015. The collected sample was evaluated using the JC test and the EC model. According to the investigation results, there is a connection between inflation and Sri Lanka EG, particularly in the long run. Moreover, [Doan Van \(2020\)](#) investigated if inflation and money supply are related to EG. The research was performed in China. The study sampled information over the past four years. The selected sample spans the years 2012 through 2016. The collected sample was evaluated using the FF and economic models. The results of the investigation indicate that both money supply and inflation have an impact on the EG. The country's EG is proportional to the business activity within the country. Countries with a significant amount of business typically have superior EG. When a company generates industry, money flow, foreign direct investment, and employment follow. Literature suggests a connection between industrialization and EG. [Wang et al. \(2018\)](#) examined whether industrialization is associated with EG in this scenario. The research was conducted in both China and India. The study sampled information from 34 years. The selected sample spans the years 1980 through 2014. The collected sample was evaluated using TD modeling. According to the analysis's findings, there is a connection between industrialization and EG.

Moreover, both economies are under enormous pressure in the context of eradicating poverty. Poverty is one of the key factors contributing to the discontinuation of EG. Similarly, [Saba et al. \(2022\)](#) investigated if ICT diffusion and industrialization are related to EG. The research was performed on 171 economies that were both developed and developing. The study sampled information from 18 years. The selected sample spans the years 2000 to 2018. The collected sample was evaluated with the GMM estimator model. The investigation results suggested that industrialization has a negative relationship with EG. In addition, [Adewale \(2017\)](#) investigated whether industrialization has any relationship with EG. The analysis focused on the BRICS economies. The study sampled information from 56 years. The selected sample spans the years 1960 to 2016. The collected sample was evaluated using the GMM estimator. According to the investigation results, industrialization harms the EG. In addition, [Ibitoye et al. \(2022\)](#) investigated if industrialization had any relationship with EG. The research was performed in Nigeria. The study sampled information spanning 33 years. The selected sample spans the years 1986 through 2019. The collected sample was evaluated using the Keynesian model. The results of the investigation indicate that industrialization affects the Nigerian EG.

3. RESEARCH METHODS

This study investigates the influence of FDI, employment rate, population growth, inflation, and industrialization on the EG of developing nations. Burundi, Afghanistan, Somalia, South Sudan, the Central African Republic, Mozambique, Madagascar, Sierra Leone, Congo, and Niger are developing countries. The researchers used secondary data from the WDI database from 2011 to 2021. The study equation is as follows:

$$EG_{it} = \alpha_0 + \beta_1 FDI_{it} + \beta_2 ER_{it} + \beta_3 PG_{it} + \beta_4 INF_{it} + \beta_5 IND_{it} + e_{it} \quad (1)$$

Where;

- EG = EG
- t = Time Period
- i = Countries
- FDI = Foreign Direct Investment
- ER = Employment Rate
- PG = Population Growth
- INF = Inflation
- IND = Industrialization

The study employed the EG as the dependent variable and GDP growth as proxies (annual percentage). In addition, the researchers utilized three predictors, including FDI as measured by FDI, net flows (percent of GDP), employment rate proxies as employment to population rate total (percent), and population growth as assessed by population growth (annual percentage). The researchers additionally employed two

control variables, including inflation proxies such as consumer price (annual percentage) and industrialization proxies such as industry value added (percentage of GDP). Table 1 contains the variables that can be measured.

Table 1. Variables with Measurements

S#	Variables	Measurement	Sources
01	EG	GDP growth (annual percentage)	WDI
02	Foreign Direct Investment	FDI, net flows (% of GDP)	WDI
03	Employment Rate	Employment to population rate total (%)	WDI
04	Population Growth	Population growth (annual percentage)	WDI
05	Inflation	Consumer price (annual percentage)	WDI
06	Industrialization	Industry value added (% of GDP)	WDI

The researchers utilized descriptive statistics to illustrate the specifics of the constructs under investigation. In addition, the researchers used the correlation matrix, which demonstrates the relationship between variables. In addition, the researchers used the cross-sectional dependency (CSD) test to examine the CSD issue; the equation for the CSD test is as follows:

$$CSD_{IT} = \left[\frac{IT(T-1)}{2} \right]^{\frac{1}{2}} \hat{\rho}_T \quad (2)$$

Where, $\hat{\rho}_T$ represents the coefficient correlation, T represents the time, and I represents the cross-section units.

In addition, the researchers utilized the cross-sectionally enhanced IPS (CIPS) to investigate the unit root among the variables. This method is the most effective for examining the unit root in panel estimations. The equation is as follows:

$$\Delta W_{i,t} = \phi_i + \phi_i Y_{i,t-1} + \phi_i \bar{Y}_{t-1} + \sum_{l=0}^p \phi_{il} \Delta \bar{W}_{t-1} + \sum_{l=0}^p \phi_{il} \Delta W_{i,t-1} + \mu_{it} \quad (3)$$

Where, \bar{W} represent the mean "cross-section" that is mentioned below:

$$W^{i,t} = \phi^1 \overline{FDI}^{i,t} + \phi^2 \overline{ER}^{i,t} + \phi^3 \overline{PG}^{i,t} + \phi^4 \overline{INF}^{i,t} + \phi^5 \overline{IND}^{i,t} \quad (4)$$

Hence, the CIPS is established below:

$$\widehat{CIPS} = N^{-1} \sum_{i=1}^n CADF_i \quad (5)$$

Where CADF represents the cross-sectionally augmented dickey fuller test

In addition, the researchers employed the co-integration test developed by [Westerlund et al. \(2008\)](#) to examine the model's co-integration. According to the CSD assumption, this strategy is considered the best. Below is the equation for the test:

$$llog(L) = \alpha_0 - \frac{1}{2} \sum_{i=1}^N (T \log(\sigma_{i,t}^2) - \frac{1}{\sigma_{i,t}^2} \sum_{t=1}^T eit^2) \quad (7)$$

The researchers also utilized the CS-ARDL method to examine the relationship between the understudy structures. This is the optimal method for examining the association between variables in panel studies that give both long- and short-run associations. Moreover, it handles CSD faults, which the ARDL model could not. Below is the equation for the approach:

$$\Delta Y_{it} = \varphi_i + \sum_{l=1}^p \varphi_{it} \Delta Y_{i,t-1} + \sum_{l=0}^p \varphi'_{il} X_{1,s,i,t} + \sum_{l=0}^1 \varphi'_{il} \overline{X} Z_{i,t-1} + \varepsilon_{it} \quad (8)$$

Finally, the researchers developed the CS-ARDL equation for EG using understudy predictors given below:

$$\Delta EG_{it} = \varphi_i + \sum_{l=1}^p \varphi_{it} \Delta EG_{i,t-1} + \sum_{l=0}^p \varphi'_{il} FDI_{s,i,t} + \sum_{l=0}^p \varphi'_{il} ER_{s,i,t} + \sum_{l=0}^p \varphi'_{il} PG_{s,i,t} + \sum_{l=0}^p \varphi'_{il} INF_{s,i,t} + \sum_{l=0}^p \varphi'_{il} IND_{s,i,t} + \varepsilon_{it} \quad (9)$$

4. RESEARCH FINDINGS

Researchers utilized descriptive statistics to illustrate the specifics of variables. According to the study's findings, the average value of EG was 2.807%, the average value of FDI was 6.559%, and the average value of ER was 56.161%. In addition, the research results indicate that the average value for PG was 2.595%, the average value for INF was 13.176%, and the average value for IND was 21.36%. These results are presented in [Table 2](#).

Table 2. Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
EG	110	2.807	8.716	-46.082	20.717
FDI	110	6.559	10.398	-18.918	39.811
ER	110	56.161	23.402	12.822	93.934
PG	110	2.595	1.254	-3.755	5.299
INF	110	13.176	41.527	-2.815	380.000
IND	110	21.366	13.034	-5.692	65.874

In addition, the researchers utilized the correlation matrix, which illustrates the relationship between variables. Results demonstrated a favorable relationship between FDI, employment rate, population growth, inflation, and industrialization and the EG of developing countries. These results are presented in [Table 3](#).

Table 3. Matrix of Correlations

Variables	EG	FDI	ER	PG	INF	IND
EG	1.000					
FDI	0.072	1.000				
ER	0.134	0.209	1.000			
PG	0.005	0.146	0.017	1.000		
INF	0.018	-0.130	-0.265	-0.558	1.000	
IND	0.262	0.108	-0.024	0.106	-0.004	1.000

Moreover, the researchers also applied the CSD test to check the CSD issue. The outcomes indicated that the t-values are bigger than 1.96 and the p-values are lower than 0.05. The outcomes exposed that no CSD issue exists. These outputs are given in [Table 4](#).

Table 4: CSD Analysis

Variable	Test Stat (prob-values)
EG	3.028*** (0.000)
FDI	4.674*** (0.000)
ER	5.920*** (0.000)
PG	3.664***(0.000)
INF	4.376*** (0.000)
IND	3.647*** (0.000)

In addition, the researchers utilized the IPS (CIPS) to investigate the unit root of the variables. EG, FDI, INF, and IND were shown to be stationary at level, while ER and PG were stationary at first difference. These results are presented in [Table 5](#).

Table 5. Unit Root Test

Variables	I(0)		1 st Difference I(1)	
	CIPS	M-CIPS	CIPS	M-CIPS
EG	-2.354***	-2.784***	----	----
FDI	-3.781***	-3.534***	----	----
ER	----	----	-5.873***	-5.493***
PG	----	----	-5.672***	-4.910***
INF	-2.833***	-3.291***	----	----
IND	-3.674***	-2.377***	----	----

In addition, the researchers employed the co-integration test developed by [Westerlund et al. \(2008\)](#) to examine the model's co-integration. The results showed that t-values are

greater than 1.96 and p-values are less than 0.05. The results demonstrated the existence of co-integration. These results are presented in [Table 6](#).

Table 6. Co-integration Test

Test	Without break	Mean shift	Regime shift
Explained Variable: EG			
Z _φ (N)	-4.390***	-5.672***	-4.783***
P _{value}	0.000	0.000	0.000
Z _τ (N)	-4.467***	-5.481***	-4.387***
P _{value}	0.000	0.000	0.000

The researchers also utilized the CS-ARDL method to examine the relationship between the understudy structures. Short-term and long-term results indicated that FDI, employment rate, population growth, inflation, and industrialization have a positive relationship with the EG of emerging countries. These results are presented in [Table 7](#).

Table 7. CS-ARDL Analysis

Long Run findings			
Variables	Coeff	t-stat	Prob
Explained Variable: EG			
FDI	0.783***	3.564	0.001
ER	1.904***	4.278	0.000
PG	2.271***	5.392	0.000
INF	0.633**	2.746	0.012
IND	1.372***	5.201	0.000
CSD-Statistics	-	0.049	0.752
Short Run Results			
FDI	3.674***	4.746	0.000
ER	1.109***	4.674	0.000
PG	2.102**	3.382	0.001
INF	3.382***	4.783	0.000
IND	1.272***	5.102	0.000
ECT(-1)	-0.674***	-5.758	0.000

5. DISCUSSIONS

The findings revealed a positive correlation between FDI and EG. These findings are consistent with the research of [M. Ahmad et al. \(2021\)](#), which suggests that if enterprises in a country successfully attract a large amount of FDI, they maintain their financial resources and may develop long-term business strategies. The expansion of sustainability in the EG results from these enterprises' increased output, according to

Gokmenoglu et al. (2019), a country's investment level increases when the government permits FDI inflows and implements initiatives to attract more foreign investors. It facilitates the execution of developmental projects and paves the way for the nation to achieve a greater EG.

The results indicated that the employment rate is positively correlated with EG. These findings are consistent with Milica et al.'s (2019) study, which hypothesizes that an increase in the employment rate improves the workforce labor within an organization and facilitates business operations. This enhances the overall output level and business expansion. As a result, EG grows. These conclusions are consistent with Manzoor et al.'s (2019) examination of the employment rate's effect on the EG rate. While the employment rate continues to rise, there is less strain on natural and artificial resources and more efficient utilization of resources to develop new ones. This promotes resource availability consistency and sustains EG.

The results demonstrated a favorable correlation between population increase and EG. These findings are consistent with the research of Marques et al. (2019), which suggests that a country's human resources are derived from its people. When the population growth rate is greater, human resources continue to increase. The greater the accessible human resources, the greater the output level and the EG rate. According to Zhang et al. (2019), human capital development, infrastructure construction, and other resource development are enhanced when a country's population growth rate increases. It causes a rise in the EG rate.

The results indicated that inflation is positively correlated with EG. These findings are consistent with the findings of T. Ahmad's study from 2022, which suggests that the incidence of inflation raises the profitability of enterprises due to higher product pricing, and it may enhance their propensity to manufacture goods and services. The consequent rise in goods and services output contributes to EG. These findings are consistent with Amin et al. (2020)'s findings that, during periods of inflation, the government's capacity to spend on public well-being rises, resulting in country development practices. Hence, EG is anticipated to grow.

The results indicated a link between industrialization and EG. These findings are consistent with Sarkodie et al.'s (2020) research, which concludes that industry is the largest economic sector. Industrialization increases the number of consumers and capital goods. Hence, it results in higher EG. These findings concur with Opoku et al.'s (2020) explanation that industrialization increases people's interaction with modern means of living. With innovation and technological advancement, EG rises.

6. IMPLICATIONS

As a result of its contribution to the body of knowledge, the study offers scholars guidelines for future endeavors. The study investigates the effects of FDI, employment

rate, and population growth on EG, in addition to the control factors of inflation and industrialization. The initiative to examine the role of FDI, employment rate, population growth, inflation, and industrialization in China's EG contributes to the body of knowledge.

There are numerous empirical implications of the study for emerging economies. It provides state and economic authorities with rules on how to increase EG. According to the report, governments and economists must work to promote FDI to increase EG. Furthermore, the study suggests that economic policies should be formulated to raise the employment rate and, thus, they must enhance EG. The research assists policymakers in formulating strategies for achieving high EG through high FDI, employment, and population growth. There is a recommendation that population increase must be productive for the country to reach higher EG. The study also suggests that the government should favor inflation under difficult circumstances, which results in a higher EG for the economy. In addition, the report indicates that the governing bodies must support industrialization. It would boost EG.

7. CONCLUSION

The writers' writing aimed to examine the effects of FDI, employment rate, and population increase on EG. In addition, they planned to investigate the influence of inflation and industrialization in EG. Using the quantitative methodology, the authors collected FDI, employment rate, population growth, inflation, industrialization, and EG data from China's statistical records. Results revealed a positive relationship between FDI, employment rate, population growth, inflation, industrialization, and EG. The results demonstrated that a rise in FDI inflows enhances government and private firms financial resources. It increases EG by improving the nation's development, public welfare, and firm performance.

Similarly, the growth in the employment rate ensures the development of company plans and enhances their implementation. The improved EG is a consequence of the increased output. The data indicate that a growing population enhances the various locations from multiple viewpoints, including human capital, infrastructure development, and resource preservation. Thus, EG is increased. The study indicated that rising inflation stimulates national development and enhances economic growth (EG). In addition, industrialization focusing on innovation and technological advancement enhances EG.

8. LIMITATIONS

Nonetheless, there are certain limitations in the current study, and it is advised that future researchers eliminate them. Many factors, such as FDI, employment rate, population growth, inflation, and industrialization, are analyzed in this study. For full guidelines, authors must explore further EG-driving elements. Using China-specific facts and figures, this article analyzes the relationship between FDI, employment rate, population

growth, inflation, industrialization, and EG. To offer general findings, future researchers must organize statistics from many countries.

REFERENCES

- Abdollahi, H. (2020). Investigating energy use, environment pollution, and EG in developing countries. *Environmental and Climate Technologies*, 24(1), 275-293. doi: <https://doi.org/10.2478/rtuct-2020-0016>
- Adewale, A. R. (2017). Import substitution industrialization and EG—Evidence from the group of BRICS countries. *Future Business Journal*, 3(2), 138-158. doi: <https://doi.org/10.1016/j.fbj.2017.06.001>
- Ahmad, M., Jabeen, G., Irfan, M., Işık, C., & Rehman, A. (2021). Do inward foreign direct investment and economic development improve local environmental quality: aggregation bias puzzle. *Environmental Science and Pollution Research*, 28, 34676-34696. doi: <https://doi.org/10.1007/s11356-021-12734-y>
- Ahmad, T. (2022). A Case of Pakistan Investigating the Relationship between Inflation and EG: A Case of Pakistan. *Acta Pedagogica Asiana*, 1(1), 1-8. doi: <https://doi.org/10.53623/apga.v1i1.64>
- Amin, A., Liu, Y., Yu, J., Chandio, A. A., Rasool, S. F., Luo, J., & Zaman, S. (2020). How does energy poverty affect economic development? A panel data analysis of South Asian countries. *Environmental Science and Pollution Research*, 27(25), 31623-31635. doi: <https://doi.org/10.1007/s11356-020-09173-6>
- Bahrini, R., & Qaffas, A. A. (2019). Impact of information and communication technology on EG: Evidence from developing countries. *Economies*, 7(1), 1-21. doi: <https://doi.org/10.3390/economies7010021>
- Bhorat, H., Cassim, A., & Tseng, D. (2016). Higher education, employment and EG: Exploring the interactions. *Development Southern Africa*, 33(3), 312-327. doi: <https://doi.org/10.1080/0376835X.2016.1161501>
- Dinh, T. T.-H., Vo, D. H., The Vo, A., & Nguyen, T. C. (2019). Foreign direct investment and EG in the short run and long run: Empirical evidence from developing countries. *Journal of Risk and Financial Management*, 12(4), 150-176. doi: <https://doi.org/10.3390/jrfm12040176>
- Doan Van, D. (2020). Money supply and inflation impact on EG. *Journal of Financial Economic Policy*, 12(1), 121-136. doi: <https://doi.org/10.1108/JFEP-10-2018-0152>
- Fan, W., & Hao, Y. (2020). An empirical research on the relationship amongst renewable energy consumption, EG and foreign direct investment in China. *Renewable Energy*, 146, 598-609. doi: <https://doi.org/10.1016/j.renene.2019.06.170>
- Garza-Rodriguez, J., Andrade-Velasco, C., Martinez-Silva, K., Renteria-Rodriguez, F., & Vallejo-Castillo, P. (2016). The relationship between population growth and EG in Mexico. *Jorge Garza-Rodriguez and Cecilia I. Andrade-Velasco and Karen D. Martinez-Silva and Francisco D. Renteria-Rodriguez and Pedro A.*

- Vallejo-Castillo,(2016)"The relationship between population growth and EG in Mexico", *Economics Bulletin*, 36(1), 97-107. Retrieved from <https://ssrn.com/abstract=2728681>
- Gokmenoglu, K., Kirikkaleli, D., & Eren, B. M. (2019). Time and frequency domain causality testing: The causal linkage between FDI and economic risk for the case of Turkey. *The Journal of International Trade & Economic Development*, 28(6), 649-667. doi: <https://doi.org/10.1080/09638199.2018.1561745>
- Gökmenoğlu, K., & Taspinar, N. (2016). The relationship between CO2 emissions, energy consumption, EG and FDI: the case of Turkey. *The Journal of International Trade & Economic Development*, 25(5), 706-723. doi: <https://doi.org/10.1080/09638199.2015.1119876>
- Haseeb, M., Zandi, G., Hartani, N. H., Pahi, M. H., & Nadeem, S. (2019). Environmental analysis of the effect of population growth rate on supply chain performance and EG of Indonesia. *Ekoloji*, 28(107), 417-426. Retrieved from <http://www.ekolojidergisi.com/article/environmental-analysis-of-the-effect-of-population-growth-rate-on-supply-chain-performance-and-5610>
- Ibitoye, O. J., Ogunoye, A. A., & Kleynhans, E. P. J. (2022). Impact of industrialisation on EG in Nigeria. *Journal of Economic and Financial Sciences*, 15(1), 796-810. Retrieved from <https://journals.co.za/doi/abs/10.4102/jef.v15i1.796>
- Lopes da Veiga, J. A., Ferreira-Lopes, A., & Sequeira, T. N. (2016). Public Debt, EG and Inflation in African Economies. *South African Journal of Economics*, 84(2), 294-322. doi: <https://doi.org/10.1111/saje.12104>
- Madurapperuma, W. (2016). Impact of inflation on EG in Sri Lanka. *Journal of World Economic Research*, 5(1), 1-7. Retrieved from <https://ssrn.com/abstract=3375693>
- Mahembe, E., & Odhiambo, N. M. (2019). Foreign aid, poverty and EG in developing countries: A dynamic panel data causality analysis. *Cogent Economics & Finance*, 7(1), 162-171. doi: <https://doi.org/10.1080/23322039.2019.1626321>
- Makarange, S. C., & Khobai, H. (2018). The effect of unemployment on EG in South Africa (1994-2016). *Economics & Finance*, 2, 1-16. Retrieved from <https://mpira.ub.uni-muenchen.de/id/eprint/85305>
- Manzoor, F., Wei, L., Asif, M., Haq, M. Z. u., & Rehman, H. U. (2019). The contribution of sustainable tourism to EG and employment in Pakistan. *International Journal of Environmental Research and Public Health*, 16(19), 378-398. doi: <https://doi.org/10.3390/ijerph16193785>
- Marques, A., Martins, I. S., Kastner, T., Plutzer, C., Theurl, M. C., Eisenmenger, N., . . . Bruckner, M. (2019). Increasing impacts of land use on biodiversity and carbon sequestration driven by population and EG. *Nature Ecology & Evolution*, 3(4), 628-637. doi: <https://doi.org/10.1038/s41559-019-0824-3>
- Milica, Đ., & Milica, J. (2019). Productive employment and working conditions as determinants of sustainable economic development in Serbia. *Studies in Business and Economics*, 14(3), 84-96. doi: <https://doi.org/10.2478/sbe-2019-0045>

- Nasir, M. A., Huynh, T. L. D., & Tram, H. T. X. (2019). Role of financial development, EG & foreign direct investment in driving climate change: A case of emerging ASEAN. *Journal of Environmental Management*, 242, 131-141. doi: <https://doi.org/10.1016/j.jenvman.2019.03.112>
- Ogunleye, O. O., Owolabi, O. A., & Mubarak, M. (2018). Population growth and EG in Nigeria: An appraisal. *International Journal of Management, Accounting and Economics*, 5(5), 282-299. Retrieved from <https://www.researchgate.net/profile/Olusogo-Ogunleye/publication/325995144>
- Omar, M. A., & Inaba, K. (2020). Does financial inclusion reduce poverty and income inequality in developing countries? A panel data analysis. *Journal of Economic Structures*, 9(1), 37. doi: <https://doi.org/10.1186/s40008-020-00214-4>
- Opoku, E. E. O., & Boachie, M. K. (2020). The environmental impact of industrialization and foreign direct investment. *Energy Policy*, 137, 111-128. doi: <https://doi.org/10.1016/j.enpol.2019.111178>
- Peterson, E. W. F. (2017). The role of population in EG. *Sage Open*, 7(4), 215-231. doi: <https://doi.org/10.1177/2158244017736094>
- Radulescu, M., Serbanescu, L., & Sinisi, C. I. (2019). Consumption vs. Investments for stimulating EG and employment in the CEE Countries—a panel analysis. *Economic Research-Ekonomska istraživanja*, 32(1), 2329-2352. doi: <https://doi.org/10.1080/1331677X.2019.1642789>
- Rafat, M. (2018). The interactive relationship between EG and foreign direct investments (FDI): A VAR analysis in Iran. *Iranian Economic Review*, 22(1), 163-185. Retrieved from https://ier.ut.ac.ir/article_65355_a825a02dcfc008e9c5abe5c7ccdc87fc.pdf
- Saba, C. S., & Ngepah, N. (2022). ICT diffusion, industrialisation and EG nexus: An international cross-country analysis. *Journal of the Knowledge Economy*, 13(3), 2030-2069. doi: <https://doi.org/10.1007/s13132-021-00795-w>
- Sabir, S., Rafique, A., & Abbas, K. (2019). Institutions and FDI: Evidence from developed and developing countries. *Financial Innovation*, 5(1), 1-20. doi: <https://doi.org/10.1186/s40854-019-0123-7>
- Sarkodie, S. A., Owusu, P. A., & Leirvik, T. (2020). Global effect of urban sprawl, industrialization, trade and economic development on carbon dioxide emissions. *Environmental Research Letters*, 15(3), 34-53. doi: <https://doi.org/10.1088/1748-9326/ab7640/meta>
- Seok, J. H., & Moon, H. (2021). Agricultural exports and agricultural EG in developed countries: Evidence from OECD countries. *The Journal of International Trade & Economic Development*, 30(7), 1004-1019. doi: <https://doi.org/10.1080/09638199.2021.1923780>
- Sergi, B. S., Popkova, E. G., Bogoviz, A. V., & Ragulina, J. V. (2019). Entrepreneurship and EG: the experience of developed and developing countries.

Entrepreneurship and Development in the 21st Century, 3-32. doi: <https://doi.org/10.1108/978-1-78973-233-720191002>

- Sharif, A., Mishra, S., Sinha, A., Jiao, Z., Shahbaz, M., & Afshan, S. (2020). The renewable energy consumption-environmental degradation nexus in Top-10 polluted countries: Fresh insights from quantile-on-quantile regression approach. *Renewable Energy*, 150, 670-690. doi: <https://doi.org/10.1016/j.renene.2019.12.149>
- Tien, N. H. (2021). Relationship between inflation and EG in Vietnam. *Turkish Journal of Computer and Mathematics Education (TURCOMAT)*, 12(14), 5134-5139. Retrieved from <https://turcomat.org/index.php/turkbilmat/article/download/11534/8469>
- Vázquez Vicente, G., Martín Barroso, V., & Blanco Jiménez, F. J. (2021). Sustainable tourism, EG and employment—The case of the wine routes of Spain. *Sustainability*, 13(13), 61-74. doi: <https://doi.org/10.3390/su13137164>
- Wang, Q., Su, M., & Li, R. (2018). Toward to EG without emission growth: The role of urbanization and industrialization in China and India. *Journal of Cleaner Production*, 205, 499-511. doi: <https://doi.org/10.1016/j.jclepro.2018.09.034>
- Westerlund, J., & Edgerton, D. L. (2008). A simple test for co-integration in dependent panels with structural breaks. *Oxford Bulletin of Economics and Statistics*, 70(5), 665-704. doi: <https://doi.org/10.1111/j.1468-0084.2008.00513.x>
- Zhang, J., Zhu, W., Zhu, L., Cui, Y., He, S., & Ren, H. (2019). Topographical relief characteristics and its impact on population and economy: A case study of the mountainous area in western Henan, China. *Journal of Geographical Sciences*, 29, 598-612. doi: <https://doi.org/10.1007/s11442-019-1617-y>