

## THE ROLE OF FISCAL DECENTRALIZATION AND HUMAN RESOURCE QUALITY IN THE WELFARE OF UNDERDEVELOPED REGIONS IN INDONESIA

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### Abstract

*This study aims to see the advantage of fiscal decentralization and human development on welfare in 62 underdeveloped districts in Indonesia. The data used is secondary data of 62 underdeveloped districts in Indonesia in 2016-2020 period for panel data regression. The result showed that fiscal decentralization, namely DAU, and life expectancy number with 5% error rate are statistically significant have sign in accordance with expectation, then H1a and H2a are accepted. While fiscal decentralization, namely DAK and DBH, with average time of school has no influence on the welfare of underdeveloped regions in Indonesia.*

**Keywords:** *Education, Fiscal Decentralization, Human Development, Underdeveloped Regions, Welfare.*

### 1. INTRODUCTION

In 2020, the President of Indonesia issued a list of districts designated as underdeveloped areas for the 2020-2024. This classification is updated every five years in an effort to accelerate the development of these underdeveloped regions. The number of such districts in Indonesia has decreased from 122 districts in the 2014-2019 period to 62 districts in the 2020-2024. The criteria for these underdeveloped regions include factors such as the local economy, infrastructure, human resources, regional characteristics, financial capacity, and accessibility (Nurhayati et al., 2022).

The Human Development Index (HDI) assesses human development in a specific geographical area. BPS uses HDI as a tool to evaluate the extent to which the population has access to various aspects of development such as education, healthcare, income, and more. Within the national development plan, human development is one of the seven key areas of focus for enhancing the quality of the workforce's competitiveness. According to Todaro and Stephen C. Smith (2006), they propose that the outcomes of community development can be gauged by assessing the welfare.

The government's role in resource allocation is one of the strategies aimed at enhancing welfare and fostering economic growth (Deswanto et al. 2017). To promote welfare at the regional level, the central government allocates transfer funds to regions through various means, including Profit Sharing Funds (DBH), Special Allocation Funds (DAK), and General Allocation Funds. These financial resources are a form of fiscal decentralization within the framework of regional autonomy, designed to reduce regional disparities.

Numerous studies have investigated the factors impacting welfare. Afif et al. (2018) and Lugastoro (2013) explored the impact of balancing funds on the Human Development Index. Asmawani et al. (2021), Mahya et al. (2021), and Santika et al. (2022) examined how HDI is influenced by life expectancy and average years of schooling. Research findings by Kurniasari (2021) demonstrated that balancing funds have an impact on HDI.

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**The Relation between Fiscal Decentralization and Welfare**

1. General Allocation Fund (DAU)

DAU represents one of the disbursements of central government funds designed to equalize regional finances and enable the exercise of regional government authority. DAU can be utilized to fund various public service requirements, encompassing healthcare, education, and community living standards. Findings from a study conducted by Kurniasari (2021) reveal a positive correlation between DAU and the Human Development Index (HDI) in East Java Province. The allocation of DAU through the capital expenditure budget aims to address infrastructure development needs within a region with the aim of elevating HDI. This outcome aligns with prior research by Rivianto and colleagues (2019), which also suggests a favorable impact of general allocation funds on HDI. Consequently, the following hypothesis is formulated:

**H<sub>1a</sub> : General Allocation Fund contributes positively to Welfare**

2. Special Allocation Fund (DAK)

DAK is an allocation intended to finance the specific needs of a particular region. The use of DAK is subject to specific requirements in line with national priorities, which can include the development of physical infrastructure, such as educational facilities, public amenities, and healthcare, as well as improving the accessibility and quality of public services for the community. Research findings by Lugastoro (2013) state that the Human Development Index in East Java is positively influenced by the ratio of the Special Allocation Fund. This result is consistent with the research conducted by Saputra et al. (2023), which found that the HDI in West Sumatra is positively affected by DAK. As a result, we derive the following hypothesis:

**H<sub>1b</sub> : Special Allocation Fund contributes positively to Welfare**

3. Revenue Sharing Fund (DBH)

DBH is an allocation that is distributed to a region based on its potential regional revenue. DBH consists of revenue sharing from taxes and natural resources to promote equitable development in the region. In the research conducted by Afif et al. (2018), it is stated that the Revenue Sharing Fund positively influences the Human Development Index (HDI) in Papua Province. As a result, we establish the following hypothesis:

**H<sub>1c</sub> : Revenue Sharing Fund contributes positively to Welfare**

**The Relation between Health and Welfare**

As an indicator of health development outcomes, life expectancy can be used to assess the quality of life of a community in a particular region. Asmawani et al. (2021) found that the Human Development Index (IPM) in North Sumatra is positively influenced by Life Expectancy. This aligns with the research findings of Santika et al. (2022), which discovered that the HDI in Aceh Tamiang District is positively affected by Life Expectancy. Consequently, we derive the following hypothesis:

**H<sub>2a</sub> : Health contributes positively to Welfare**

**The Relation between Education and Welfare**

The research results of Mahya et al. (2021) explain that the Human Development Index (IPM) in Central Java Province is positively influenced by the average years of schooling. This is consistent with the findings of Asmawani et al. (2018), which explain that the average years of schooling have a positive and significant impact on the HDI in North Sumatra Province. However, this is not the case with the results of Santika et al. (2022), which explain that the HDI in Aceh Tamiang District is not significantly influenced by the average years of schooling. As a result, we establish the following hypothesis:

**H<sub>2b</sub> : Education contributes positively to Welfare**

## 2. RESEARCH METHOD

The purpose of this study is to examine the role of fiscal decentralization and human development in influencing welfare using secondary data from underdeveloped regions in Indonesia for the years 2016-2020. The underdeveloped regions in this research refer to 62 underdeveloped districts designated by the Presidential Regulation for the 2016-2020 period. This study employs Eviews 9 as the data analysis tool with a panel data regression method, testing the use of three models, including the Common Effect Model (CEM), Random Effect Model (REM), and Fixed Effect Model (FEM). The data used in this study is sourced from the Directorate General of Fiscal Balance, Ministry of Finance, and the Central Statistics Agency of the Republic of Indonesia. The cross-section data comprises 62 underdeveloped districts in Indonesia, while the time series data spans the period from 2016 to 2020 to examine the impact of fiscal decentralization and human resource quality on welfare in underdeveloped region. Furthermore, the regression equation model established in this research is as follows:

$$Y_{it} = \beta_0 + \beta_{1a} DAU_{it} + \beta_{1b} DAK_{it} + \beta_{1c} DBH_{it} + \beta_{2a} HEALTH_{it} + \beta_{2b} EDUC_{it}$$

where:

- $Y_{it}$  = Welfare, represented by HDI
- $\beta_{1a}$  = Fiscal Decentralization, represented by DAU
- $\beta_{1b}$  = Fiscal Decentralization, represented by DAK
- $\beta_{1c}$  = Fiscal Decentralization, represented by DBH
- $\beta_{2a}$  = Human Resource Quality, represented by Life Expectancy (HEALTH)
- $\beta_{2b}$  = Human Resource Quality, represented by Average Years of Schooling (EDUC)

## 3. RESULTS AND DISCUSSION

The sample used in this study consists of 62 districts classified as underdeveloped regions in Indonesia for 2016-2020, resulting in a total sample size of 310. The following table presents the results of descriptive statistical tests based on the variables in this research.

**Table 1**  
**Descriptive Statistics for the Welfare of Underdeveloped Region**

	Human Development Index	General Allocation Fund (Billion Rp)	Special Allocation Fund (Billion Rp)	Revenue Sharing Fund (Billion Rp)	Average Years of Schooling (Year)	Life Expectancy (Year)
Mean	58.05319	556.0183	170.7729	50.27023	6.225226	64.28839
Maximum	68.83000	914.8700	355.3400	1197.920	10.00000	69.99000

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Minimum	26.56000	321.8700	52.87000	5.940000	0.700000	54.50000
Std. Dev.	7.426929	140.4753	59.77187	106.9739	2.031424	3.218507

*Source: Processed Data (Eviews 9.0)*

With a maximum value of 68.83 and a minimum value of 26.56, the Human Development Index has an average of 58.05319 from 310 observations and a standard deviation of 7.426929.

The General Allocation Fund has a minimum value of Rp321.87 billion and a maximum value of Rp916.87 billion, with an average of Rp556.0183 billion from 310 observations and a standard deviation of Rp140.4753 billion. The Special Allocation Fund has a minimum value of Rp52.87 billion and a maximum value of Rp355.34 billion, with an average of Rp170.7729 billion from 310 observations and a standard deviation of Rp59.77187 billion. The Revenue Sharing Fund has a minimum value of Rp5.94 billion and a maximum value of Rp1,197.92 billion, with an average of Rp50.27023 billion from 310 observations and a standard deviation of Rp106.9739 billion. The Average Years of Schooling has a minimum value of 0.7 years and a maximum value of 10 years, with an average of 6.225226 years from 310 observations and a standard deviation of 2.031424 years. Life Expectancy has a minimum value of 54.5 years and a maximum value of 69.99 years, with an average of 64.28839 years from 310 observations and a standard deviation of 3.218507 years.

**Model Selection Test for the Welfare of Underdeveloped Region**

Based on the results of the testing for model selection, the Fixed Effect Model is the most appropriate model chosen through the data regression results in the following table:

**Table 2**  
**Model Selection Test Result**

	Probability	Result	Description
<b>Chow Test</b>	0.0000	Ho rejected	Fixed effect
<b>Hausman Test</b>	0.0000	Ho rejected	Fixed effect
<b>LM Test</b>	0.0000	Ho rejected	Fixed effect

*Source: Processed Data (Eviews 9.0)*

Based on the results of the Chow test aimed at selecting a model between the Common Effect Model and the Fixed Effect Model, the p-value obtained for the Cross-section Chi-square is 0.0000, which is less than 0.05. Therefore, H0 is rejected. Hence, the Fixed Effect Model is chosen as the more appropriate model to use. Furthermore, in the Hausman Test to select between the Random Effect Model and the Fixed Effect Model, the p-value for Cross-section Random is 0.0000, which is less than 0.05, so H0 is rejected. Therefore, the Fixed Effect Model is selected as the most suitable model to use.

The Adjusted R-square value in the coefficient of determination test is 0.993567. This value represents the ability of the behavior/variation of fiscal decentralization and human resource quality variables to explain the welfare of the community variable, which is 99.36%, while the rest is explained by other variables not included in the model.

The p-value in the F-test indicates a value of 0.000000, which is less than 0.05, so it can be statistically proven that at least one independent variable has an effect on the dependent variable.

**Table 3**  
**Panel Data Linear Regression Test Results**

Variable	Coefficient	Std. Error	T-Stat	Prob.
C	-81.74035	6.283010	-13.00974	0.0000
DAU	0.003850	0.001939	1.985700	0.0482
DAK	-0.001597	0.000834	-1.914996	0.0567
DBH	0.000155	0.001088	0.142933	0.8865
HEALTH	2.145293	0.093328	22.98664	0.0000
EDUC	5.87E-05	0.025205	0.002329	0.9981
R-squared				0.994941
Adjusted R-squared				0.993567
F-statistic				724.0588
Prob(F-statistic)				0.000000

*Source: Processed Data (Eviews 9.0)*

The hypothesis formulated that welfare is positively influenced by fiscal decentralization and human resource quality in 62 underdeveloped districts. The research findings indicate that at a 5% level of significance, the variables that have a statistically significant impact in line with the hypothesis are the General Allocation Fund and Healthcare, hence,  $H_{1a}$  and  $H_{2a}$  are accepted. However, the Revenue Sharing Fund, Special Allocation Fund, and Education do not have a significant impact, so  $H_{1b}$ ,  $H_{1c}$ , and  $H_{2b}$  are rejected.

#### **The Effect of the General Allocation Fund on Welfare**

The findings of this study indicate that the General Allocation Fund (DAU) significantly and positively influences welfare. The magnitude of DAU's impact on welfare is 0.003850 with a significance value of 0.0482, which is less than 0.05. This means that welfare will improve as DAU increases. Consequently, DAU can serve as a predictor for enhancing the welfare of underdeveloped areas. This aligns with previous research findings that DAU has a positive impact on the Human Development Index (HDI) (Kurniasari, 2021).

#### **The Effect of the Special Allocation Fund on Welfare**

The study's findings reveal that welfare is not influenced by the Special Allocation Fund (DAK). The significance value of DAK on welfare is 0.0567, which is greater than 0.05. This means that the welfare of underdeveloped areas is not dependent on the allocation of DAK. Consequently, DAK cannot be used as a predictor to enhance welfare. These results contradict the findings of previous research in Central Java, which showed that the Human Development Index (HDI) is positively affected by DAK (Lugastoro, 2013).

#### **The Effect of the Revenue Sharing Fund on Welfare**

The study's findings indicate that welfare is not influenced by the Revenue Sharing Fund (DBH). The significance value of DBH on welfare is 0.8865, which is greater than 0.05. This means that the welfare of underdeveloped areas is not dependent on the allocation of DBH. Consequently, DBH cannot be used as a predictor to enhance welfare. These results are not in line



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with the findings of previous research by Afif et al. (2018) which showed that DBH in Papua Province has a positive impact on the Human Development Index (HDI).

**The Effect of the Life Expectancy on Welfare**

The findings of this study are that life expectancy significantly and positively influences welfare. The magnitude of the impact of life expectancy on welfare is 2.145293 with a significance value of 0.0000, which is less than 0.05. This means that welfare will improve as life expectancy increases. Consequently, welfare can be enhanced through life expectancy as a predictor. These results align with previous research findings that life expectancy positively affects the Human Development Index (HDI) (Asmawani, et al., 2021; Santika, et al., 2022).

**The Effect of the Average Years of Schooling on Welfare**

The findings of this study indicate that welfare is not influenced by the average years of schooling. The significance value of the average years of schooling on welfare is 0.9981, which is greater than 0.05. This means that welfare is not determined by the average years of schooling. Consequently, the welfare of underdeveloped areas cannot be improved through average years of schooling as a predictor. These results align with previous research findings that the Human Development Index (HDI) in Aceh Tamiang District is not influenced by the average years of schooling (Santika, et al., 2022).

**4. CONCLUSION**

This study aims to examine the role of fiscal transfers, average years of schooling, and life expectancy in influencing welfare in 62 underdeveloped districts. Secondary data in this research includes 62 underdeveloped districts in Indonesia during the period 2016-2020, using panel data regression analysis. The results of this study indicate that welfare in underdeveloped areas is positively and significantly influenced by the General Allocation Fund and Life Expectancy. However, the Special Allocation Fund, Revenue Sharing Fund, and Average Years of Schooling do not have a significant impact.

For future research, the author suggests the inclusion of additional variables that could theoretically influence the welfare of underdeveloped areas. The number of underdeveloped districts is expected to decrease in the following period, allowing for further research to explore the factors that can remove a district from the list of underdeveloped regions.

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