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Original Article

Mediating Role of the Human Development Index in the Relationship between Transfer Funds on Unemployment and Income Inequality in Aceh Province, Indonesia

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Abstract: The transfer of funds from the central government to Aceh Province tends to increase from 2013 to 2022. However, the high transfer funds have led to a lack of regional independence in Aceh, and problems such as unemployment and income inequality still need to be fully resolved. This study aims to investigate the effect of transfer funds on unemployment and income inequality with HDI as a mediator in Aceh Province. This study uses panel data from 23 districts/cities of Aceh Province from 2011-2022. The data were processed using panel regression and path analysis methods. The findings show that transfer funds have a positive and significant effect on HDI and income inequality and a significant negative effect on unemployment. Transfer funds indirectly affect the unemployment rate and income inequality through the human development index. The Aceh Provincial Government is advised to conduct more intensive policies to reduce the unemployment rate and income inequality in Aceh Province, especially through transfer funds.

Keywords: Transfer funds; Unemployment; Gini Index; Human Development Index



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1. Introduction

Fiscal decentralisation results from the implementation of regional autonomy in Indonesia, officially implemented on 1 January 2001, aimed at creating aspects of independence in the regions. The delegation of authority in all fields except foreign policy, defence, security, justice, monetary and fiscal and religion (Hastuti, 2018). Fiscal decentralisation aims for local governments to develop their regions' potential fully. This decentralisation policy will show the effectiveness of government administration in each region. In addition, fiscal decentralisation has the aim of fulfilling regional aspirations regarding control over state financial resources, encouraging accountability and transparency of local governments, increasing community participation in the regional development process, reducing inequality between regions, ensuring the implementation of minimum public services in each region, and ultimately expected to improve the welfare of society in general (Christia & Ispriyarto, 2019; Maryanti et al., 2022). One of the mechanisms implemented in implementing fiscal decentralisation in Indonesia is the transfer of funds disbursed from the centre to

autonomous regions. Aceh Province is one of the autonomous regions with low fiscal independence. This indicates that Aceh Province is very dependent on funds disbursed by the central government.

The Aceh Province regional fiscal capacity index of 0.303 is in a low category, so fiscal transfers from the centre are still needed. In the last ten years, the distribution of transfer funds for Aceh Province has fluctuated, but from 2013 to 2022, funds transfer tends to increase. In 2013, the transfer of funds from the central government to the Aceh local government amounted to 9,208.59 billion Rupiah and 10,949.20 billion Rupiah in 2022. The large amount of transfer funds to the Aceh government is intended to support the improvement of economic welfare by reducing unemployment, equalising income, and increasing human capital to achieve sustainable development. However, over-reliance on transfer funds can lead to other problems, such as the government's lack of initiative and the people of Aceh Province to seek local revenue sources independently. Thus, it is feared that the reduction of unemployment does not occur optimally through the provision of transfer funds. Fund transfers are expected to reduce unemployment. This is because the distribution of balancing funds is used for activities that can encourage economic growth and welfare so that the unemployment rate can be reduced (Adriani & Yasa, 2015).

Unemployment data shows that unemployment in Aceh Province has decreased significantly since 2013, from 10.3 per cent to 6.17 per cent in 2022. However, compared to the national average, unemployment in Aceh is still higher. The existence of transfer funds is expected to reduce unemployment optimally; at least the unemployment rate in Aceh Province is below the national unemployment rate. This phenomenon shows that there needs to be more effectiveness in utilising transfer funds in Aceh Province, where sometimes transfer funds are not allocated to the community's needs. Another socio-economic problem that is expected to be reduced by the transfer of funds is the problem of income inequality. From 2013 to 2022, the Gini index of Aceh Province had a fluctuating value and fell into the moderate category. On the basis of data published by Badan Pusat Statistik, in 2013, the gini ratio of Aceh Province was 0.305, which increased in 2016 to 0.333 but decreased in 2019 to 0.319. In 2021, it increased again to 0.324. In 2022, the gini value in the province of Serambi Mekkah fell to 0.311, becoming the lowest in the last five years. The Gini ratio at this moderate level indicates that the income distribution in Aceh Province is relatively equitable. This condition must also be investigated to assess whether transfer funds contribute to maintaining equitable income distribution in Aceh Province.

This study also uses the human development index variable as a mediating variable to see fiscal policy development through transfer funds in Aceh province so that the explanation of transfer funds associated with development inequality and unemployment can be seen differently from previous research. Over the last ten years, the value of the human development index (HDI) in Aceh Province has increased, as has the Indonesian HDI. In 2013, the HDI value in Aceh province was 68.3 per cent, increasing by 4.5 points to 72.8 per cent in 2022. However, the HDI value of Aceh Province has always been below the value of Indonesia's HDI. Only in 2020 was the HDI value of Aceh Province above Indonesia's HDI, at 71.99 per cent. Adriani & Yasa (2015) and Maryanti et al. (2022) studied the relationship between transfer funds and unemployment. They stated that Dana Perimbangan can significantly reduce the unemployment rate, similar to the findings of Putro (2016), which states that the Revenue Sharing Fund has a negative effect on the unemployment rate. Ernawati et al. (2021) show that government spending through the allocation of village funds encourages inclusive growth as a pro-job policy and can reduce the number of unemployed, as well as research results by Holik (2020) found that budget allocations in the General Allocation Fund and Special Allocation Fund negatively affect unemployment in Java.

Siburian (2020) concluded that fiscal decentralisation reduces income inequality in Indonesia. Tang & Sun (2022) also found that through fiscal incentives, financial institutions have more incentives to increase agricultural lending. Urban-rural income inequality decreased significantly during the study data period in China, and Rachma et al. (2019) show that village funds contributed significantly to reducing rural income inequality. Fiscal capacity and transfer funds increased economic output and reduced rural inequality (Hardinandar, 2020). This relationship is based on the objectives of fiscal decentralisation, namely, to encourage the regional economy and reduce income inequality between regions in Indonesia. Fiscal Decentralisation has a positive and significant influence on the human development index in North Maluku Province. This implies that the higher the fiscal decentralisation, the higher the human development index Daud & Soleman (2020). Research Suhyanto et al. (2021) and Regina et al. (2020) state that all transfer funds affect the increase in the human development index. Moreover, Verawaty et al. (2021) also documented that the general allocation of funds positively affects the human development index in Indonesia, as Fahriza & Ariani (2023) saw that the Balance Fund affected the Human Development Index.

This study is different from previous studies, where previous studies only used some parts of the transfer funds to the regions and associated with unemployment, such as balancing funds (Adriani & Yasa, 2015; Maryanti et al., 2022), revenue sharing funds (Putro, 2016), Special Allocation Fund (Holik, 2020), General Allocation Fund (Verawaty et al., 2021), Balance Fund (Fahriza and Adriani, 2023), and others, so that this study will look at fiscal transfers to the regions as a whole. There have been several studies that discuss the direct effect of transfer funds on HDI (Suhyanto et al., 2020), unemployment (Ernawati et al., 2021; Holik, 2020), and income inequality (Siburian, 2020; Tang & Sun, 2022; Rachma et al., 2019). However, so far, no previous research has used the HDI variable to mediate the effect of transfer

funds on unemployment and income inequality. The novelty of this study is that it uses HDI as a mediating variable in the effect of transfer funds on unemployment and income inequality, where research examining the same is still very limited. Thus, this study aims to investigate the effect of transfer funds on unemployment and income inequality with HDI as a mediator in Aceh Province. The urgency of this research lies in the continuing increase in the transfer of funds from the central government to the Aceh Provincial government. However, there are still high unemployment and income inequality problems that still need to be resolved.

2. Materials and Methods

The data used in this study is secondary data (e.g., panel data) consisting of time series data from 2011 to 2022 and a cross-section of 23 districts/cities in Aceh Province. The data collected from the Central Bureau of Statistics of Aceh and the Ministry of Finance of the Republic of Indonesia. This study has two dependent variables: unemployment expressed in per cent and income inequality expressed in points. There is only one independent variable: transfer funds expressed in Rupiah. However, the transfer fund variable was transformed into logarithmic form because the value of the transfer fund data in Rupiah units was very large. Thus, transforming transfer fund data into logarithms will simplify the form of data used. In addition, this study uses HDI as a mediating variable, which is expressed in points. This study uses panel data regression and path analysis to analyse the effect of transfer funds on unemployment and income inequality in Aceh Province with the human development index as a mediator. There are three-panel data models, namely the Common Effect Model (CEM), Fixed Effect Model (FEM), and Random Effect Model (REM). However, one of the best models must be chosen from the three models. The best model selection can be determined through the Chow test, Hausman test, and Lagrange multiplier test. To support the robustness of the model, this study also tests classical assumptions. In addition, this study will use the Sobel test to test the significance of a mediation effect. Based on the research model used in this study, namely the panel data regression analysis model and path analysis, where the two models will be combined into one unit, the regression model used in this study is as follows (Silvia, 2020):

$$\text{General equation of path sub-structure 1:} \\ \text{HDI}_{it} = \beta_0 + \beta_1 \text{LogTF}_{1it} + \varepsilon_1 \quad (1)$$

General equation of path of sub-structure 2:

$$\text{UE}_{it} = \beta_0 + \beta_2 \text{LogTF}_{1it} + \beta_3 \text{HDI}_{it} + \varepsilon_2 \quad (2)$$

General equation of path of sub-structure 2:

$$\text{GI}_{it} = \beta_0 + \beta_4 \text{LogTF}_{1it} + \beta_5 \text{HDI}_{it} + \varepsilon_3 \quad (3)$$

Where, HDI is the human development index, TF is transferring funds, UE represents unemployment, and ID is the Gini ratio index. β_0 is a constant, and β_1 -5 is the regression coefficient of each independent variable. Meanwhile, i denotes the cross-section of 23 districts/cities, and the time series 2011-2022 is indicated by t .

3. Results

3.1. Descriptive Statistics

Descriptive statistics are useful for determining the frequency of dependent and independent variable data in research. They are presented in the form of mean, median, maximum data, minimum data, standard deviation, and number of observations for each variable used in this study, including transfer funds, human development index, unemployment, and income inequality.

Table 1. Descriptive Statistics

	log_TF (Rupiah)	HDI (Index)	UE (Per cent)	GI (Index)
Mean	2,85	69,35	7,13	0,28
Median	2,85	68,92	7,15	0,28
Maximum	3,34	86,28	17,97	0,45
Minimum	2,38	59,34	0,37	0,19
Std. Dev.	0,19	5,02	3,25	0,04
Observation	276	276	276	276

Source: Ministry of Finance (2023) and BPS (2023)

Table 1 shows the average transfer fund using logarithmic transfer fund data is 2.85 Rupiah, with maximum and minimum data of 3.34 and 2.38 Rupiah, respectively. The value of the human development index in Aceh Province from 2011 to 2022 has an average of 69.35 points. In the twelve years, the highest HDI value was 86.28 points, and the lowest was 59.34 points. The unemployment rate from 2011 to 2022 averages 7.13 per cent, with maximum and minimum values of 17.97 per cent and 0.37 per cent, respectively. Income inequality using Gini index data as an indicator has an average value of 0.28 points, with maximum and minimum data of 0.45 points and 0.19 points, respectively. In addition, the transfer funds, HDI, unemployment, and income inequality variables have a standard deviation value smaller than the average. This indicates that the data for all variables have an even spread or distribution. The information provided by these descriptive statistics will provide an overview of the data for each variable in this study for all districts/cities in Aceh Province during 2011-2022.

3.2. Results

3.2.1. Panel Data Regression

There are three stages of testing for selecting the best model to be used in this study on substructure models 1, 2, and 3, including the Chow Test, Hausman Test, and Lagrange Multiplier Test.

Table 2. Result of Chow Test, Hausman Test, and LM Test

Models	Tests	Effects Test	Prob.	Conclusion
Model Sub-structure 1	Chow Test	Cross-section Chi-square	0,000	FEM
	Hausman Test	Cross-section random	0.097	REM
	Lagrange Multiplier Test	Breusch-Pagan	0,000	REM
Model Sub-structure 2	Chow Test	Cross-section Chi-square	0,000	FEM
	Hausman Test	Cross-section random	0,000	FEM
Model Sub-structure 3	Chow Test	Cross-section Chi-square	0,000	FEM
	Hausman Test	Cross-section random	0.058	REM
	Lagrange Multiplier Test	Breusch-Pagan	0,000	REM

Table 2 provides the results of the Chow, Hausman, and Lagrange Multiplier tests for the three models. The Chow test determines the best model between the Common Effect model and the Fixed Effect model that will be used to estimate panel data. Then, proceed with the Hausman test. This test aims to select the most appropriate model between the Fixed Effect Model and the Random Effect Model, which will be used to estimate panel data. The next test conducted is the Lagrange Multiplier test, the best test for the common and random effect models. The results of the three tests of determining the best model in this study decided that for Sub-Structure Model 1, the best panel data model that can be selected is the random effect model, then Sub-Structure Model 2, the best regression model is the fixed effect model and the last model, namely Sub-Structure Model 3 is the random effect model. This research's result analysis and conclusion will be based on the result of the best panel model.

3.2.2 Panel Data Regression Results, Path Analysis, and Classical Assumption Tests

The sub-structure 1 model uses panel data regression with a random effect model. This regression was conducted to see the effect of partially and simultaneously transferring funds on the human development index in Aceh Province. Sub-structure model 2 uses panel data regression with a fixed effect model. This regression was conducted to partially and simultaneously see the effect of transfer funds and the human development index on the unemployment rate in Aceh Province. Meanwhile, sub-structure model 3 uses panel data regression with a random effect model. This model is estimated to partially and simultaneously see the effect of transfer funds and the human development index on income inequality in Aceh Province. The estimation results using the best panel model selected for each model are shown in Table 3.

Table 3. Result of Panel Data Regression Analysis

Models	Variables	Coefficient	Std. Error	t-Statistic	Prob.
Model Sub-structure 1 (HDI)	C	36.51611***	1.690176	21.60492	0,000
	Log (TF)	11.50006***	0.473708	24.27670	0,000
	R-squared	0.681251		F-statistic	585.6118***
	Adj. R-squared	0.680088		Prob(F-statistic)	0,000
Model Sub-structure 2 (UE)	C	39.27900***	5.072686	7.743236	0,000
	Log (TF)	-3.679232**	1.654898	-2.223238	0.0271

Models	Variables	Coefficient	Std. Error	t-Statistic	Prob.
	HDI	-0.312120***	0.120003	-2.600935	0.0098
	R-squared	0.637152		F-statistic	18.36459***
	Adj. R-squared	0.602458		Prob(F-statistic)	0,000
Model Sub-structure 3 (GI)	C	0.078186	0.048500	1.612066	0.1081
	Log (TF)	0.033946**	0.014931	2.273500	0.0238
	HDI	0.001581*	0.000924	1.709679	0.0885
	R-squared	0.078060		F-statistic	11.55732***
	Adj. R-squared	0.071306		Prob(F-statistic)	0,000

Notes: ** and *** are significant at 5% and 1% confidence levels, respectively.

Table 3 indicates the Sub-Structure 1 model shows that transfer funds have a positive and significant effect on the human development index in Aceh Province with a coefficient of 11.50. The Prob (F-Statistics) value listed in Table 3 shows at the one per cent significance level, which explains that simultaneously, the independent variables affect the dependent variable and can be proven statistically. The Adjusted R-squared value shows that the transfer fund variable simultaneously influences 68 per cent of the HDI variable. In comparison, the remaining 32 per cent is influenced by other variables not included in the model. Sub-Structure Model 2 explains that the transfer fund has a negative and significant effect on the unemployment rate in Aceh Province with a coefficient of -3.68. Likewise, the HDI variable negatively and significantly influences the unemployment rate with a coefficient of -0.31. The adjusted R-squares value is 0.60, a one-percent significance level. This explains that the unemployment rate variable is influenced by the transfer fund and HDI variables by 60 per cent simultaneously, while the remaining 40 per cent is influenced by other variables not included in the model.

The sub-structure 3 model with partial analysis shows that the transfer fund variable has a negative effect at the five per cent significance level on income inequality in Aceh Province with a coefficient of 0.03. Similarly, the HDI variable positively affects income inequality at the ten per cent significance level with a coefficient of 0.001581, which has no effect. The Adjusted R-Squares value in the panel data regression model sub-structure 3 is 0.07, which indicates that simultaneously, the transfer funds and HDI variables affect income inequality by 7 per cent. At the same time, the remaining 93 per cent is influenced by other variables not included in the model. The results of the classical assumption test show that the three sub-structure models have residual data problems that are not normally distributed. This can be seen from the Jarquae-Bera probability value below 0.05, thus rejecting H_0 (see Figure 1). However, since this study uses more than 100 data, all data are normally distributed by the assumptions of the Central Limit Theorem. The theory states that if the number of observations is more than 100 data, the normality test is not necessary (Gujarati, 2003; Hernandez, 2021).

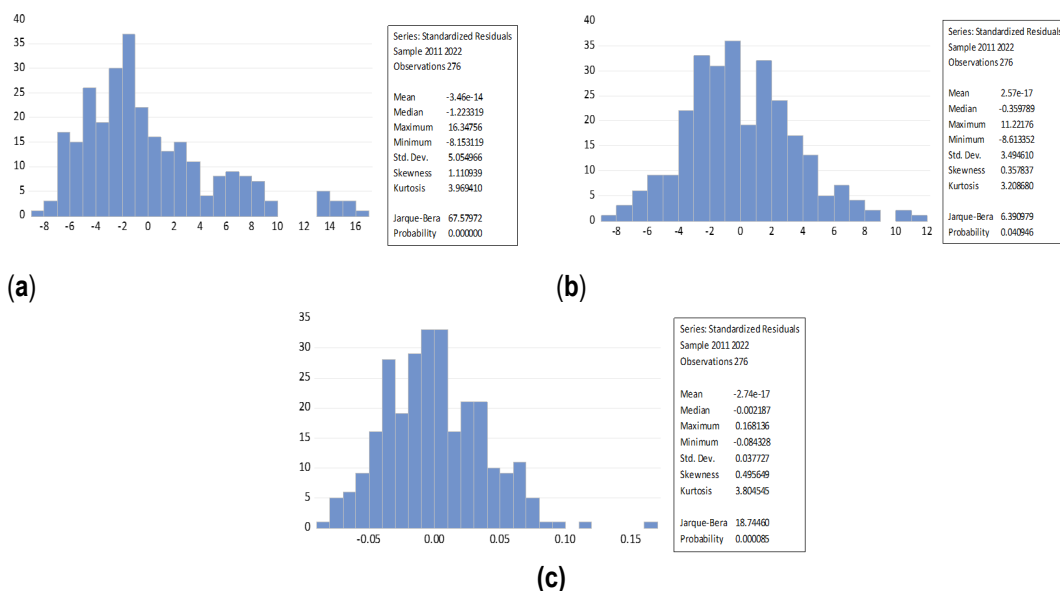


Figure 1. Result of Classical Assumption Testing (a) Sub-Structure Model 1, (b) Sub-Structure Model 2, and (c) Sub-Structure Model 3

Table 4 shows that the three research models do not experience heteroscedasticity problems. This can be seen from the probability greater than alpha 5% in Table 4. So, this study concluded that the model is free from symptoms of heteroscedasticity.

Table 4. Result of Heteroscedasticity Testing

Models	Variables	Coefficient	Std. Error	t-Statistic	Prob.
Model Sub-structure 1	log_TF	-0.417147	0.451523	-0.923868	0.3564
Model Sub-structure 2	log_TF	2.364076	0.805216	2.935953	0.3647
	HDI	-0.239067	0.058389	-4.094352	0.0901
Model Sub-structure 3	log_TF	0.838105	0.733544	1.142542	0.2542
	HDI	-0.110673	0.051641	-2.143135	0.3330

Table 5 describes the multicollinearity test conducted to test the relationship between independent variables. This study uses two independent variables in Sub-Structure Model 2 and 3, where the correlation coefficient of TF and HDI test results show a number 0.2064, which is smaller than 0.90 (see Table 5). Thus, we concluded that there is no multicollinearity problem in the model.

Table 5. Result of Multicollinearity Testing

Variable(s)	LOG_TF	HDI
Log (TF)	1.000	0.206428
HDI	0.206428	1.000

Table 6 describes the results of the path analysis and Sobel test. It provides information related to variable relationships, such as the value of direct, indirect, and total influence. The direct effect describes the effect of the independent variable on the dependent variable, which is not mediated by the mediator variable. The indirect effect describes the effect of the independent variable on the dependent variable mediated by the mediator variable. The total effect shows the sum of the direct and indirect effects. Table 6 informs us that the direct effects are all significant except for the effect of HDI on income inequality. The results of the indirect effects are statistically significant. This result is useful to answer the objective of this study, where HDI mediates the effect of transfer funds on unemployment and income inequality. The total effect is useful to assess the strength of the mediation effect.

Table 6. Results of Path Analysis and Sobel Test

Variables	Direct Effect	Indirect Effect	Total Effect
Log_TF → HDI	11.500***		
Log_TF → UE	-3.679**		
Log_TF → GI	0.033**		
HDI → UE	-0.312***		
HDI → GI	0.002*		
Log_TF → HDI → UE		-3.588**	
Log_TF → HDI → GI		0.023**	
(log_TF→HDI)+(log_TF→HDI→UE)			7.912
(log_TF→HDI) +(log_TF→HDI→GI)			11.523

Note: ***, ** indicates 1 and 5 percent significance levels.

4. Discussion

The effect of transfer funds on the HDI in Aceh Province is positive and significant at the one per cent level with a coefficient of 11.500. This indicates that an increase of one per cent in transfer funds will increase HDI by 11,500 points. This study's results align with research by Suhyanto et al. (2021) and Alam & Simanjuntak (2024) that have been done before. Transfer funds are very effective in increasing the HDI. The allocation of transfer funds is clearly stated for education spending, health spending, infrastructure, minimum service standards, and community welfare. Since 2022, the Transfer to Regions and Village Funds determines the amount of use of the General Allocation Fund, which is determined to be used for education and health and is regulated in detail through the Regulation of the Minister of Finance of the Republic of Indonesia, No. 110 of 2023 concerning indicators of regional performance levels and technical guidelines for the part of the general allocation fund that is determined for use. Likewise, with the use of the Aceh Special Autonomy Fund or DOKA, based on Aceh Qanun No. 5/2008 on the implementation of education and Aceh Qanun No. 4/2010 on Health, the DOKA allocation must meet the mandatory education of at least 20 per cent,

and mandatory health of 10 per cent of the total special autonomy funds disbursed. This impacts local spending, which focuses on education and health spending and has implications for the increase in HDI (Ann et al., 2023; Kousar et al., 2023). The results of this study have shown that transfer funds in Aceh have been used effectively for programs to improve the quality of education, health and economy of the people of Aceh, thus contributing to the increase in HDI.

Therefore, through these results, the policy implication for the Government of Aceh is to continue to evaluate and monitor programs related to improving the indicators of HDI by strengthening government institutions responsible for health, education, and welfare. Transfer funds negatively affect the unemployment rate at the five per cent significance level with a coefficient value of -3.679. This research is in line with the results of Maryanti et al. (2022), which states that balancing funds can significantly reduce the unemployment rate, and corroborate the research of Putro (2016), which states that Revenue Sharing Funds have a negative effect on the unemployment rate. The amount of transfer funds will affect government spending on activities that can encourage economic growth and welfare so that, in the end, the unemployment rate can be reduced, as found by Kuo & Miyamoto (2019) in the United States and Holden & Sparrman (2018) in 20 OECD countries. The research results by Ernawati et al. (2021) show that government spending through the allocation of village funds encourages inclusive growth as a pro-job policy and can reduce the number of unemployed people in rural areas. The Aceh government could increase transfer funds to reduce the unemployment rate in Aceh, focusing on expanding employment and the economy by developing regional potential.

An increase in transfer funds is also in line with an increase in income inequality, where a one-point increase in transfer funds will increase income inequality by 0.033 with a significance level of five per cent. Balseven (2017) and Liu et al. (2017) also found this research result. The increase in income inequality due to transfer funds is because government spending is dominated by infrastructure spending and public administration, so social spending and community empowerment that spur a reduction in income inequality are not accommodated. These results align with those found by Cevik & Correa-Caro (2020) in China and research results by Arham & Hatu (2020) in Indonesia. The result that transfer funds can increase income inequality suggests that transfer funds in Aceh must be channelled appropriately. Therefore, the Government of Aceh could strengthen social protection programs by allocating transfer funds to social programs to help those below the poverty line and vulnerable to income inequality.

The Human Development Index negatively and significantly affects the one per cent unemployment rate with a coefficient of -0.312. This research aligns with the results of Mahroji & Nurkhasanah (2019) and Suparman & Muzakir (2023). A higher HDI value indicates that more people are accessing health and education (Qamariyah et al. (2022). Investment in education is expected to improve the quality of human resources (HR), increase the opportunity to enter the market and reduce the unemployment rate. The result of this study, which shows that an increase in HDI can reduce unemployment, indicates that higher quality human capital will prevent high unemployment. Thus, to lower unemployment in Aceh Province, the Aceh government can strengthen investment in education and health. The government can also encourage the private sector to improve education and health facilities through transferring funds.

The effect of the human development index on income inequality in Aceh Province is positive but insignificant, with a coefficient value of 0.002, so HDI does not affect income inequality. This aligns with Yusniar (2019) and Febriyani & Anis (2021) research. The lack of effect of HDI on income inequality in Aceh Province is because, in Southern Sumatra, the sector that contributes the most to GRDP is the agriculture, forestry and fisheries sector, which does not require workers with a high level of education but requires a large amount of labour, so the HDI level does not affect per capita income in Aceh Province (Ersad et al., 2022). HDI does not affect income inequality because it tends to dominantly measure social or non-economic indicators, such as health, education, and welfare, so it cannot reduce income inequality.

Path analysis and the Sobel test show that transfer funds indirectly affect the unemployment rate in Aceh Province through HDI with a negative and significant coefficient, with a coefficient value of -3.588. In other words, every increase in transfer funds by one point will reduce the unemployment rate in Aceh Province by 3.588. An increase in transfer funds earmarked for spending on education, health and public welfare, thereby increasing the value of the human development index (Alam & Simanjuntak, 2024; Suhyanto et al., 2021). As Mahroji & Nurkhasanah (2019) and Suparman & Muzakir (2023) explain, an increase in HDI will reduce the unemployment rate. Another path analysis and Sobel test result is that transfer funds indirectly affect income inequality in Aceh Province through HDI with a positive and significant coefficient, with a coefficient value of 0.023. In other words, every increase in transfer funds by one point will increase income inequality in Aceh Province by 0.023 points. This research is in line with Arfah's research (2021), which states that village funds indirectly through HDI mediation have a positive effect on income inequality in Indonesia. The lack of maximum transfer funds to reduce inequality is due to the untargeted use of transfer funds, especially in community empowerment. Transfer funds are dominated by infrastructure spending and public administration that do not directly touch the community, which results in increased income inequality.

5. Conclusions

This study aims to analyse the effect of transfer funds on unemployment and income inequality in Aceh Province, using the human development index as a mediator in Aceh Province, using panel data from 2011 - 2022 covering 23

districts/cities. This study uses a panel data regression model and path analysis to estimate three sub-structure models at a 99 per cent confidence level. Also, transfer funds have a positive and significant effect on HDI and income inequality and a significant negative effect on unemployment. The human development index has a negative and significant effect on unemployment but no effect on income inequality. Transfer funds indirectly negatively and significantly affect the unemployment rate through the human development index. Furthermore, the transfer of funds indirectly positively and significantly affects income inequality through the human development index. Based on the results of this study, the Aceh Provincial Government should conduct more intensive policies to reduce unemployment and income inequality in Aceh Province, especially on the variables of transfer funds and human development index, so that the problem of unemployment and income inequality in Aceh Province can be resolved. Researchers who want to research in the same field can add other variables and use a larger sample size to produce better, more in-depth research and find a solution to the problem of unemployment and income inequality.

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