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Can Human Capital, Corruption and Population Density Affecting Economic Growth?

(Empirical Study in South Asian Countries 2016-2020)

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Abstract

This study aims to analyze the determinants of poverty in South Asian countries. The data in this study is secondary data obtained from the World Bank, Asian Development Bank and Transparency International. This study was conducted to test several hypotheses. This study examines the effect of the level of human resources, the level of corruption and population density on economic growth in South Asian countries. The observation period chosen is from 2016 to 2020 (5 years). The analytical method used to test the hypothesis is panel data regression analysis. The results of this study indicate that the level of human resources has no effect on economic growth. While the level of corruption and population density has a significant negative effect on the economic growth of South Asian countries.

Kata Kunci:
Sumber daya manusia; Korupsi; Kepadatan Penduduk; Pertumbuhan Ekonomi

Abstrak:

Penelitian ini bertujuan untuk menganalisis faktor penentu kemiskinan di negara-negara Asia Selatan. Data dalam penelitian ini adalah data sekunder yang diperoleh dari World Bank, Asian Development Bank dan Transparency International. Penelitian ini dilakukan untuk menguji beberapa hipotesis. Dalam penelitian ini mengamati pengaruh dari tingkat sumber daya manusia, tingkat korupsi dan kepadatan penduduk terhadap pertumbuhan ekonomi di negara-negara Asia Selatan. Periode pengamatan yang dipilih adalah dari tahun 2016 sampai dengan tahun 2020 (5 tahun). Metode analisis yang digunakan untuk menguji hipotesis adalah analisis regresi panel data. Hasil penelitian ini menunjukkan bahwa tingkat sumber daya manusia tidak berpengaruh terhadap pertumbuhan ekonomi. Sementara tingkat korupsi dan kepadatan penduduk berpengaruh negatif signifikan terhadap pertumbuhan ekonomi negara-negara Asia Selatan.

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INTRODUCTION

Economic growth is the main policy agenda of developing countries that have high poverty rates (Mohammad Mafizur Rahman, 2018) Good economic growth will have an impact on improving living standards, reducing poverty and creating new jobs (Azam, 2019) this problem is also faced by the South Asian region which has a high poverty rate and is different in each state (Bansal et al., 2021).

The South Asian Association for Regional Cooperation (SAARC) countries - Afghanistan, Bangladesh, Bhutan, India, Nepal, Pakistan, Sri Lanka and the Maldives have a combined population of around 1.9 billion (World Bank, 2019). Despite its high population, South Asia is one of the largest and poorest regions in the world. Despite its vast human and natural resources, the region is still classified as underdeveloped, has a poor quality of life and a very high infant mortality rate (Alharthi & Hanif, 2020). In identifying the economic situation in a region in a certain period, it can be measured using Gross Domestic Product (GDP) data to understand how the region organizes and uses available resources. GDP itself is one of the main measures in seeing the real performance of a region's economy as a whole.

Table 1.1
GDP of South Asian Countries 2020

No	Country	GDP/US$
1	India	2.660
2	Bangladesh	323.06
3	Pakistan	262.2
4	Sri Lanka	80.67
5	Nepal	33.66
6	Afganistan	20.12
7	Maladewa	3.74
8	Bhutan	2.315

Source : Databoks, 2021

In 2020 India topped South Asia with a GDP value of US$2.66 followed by Bangladesh and Pakistan with US$323.06 billion and US$262.6 billion respectively. Economic growth in the region has attracted global attention due to its strategic role in the world economy. However, efforts to achieve economic growth in South Asia are faced with a variety of complex challenges. Fundamentally, economic growth in

South Asia is a consequence of a complex interaction between internal and external factors. Factors such as human resource quality, population density, and even corruption can affect economic growth.

THEORITICAL FOUNDATION

Human resources are an important factor to follow the flow of structural economic change (Dwiarsyah et al., 2021). Population density can affect the quality of life of its people. Economic growth can be spurred by an increase in population, more people will lead to an expansion of the market, which in turn will increase the level of specialization in the economy. As a result of this specialization, economic activity will increase, but the problem arising from population density is inequality in distribution. High population density can have an impact on people's quality of life. (Yunianto, 2021) The problem of economic growth can also be influenced by corrupt practices in a country. Several studies have shown that corruption often occurs in countries with low and developing economies or in authoritarian leadership regimes (Sasana, 2004). The high level of corruption in a country reflects a failure in government planning due to weak institutional quality, so that personal interests are often placed above national interests (Ichvani & Sasana, 2019).

However, it should be noted that the context and situation in each country in South Asia may differ, so more specific and focused research is needed to understand the dynamics of economic growth in each country in more depth.

METHODS

This research uses paneI data. In addition to obtaining a sufficient number of observations, the use of paneI data also aims to obtain comprehensive analysis results, namely suggesting the determinants of economic growth in South Asian countries from 2015-2020.

Based on the research objectives and the literature review that has been conducted, this research can be codified as follows:

$$EG2it = \alpha + \beta 1HDIit + \beta 2Cit + \beta 3PDit + \varepsilon$$

Keterangan:

EG = Economic Growth (Y)

HDI = Human Capital (X1)

C = Corruption (X2)

PD = Population Density (X3)

ε = Error
i = Country
t = Year

The modeI in equation (1) above is then estimated using three approaches, namely (a) Common Effect ModeI (CEM) approach; (b) Fixed Effect ModeI (FEM) approach; and (c) Random Effect ModeI (REM) approach. Meanwhile, to determine the best modeI approach in estimating the parameters in this research, a modeI specification test was conducted. The modeI specification test tools used include: (a) Chow test is a test to choose between CEM mode or FEM mode; (b) Hausman test is a test to choose between FEM mode or REM mode; and (c) MuItipIier Iangerange test is used to choose between REM mode or CEM mode.

To see the level of significance of the parameters estimated with the selected mode, a significance test of the estimated parameters was conducted. Testing the level of significance is done both parsimoniously according to the independent variables used and jointly with all the existing independent variables. ParsiaI testing is done through the t statistical test, while joint testing is done through the F statistical test. Meanwhile, to test the level of goodness of fit of the modeI, the coefficient of determination test is carried out.

RESULT AND DISCUSSION

1. Descriptive Analysis

The amount of data obtained in this study is 40 observational data in the 5-year period 2016-2020. With a total of 8 countries. The following is a descriptive analysis of each variable:

Table 2
Descriptive Analysis

	Y	X1	X2	X3
Mean	2.85	0.6345	35.725	510.8
Median	4.9	0.64	33	298.5
Maximum	9	0.78	68	1858
Minimum	-33.5	0.48	15	19
Std. Dev.	7.2919	0.09246	14.0931	563.852

Source: Eviews Data Process 2023

Based on the results of the descriptive statistical test shown in Table 2, it can be seen that the average number of human development indices is 0.63 with a maximum number of 0.78 and a minimum of 0.48. The interpretation of these values is that there is the lowest human development index in South Asian countries in this study of 0.48 from 2016 to 2020. On the other hand, the average (mean) economic growth in South Asian countries during the 2016-2020 period is 0.6345 or greater than the standard deviation of 0.09246.

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Based on the results of the descriptive statistical test shown in Table 2, it can be seen that the average number of population density levels is 510.8 with a maximum number of 298.5 and a minimum of 19. The interpretation of these values is that there is the lowest human development index in South Asian countries in this study of 19 during 2016 to 2020. On the other hand, the average (mean) economic growth in South Asian countries during the 2016-2020 period is 510.8 or smaller than the standard deviation of 563.852.

2. **Panel Data Regression (Model Selection)**

This research conducts estimation testing to find the right modeI in analyzing paneI data regression. ModeI estimation testing is done with three steps. The steps taken in this estimation stage are Chow test, Hausman test and Iagrange MuItipier (IM) test. The Chow test is conducted to choose between the Common Effect Mode (CEM) and Fixed Effect Mode (FEM) that is appropriate for use in research.

Table 3
Chow Test

Redundant Fixed Effects Tests
Equation: Untitled
Test cross-section fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F	9.031621	(7,29)	0.0000
Cross-section Chi-square	46.275831	7	0.0000

Source : Eviews Process Data 2023

In Table. 3 Chow test shows that the value of Prob Cross-section F < (0.05) then H0 is rejected and FEM is more appropriate to use in estimating paneI data than CEM. The next step is the Hausman Test which aims to choose whether the Fixed Effect ModeI (FEM) or Random Effect ModeI (REM) approach is more appropriate for paneI data regression.

Table 4
Hausman Test

Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	54.669581	3	0.0000

Source: Eviews12 Data Process, 2023.

The Hausman test shows that the Prob Chi-Square value is > (0.05) so H0 is rejected so that REM is more suitable for use in estimating paneI data than FEM. From the results of the Chow Test and Hausman Test, it can be concluded that the Fixed Effect Mode (FEM) is more appropriate to use. Since the chosen one is the Fixed Effect ModeI (FEM), then the MuItipIier Iagrange test is not needed.

3. Hypothetical Test Result

a. F Test (Simultan)

From the results of the Fixed Effect Mode (REM) paneI data regression, the F-statistic probabiIity value is 0.00 <0.05. The results provide the conclusion that

(simultaneously) the variability of the human development index, corruption, the number and level of population density affect the variability of economic growth.

Table 5

F test (Simultan)

Prob(F-statistic)	0.000027
R-squared	0.69778

Source: Eviews12 Data Process, 2023

In the table above, based on the results of the F test estimation, the R-square value is 0.69, it can be concluded that economic growth can be influenced by human resources (HDI), corruption (C) and population density (PD) has an effect of 69% and the rest is influenced by other variables outside this study.

b. T test (Partial)

Table 6

T test (Partial)

Variabel	Coeffisient	T-Statisctic	ProbabiIitas	Keterangan
HDI	64.27436	0.829656	0.4135	H1 ditolak
C	-1.806173	-4.597393	0.0001	H2 diterima
PD	-0.090492	-4.196217	0.0002	H3 diterima

Source: Eviews 12 data Process 2023

The t-test is used to identify the impact of independent variables separately on the dependent variable, assuming the other independent variables remain fixed. Then, the calculated t-value is compared with the t-table value from the t-distribution or can be evaluated based on its probability. With a confidence level of 95 percent (α=0.05), and a value of degree of freedom (df) = 85 (n-k = 100-5), the t-table value of 1.66298 is obtained.

Based on the estimation results above, HDI obtained a t-count value of 0.829 < t table 1.663 and a significant value of 0.4135 in the coeffisient table 0.05, meaning 0.4135> 0.05, it can be concluded that partially human resources (HDI) has no effect on South Asia's economic growth. Corruption (C) obtained a t-count value of -4.5973> 1.663 and a significant value of 0.0001 in the coefficients table 0.05, meaning 0.0001 < 0.05, it can be concluded that partially C has a significant negative effect on South Asian economic growth. Population density (PD) obtained a t-count value of -

4196> 1.663 and a significant value of 0.0002 in the coefficients table 0.05, meaning 0.0002 < 0.05, it can be concluded that partially PD has a negative effect on population growth in South Asia.

Based on the estimation results, it is concluded that the human resource perception index (HDI) has no effect on economic growth with a probability of 0.4135> 0.05, so that any increase in the human resource index by 1 will not increase South Asia's economic growth. Unlike the initial hypothesis but has the same results by research (Aslam, 2020) this can be caused if the skills possessed by the human resources of the population in the research area are not in accordance with market demand or industrial needs, then the influence on economic growth will be limited.

Corruption perception index (c) has a negative and significant effect on economic growth with a probability value of 0.0001 <0.05. Each increase in the corruption perception index by 1 will reduce economic growth by 4.597 percent. This means that a country with a high level of corruption will hamper the country's economic growth in accordance with the initial hypothesis that explains corruption has a negative effect on economic growth.

The population density index (PD) has a negative and significant effect on economic growth with a probability value of 0.0002 <0.05. every increase in the PD index by 1 will reduce economic growth in South Asia. in line with the initial hypothesis and research from (Ali, 2015) and (Furuoka, 2018). This means that in the South Asia region, population density will hamper economic growth in the region. According to other studies, population density is often an obstacle because uncontrolled population density will cause socio-economic problems, public welfare, security, availability of clean water, food, and security (Yunianto, 2021).

CONCLUSION

From the results of the above, it can be concluded that human resources have no effect on economic growth in South Asia, Corruption has a significant negative effect on South Asian economic growth and Population Density has a significant negative effect on the South Asian economy. many factors cause this, including the quality and quantity of human resources that are not in accordance with what is needed by the country, the absence of the suitability of the skills possessed by the community It is important to remember that human resources remain an important component in economic growth, but their impact is often complex and related to various other

factors. Population density, on the other hand, can be a hindrance if the country cannot control its growth and there is no positive impact of a large population.

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