THE EFFECT OF PUBLIC EXPENDITURE AND ECONOMIC COMPLEXITY ON INCOME DISPARITY IN INDONESIA

Balqys Rachely*, Abdul Bashir, Siti Rohima
Economic Department, Faculty of Economics, Sriwijaya University, Indonesia

Abstract

Income distribution disparity is an economic issue addressed within the framework of the Sustainable Development Goals (SDGs), as it can have adverse effects on a country's socio-political landscape. This study aims to determine the impact of healthcare expenditure, educational expenditure, social spending, and trade on income distribution disparities in Indonesia. This research is of a quantitative nature, utilizing secondary data obtained from various sources, including the Directorate General of Fiscal Balance (DJPK) and the Central Bureau of Statistics (BPS). The analytical approach employed involves panel data regression analysis using the Random Effect Model (REM). The research scope encompasses all 34 provinces in Indonesia from 2010 to 2022. The findings reveal that both collectively and individually, healthcare expenditure, education expenditure, social protection spending, and trade significantly influence income distribution disparities in Indonesia. Specifically, investment in healthcare and education exhibits a negative correlation with income disparity, while social protection spending and trade displays a positive correlation.

***Keywords**: Income Disparity, Inequality, Public Spending, Health Spending, Education Spending, Social Protection Spending, Trade, Economic Complexity*

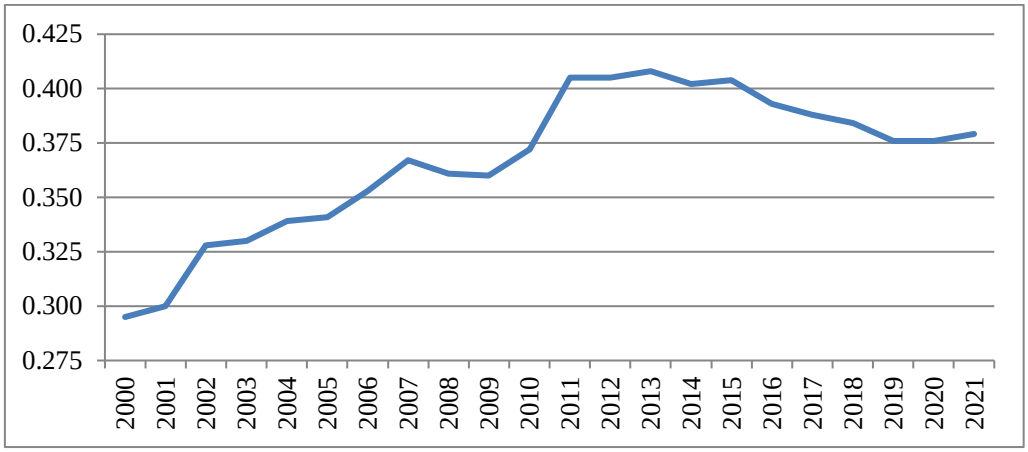
1. INTRODUCTION

The issue of income inequality consistently takes center stage and necessitates urgent attention across all countries. As is widely recognized, the global development plan, as conceptualized in the Sustainable Development Goals (SDGs), strives to mitigate income disparities within nations. This is particularly crucial in developing countries where the impact of disparities tends to be more pronounced. This is due to the primary focus of developing nations on achieving high economic growth rates, which is indicative of social welfare levels. Consequently, this dynamic influences the degree of economic equity, often referred to as a trade-off.

According to (Buhaerah, 2017; Heryanah, 2017; Ihsani & Rohman, 2022; Novianti & Panjaitan, 2022; Nurul et al., 2021) Indonesia falls into the category of nations grappling with income disparity issues. Figure 1 illustrates the position of income disparities based on the expenditure patterns of rural and urban communities within Indonesia.

* Corresponding author. Email addresses: balqisrachel26@gmail.com

Published by AFEBI Economic and Finance Review



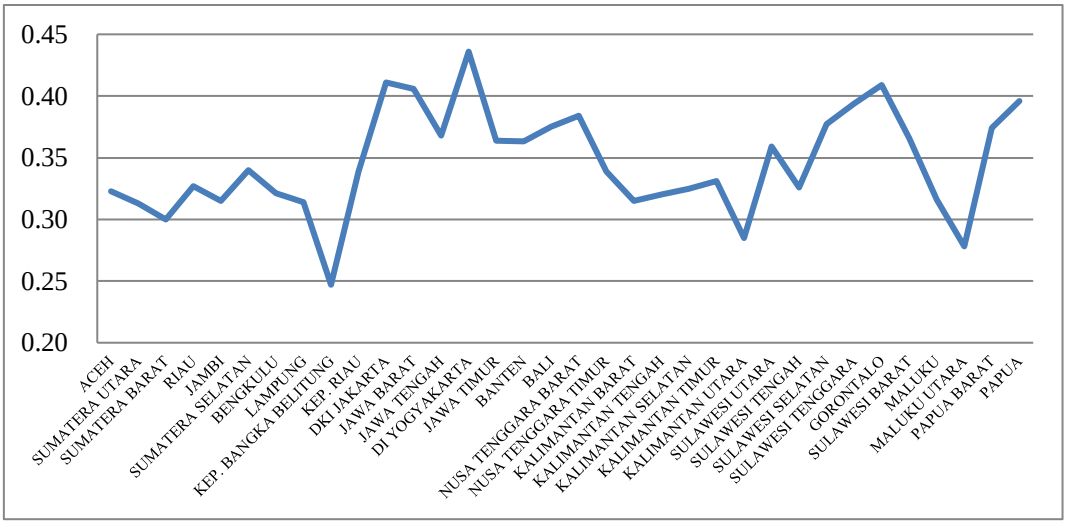
Source: World Bank

Figure 1 Indonesia's level of inequality (Gini Index) for 2000-2021

Indonesia's position of disparity has exhibited an increasing trend since 2000. Despite maintaining a moderate stance, Indonesia's disparity has continued to rise since 2000, culminating in its highest disparity level in 2015 at 0.41. This phenomenon was triggered by the transfer of production factors towards central regions, along with the consequential backwash effect. During that period, Bali and the island of Java served as governmental centers, concentrating economic activities and consequently attracting labor and capital. This dynamic accentuated the divide between these focal points and underdeveloped regions.

In 2016, disparities decreased and remained manageable. However, by 2019, there was a reversal in this trend, leading to Indonesia's Gini ratio reaching 0.398 in 2021. This reversal was instigated by the outbreak that hit Indonesia, compelling the government to implement lockdown policies.

At the provincial level, income disparities continue to persist in Indonesia, as depicted in Figure 2. This figure showcases the distribution of disparities, with the most significant variations observed in the Java and Sulawesi regions, along with their neighboring areas. In contrast, provinces situated on Sumatra Island tend to exhibit relatively lower levels of income disparities.



Source: Badan Pusat Statistik

Figure 1 Indonesia's Gini Ratio by Province in 2022

Published by AFEBI Economic and Finance Review

The province with the lowest disparity is Bangka Belitung Islands Province, recording a Gini index of 0.247. This achievement stems from the government's augmented consumption expenditure coupled with its effective absorption capacity, which in turn enhances the effectiveness of the multiplier effect (Aprillia et al., 2021). Conversely, the Special Region of Yogyakarta stands as the province with the highest disparity. This circumstance can be attributed to the persisting issue of unemployment within DIY, underscoring its impact on the disparity levels.

The government's efforts to maintain a stable level of disparity in Indonesia focus on fulfilling public infrastructure requirements through the allocation of resources from the government budget for public spending. (Afonso & Schuknecht, 2008; Pestieau, 2006; Ulu, 2018) have explored the linkage between social spending determinants and income disparities within OECD countries, revealing a distinct correlation between social spending and income disparities. (Bloch, 2020; da Costa & Gartner, 2017) delve into the connection between education and healthcare spending and income disparities. In line with this, (Sulistyaningrum & Tjahjadi, 2022) highlight several crucial factors significantly influencing income disparity, including community education duration. Complementing this, research conducted by (Doumbia & Kinda, 2019) indicates that limited access to education, healthcare, and employment opportunities within the community can exacerbate the prevailing income disparities in Indonesia.

Determinants of income disparity are commonly associated with socioeconomic factors such as institutions, social expenditure, and capital returns (Autor, 2014; Chu & Hoang, 2020). However, at certain points, the influencing factors for disparity levels involve a nation's capability in production activities. Economic complexity, a concept that measure a nation's productivity, emerges as a crucial determinant (Cristelli et al., 2013; Hartmann et al., 2022). Economic complexity is a long-term process, with its fluctuating components contingent upon regional conditions. Indicators used to measure economic complexity often employ exports or trade, as observed in studies by (Cristelli et al., 2013).

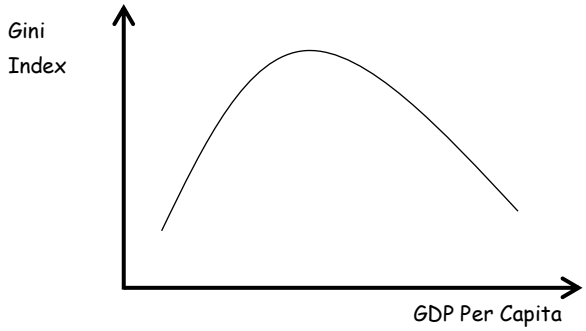
Government efforts, carried out through public spending and economic complexity measured by trade levels, yield varying impacts in each region, contingent upon the income within those respective areas. Consequently, it becomes imperative to examine strategies for achieving regional income distribution equity.

2. LITERATURE STUDY

Income Disparity

Income disparity is characterized as the variation in economic well-being between the affluent and the less affluent, evident in the differing income levels of these two groups (Baldwin, 1983). According to Kuznets (Todaro, 2004), during the initial phases of development, disparities tend to rise. As a nation undergoes industrialization, urbanization intensifies due to greater centralization in cities. Eventually, disparities tend to decline as a considerable number of individuals transition to more productive modern sectors. This pattern is often illustrated using an inverted U-curve.

Published by AFEBI Economic and Finance Review



Sumber: Todaro (2004)

Figure 3 Kuznet Curve

Government Spending Theory

According to Wagner theory, per capita income serves as a measuring instrument to gauge the progress of economic activity, subsequently accompanied by an upsurge in government expenditure aimed at furnishing public goods and services for the populace. (Mankiw, 2003) Wagner's law is articulated as follows:

$$\frac{P_k PP_1}{PPK_1} < \frac{P_k PP_n}{PPK_2} < \cdots < \frac{P_k PP_n}{PPK_n}$$

Information:

$P_k PP$	:	Government expenditure per capita
PPK	:	Income per capita, namely GDP / population
1,2,...n	:	Period of time (Year)

The condition of increasing government spending is also marked by changes caused by population growth, and increasing urbanization flows. These shifts have brought about an augmented demand for public amenities and a variety of policies aimed at maintaining the organization of urban zones. Wagner's assertion highlights the potential for disparities in the evolution of government spending patterns between the central administration and local governing bodies.

The policy required to address escalating disparities involves the redistribution of public spending, including allocation to social protection and education (Doumbia & Kinda, 2019). In Poland, instances of social spending like providing social assistance to farmers have been observed to potentially undermine farmer productivity, inadvertently contributing to a poverty gap and exacerbating disparities (Larch, 2009). Similarly, (Yasni & Yulianto, 2020) share that assisting the impoverished does not inherently rectify disparities.

The investment in human capital, achieved through educational spending, has been noted to wield a contradictory impact on disparities. While (OECD, 2015) asserts a negative influence of education spending on disparities, (Anderson et al., 2018) present divergent findings, suggesting that the education spending on disparities is comparatively milder.

To reduce income disparities, the largest allocation of spending should be directed towards training, followed by healthcare expenditure. Education plays a pivotal role in the development process by curbing poverty and lessening income disparities within society (Hassan et al., 2021). Enhancing healthcare quality also holds potential in diminishing disparity levels,

Published by AFEBI Economic and Finance Review

accentuating the efficacy of occupational health systems concerning production factors for occupational health programs (OECD, 2015).

Additionally, the economic complexity of a region has been identified as a contributor to aggravated income distribution (Chu & Hoang, 2020). These insights underscore the downside of economic complexity on income distribution. This stems from the necessity to synchronize the expansion of production capacity with other concurrent fiscal policies.

3. RESEARCH METHODOLOGY

The research was conducted across 34 provinces in Indonesia during the period of 2010-2022. The data employed for this study encompass social spending, education spending, health spending, trade, and the Gini index ratio. The data subjected to analysis are secondary in nature, sourced from the official website of Badan Pusat Statistik Indonesia, Direktorat Jendral Perimbangan Keuangan, Kementrian Keuangan, Kementrian Perdagangan Republik Indonesia

The methodology adopted for this research involves a descriptive quantitative approach. The data manipulation process was facilitated using the EViews application. The research model applied to panel data is the Ordinary Least Square (OLS) Model, formulated as follows:

$$Gini_{i,t} = a_{i,t} + \beta_1 Kes_{i,t} + \beta_2 Ped_{i,t} + \beta_3 Sos_{i,t} + \beta_4 Pdg_{i,t} + \varepsilon_{i,t}$$

The variables studied are denoted as follows: (Gini) represents income disparity, (Kes) signifies health spending, (Ped) represents education spending, (Sos) indicates social spending, and (Pdg) represents trade. The scope of this research covers 34 provinces in Indonesia denoted by (i), during the year of the research marked as (t).

The estimation analysis method using panel data is carried out using 3 approaches, namely (Gujarati & Porter, 2011):

a. *Pooled Least Square (PLS)*

This approach involves the combination of time series data and cross-sectional data through the use of the OLS method. The Pooled Least Squares method represents the simplest technique, assuming that the data accurately represents real-world conditions. The outcomes of the regression analysis are regarded as applicable to all subjects across all time periods.

b. *Fixed effect Model (FEM)*

The fixed effect model is an approach that posits variations in intercepts, where the intercepts solely differ among individuals while remaining constant across different time points.

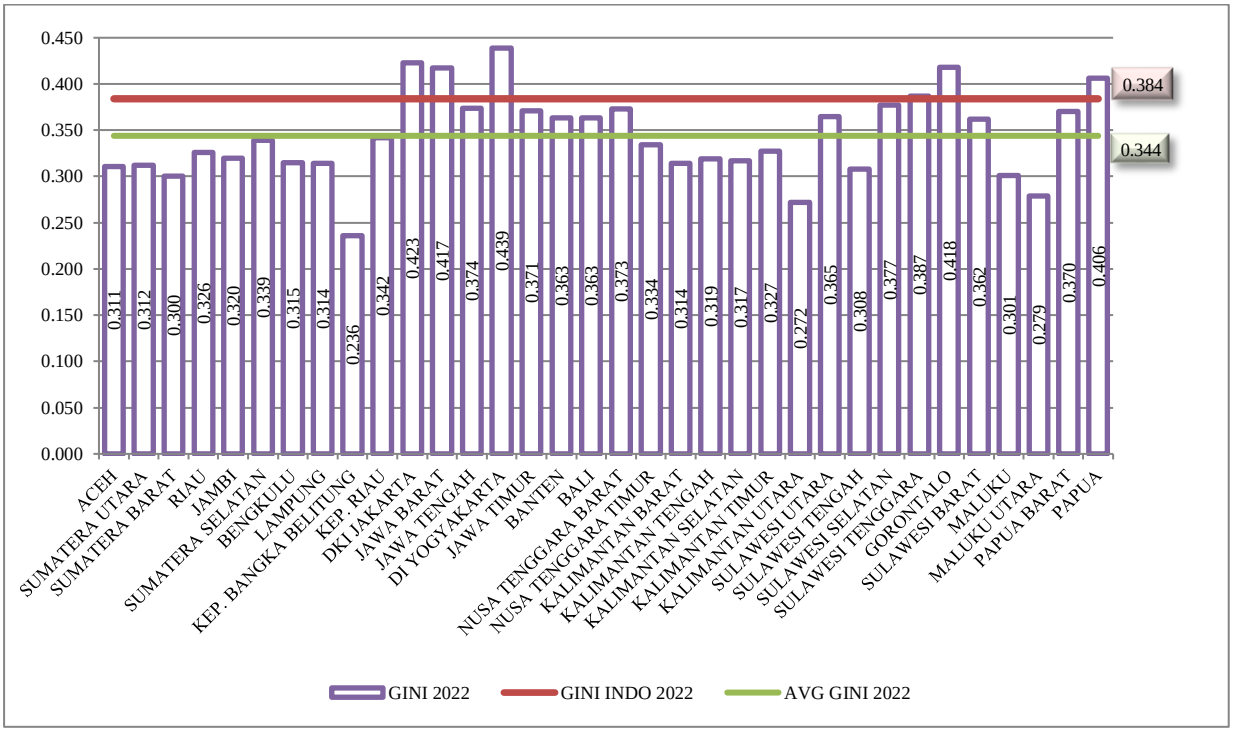
c. *Random Effect Model (REM)*

The random effect model takes into account the residuals which are suspected to have a relationship between individuals and over time. The panel data model, which involves correlations between error terms due to changing times and different observations, can be overcome with the error component model approach.

Published by AFEBI Economic and Finance Review

4. RESULT AND DISCUSSION

In 2022, Indonesia is poised to confront substantial challenges concerning economic disparities, as indicated by the Gini Index. In the Indonesian context, the Gini Index serves as an indicator of socio-economic inequalities existing among different population groups across various regions.



Source: Badan Pusat Statistik Indonesia

Figure 4 Indonesia's level of inequality for 2022

Figure 3 illustrates the position of inequality that occurs in all provinces in Indonesia. Indonesia's Gini coefficient is at a value of 0.384, and the average Gini ratio is 3.44. There are provinces that have Gini values above the average Gini value for the majority of Indonesian provinces on the island of Java. Additionally, this is true for the provinces of North Sulawesi, South Sulawesi, Southeast Sulawesi, Gorontalo, West Sulawesi, Papua, and West Papua. One of the factors contributing to this condition is geographic inequality. Indonesia is an archipelagic country with significant diversity in terms of economic development and infrastructure. Some areas, especially in remote islands, experience limited access to adequate public services, education, and employment. This creates a focal point of disparity between developed urban areas and underdeveloped rural areas.

a. Effects of Health Expenditure, Education Expenditure, Social Protection Expenditure and Trade on Income Disparities in Indonesia

When estimating parameters, the chosen model was the Random Effect Model (REM), determined based on the outcomes of the Chow test, Hausman test, and Lagrange Multiplier test. Subsequently, an assessment of the variance-covariance matrix structure was conducted, revealing heteroscedasticity in the residual variance-covariance matrix. The formulated model satisfies the classical assumptions, including tests for normality and multicollinearity. Here are the parameter estimation results:

Published by AFEBI Economic and Finance Review

Table 1 Parameter Estimation Results

Variable	Random Effect Model (REM)
C	0.065708***
	(0.0131)
Log Kes	-0.010370*
	(0.0055)
Log Ped	-0.008599***
	(0.0028)
Log Sos	0.022757***
	(0.0037)
Log Pdg	0.026232***
	(0.0051)
Statistical Summary	
R-squared	0.610592
Adjusted R-squared	0.607028
F-statistic	171.3043
Prob (F-statistic)	0.00000

Note: Standard Errors are shown in brackets. Significance levels are indicated as follows: *p<0.10, **p<0.05, ***p<0.01.

Based on the regression results, an equation model can be made as follows:

$$Gini_{i,t} = 0.0657_{i,t} - 0.0103\ (Kes)_{i,t} - 0.0085(Ped)_{i,t} + 0.0227\ (Sos)_{i,t} + 0.0262(Pdg)_{i,t} + \varepsilon_{i,t}$$

The constant in the model is 0.0657, indicating that when Health Expenditures (Kes), Education Expenditures (Ped), Social Protection Expenditures (Sos), and Economic Complexity as measured using Trade (Pdg) are all set to 0 (zero), the Gini Index will be 0.0657, assuming that other variables are held constant (ceteris paribus).

From the parameter estimation results shown in Table 1, the calculated F value is 171.3039, surpassing the critical F value. Consequently, it can be concluded that health spending, education spending, social protection spending, and trade collectively possess a significant influence on the level of income disparity.

Health spending, at a significance level of 10 percent, exhibits a negative effect of 0.0103 on income disparities within Indonesian provinces. This implies that if health spending increases by 1 percent, the Gini Index (Y) value decreases by 0.0103 percent, while keeping other variables constant (Alaminos, Estefanía & Geske, 2022; Ataguba, 2021). Similar results have been found, indicating the role of the health system in significantly reducing income inequality (Alaminos, Estefanía & Geske, 2022). The study suggests that increased private intervention in the health sector could undermine the effectiveness of allocating health spending to mitigate inequality in various European countries. Contrasting this, research by (Anderson, Edward, d'Orey, M. A. J., Duvendack, M., & Esposito, 2018) discovered no evidence supporting the notion that health spending can reduce inequality. (Bloch, 2020) found similar results in multiple South Asian countries, although they identified the negative effect to be less pronounced. Thus, (Doumbia & Kinda, 2019) recommend public intervention in the health sector to diminish disparities in healthcare access, as allocating an inadequate portion of the budget could minimize the impact on inequality or even exacerbate it.

Published by AFEBI Economic and Finance Review

Education spending also demonstrates an impact on income inequality at a significance level of 1 percent, exhibiting a negative relationship of 0.0008. This suggests that with every 1 percent rise in income, education spending contributes to a reduction in the Gini index by 0.008 percent (Jain-Chandra et al., 2019). Similar conclusions were drawn by (Jain-Chandra et al., 2019), highlighting the association between education spending and decreased income inequality in Asia. Nonetheless, it's worth noting that some of these significant effects might be influenced by the combination of education spending and capital spending (Castelló-Climent & Doménech, 2021) Found that in East Asia, expenditure for income objectives can impact educational equity, subsequently leading to a reduction in the Gini coefficient. Conversely, in Brazil, (da Costa & Gartner, 2017) discovered that education spending did not hold significance in terms of inequality. This divergence arises from the competitive presence of the private sector in Brazil, even at the primary education level.

The results of the study show that Social Protection Spending has a positive impact of 0.022. Shows that when social spending increases by 1 percent it will have an impact on increasing the level of income disparity by 0.022 percent. (Barrientos, 2019) who conducted research in Latin America and Africa had the same results, namely a positive effect. According to him, this happened because the distribution of programs was skewed toward non-poor groups, thus limiting its effectiveness. share the same opinion, (Carraro & S.L. Marzi, 2021; UN DESA, 2018) the effectiveness of social protection in influencing inequality depends very much on the country's institutional context, financing capabilities, and the way programs are designed and implemented. (Doumbia & Kinda, 2019) found that in Indonesia the creation of social protection programs specifically PKH, RASKIN, BSM together was more significant for the distribution of poverty than the distribution of inequality, but still had a negative impact.

Trade exhibits a positive relationship, indicating that a 1 percent increase in trade leads to a 0.02 percent increase in the Gini index (Urata & Narjoko, 2017). The impact of trade expansion, as found by (Urata & Narjoko, 2017), varies across different international relationships, with regional impacts showing a positive trend. However, according to (Cerdeiro & Komaromi, 2017), the effect of trade on inequality is time-dependent. Research suggests that trade has a positive impact in the short term while tending to have a negative impact in the long term. This dynamic influence hinges on several factors, including the trade policies enacted, the nation's economic structure, and industrial capacity.

The variables utilized in this study collectively exert a significant influence on the income disparities prevalent among Indonesian provinces. This aligns with the findings of (Hartmann et al., 2022), who, by integrating government spending and production levels, ascertain that changes in disparities are associated with production levels. These levels impact labor distribution, underscoring the need for a balanced approach to worker distribution alongside human capital development. Consequently, government spending assumes a pivotal role in addressing inequality issues.

However, it's noteworthy that deep economic complexity between regions can impede government efficacy. As exemplified, intricate economic disparities may hinder the government's ability to establish sustainable social programs, often due to the interference of external entities driven by this complexity.

Published by AFEBI Economic and Finance Review

Table 2 Cross-Section Random Effect Coefficient

Province	Cross-Section Effect	Province	Cross-Section Effect
ACEH	-0.0425	KALIMANTAN TENGAH	-0.0284
SUMATERA UTARA	-0.0378	KALIMANTAN SELATAN	-0.0122
SUMATERA BARAT	-0.0375	KALIMANTAN TIMUR	-0.0006
RIAU	-0.0065	KALIMANTAN UTARA	-0.0625
JAMBI	-0.0230	SULAWESI UTARA	0.0240
SUMATERA SELATAN	-0.0041	SULAWESI TENGAH	-0.0020
BENGKULU	-0.0077	SULAWESI SELATAN	0.0473
LAMPUNG	-0.0116	SULAWESI TENGGARA	0.0449
KEP. BANGKA BELITUNG	-0.0811	SULAWESI BARAT	-0.0025
KEP. RIAU	-0.0117	BALI	0.0216
BANTEN	0.0238	NUSA TENGGARA BARAT	0.0085
DKI JAKARTA	0.0240	NUSA TENGGARA TIMUR	-0.0070
JAWA BARAT	0.0532	MALUKU	-0.0047
JAWA TENGAH	0.0060	MALUKU UTARA	-0.0660
DI YOGYAKARTA	0.0626	PAPUA	0.0461
JAWA TIMUR	0.0108	GORONTALO	0.0564
KALIMANTAN BARAT	-0.0079	PAPUA BARAT	0.0280

Referring to Table 2, it is evident that the Province of the Special Region of Yogyakarta holds the highest cross-sectional effect, followed by the Provinces of Gorontalo and West Java. This observation indicates that, while holding all independent variables constant (ceteris paribus), the Province of the Special Region of Yogyakarta exhibits the highest Gini index value, followed by Gorontalo and West Java.

In contrast, several provinces exhibit the lowest cross-sectional effect values. Bangka Belitung Province holds the lowest value, followed by North Maluku Province and North Kalimantan. This finding implies that, with all independent variables held constant (ceteris paribus), Bangka Belitung Province, followed by North Maluku and North Kalimantan Provinces, demonstrate the lowest levels of inequality.

Published by AFEBI Economic and Finance Review

5. CONCLUSION

Based on the conducted analysis, several conclusions can be drawn regarding the impact of health spending, education spending, social spending, and trade on income distribution inequality within Indonesian provinces. Health spending exhibits a negative effect on income inequality. This finding suggests that the current policy direction of allocating the health budget is aligned with Indonesia's objective of mitigating inequality. This can be attributed to the allocation of resources towards improving health services and, consequently, narrowing the gap in income distribution. Education spending demonstrates a negative impact on income disparity. This result implies that an increase in government spending aimed at providing better access to quality education for the entire population contributes to reducing income inequality. Enhanced educational opportunities can potentially bridge income gaps by empowering individuals with valuable skills and knowledge. Spending on social protection, although expected to alleviate inequality, paradoxically shows a positive impact on income disparity. This could be attributed to certain government programs not effectively targeting the intended beneficiaries, potentially leading to reduced work motivation and self-reliance among recipients. Economic complexity, as indicated by trade, has a positive influence on income inequality. This is due to the distinct economic structures and available resources in each province, which can contribute to regional disparities. Regarding the analysis between provinces, it was observed that Bangka Belitung Province holds the lowest Gini index coefficient value. Conversely, the Special Province of Yogyakarta possesses the highest coefficient. These disparities underscore the significant variation in income inequality levels across different provinces.

As a suggestion, the government can make regulations regarding the distribution of resource processing rights that can be used for production processes so as not to exacerbate economic complexity, because at a certain level a combination of complexities that are too complicated will reduce the effectiveness of government spending policies. The government must focus on developing the quality of human resources through access to education and good quality. More attention must be paid to the application of social protection allocations, expenditure allocations must be transformed into activities that are more productive and progressive so that they can have an impact on reducing income inequality.

The addition of transfer fund distribution variables should be added in order to reduce the impact of the complexity of an area, then tax redistribution can be added so that the results can be better and more varied.

Reference

Alaminos, Estefanía & Geske, S. (2022). *Impact of health social transfers in kind on income distribution an inequality*.

Anderson, Edward, d'Orey, M. A. J., Duvendack, M., & Esposito, L. (2018). Does Government Spending Affect Income Inequality? A Meta-regression Analysis. *World Development*, *103*, 60–71. https://doi.org/10.1016/j.worlddev.2017.10.006

Anderson, E., d'Orey, M. A. J., Duvendack, M., & Esposito, L. (2018). Does Government Spending Affect Income Poverty? A Meta-regression Analysis. *World Development*, *103*, 60–71. https://doi.org/10.1016/j.worlddev.2017.10.006

Aprillia, A., Wardhani, R. S., & Akbar, M. F. (2021). Analysis of Factors Affecting Poverty in

the Province of the Bangka Belitung Islands. *Jurnal Ilmu Ekonomi Terapan*, *6*(2), 188. https://doi.org/10.20473/jiet.v6i2.29184

Ataguba, J. E. (2021). The Impact of Financing Health Services on Income Inequality in an Unequal Society: The Case of South Africa. *Applied Health Economics and Health Policy*, *19*(5), 721–733. https://doi.org/10.1007/s40258-021-00643-7

Baldwin, R. E. (1983). *Pembangunan dan pertumbuhan ekonomi di negara-negara berkembang* (Kedua). Bina Aksara. https://lontar.ui.ac.id/detail?id=20155219&lokasi=lokal

Barrientos, A. (2019). The Role of Social Assistance in Reducing Poverty and Inequality in Asia and The Pacific. *ADB Sustainable Development Working Paper Series No. 62*, *62*, 1–30. www.adb.org

Bloch, C. (2020). Social spending in South Asia — an overview of government expenditure on health , education and social assistance. In *International Policy Centre for Inclusive Growth*. https://ipcig.org/publication/29705?language_content_entity=en

Carraro, L., & S.L. Marzi, M. (2021). Effects of social protection on poverty and inequality. *Handbook on Social Protection Systems*, 582–595. https://doi.org/10.4337/9781839109119.00075

Castelló-Climent, A., & Doménech, R. (2021). Human capital and income inequality revisited. In *Education Economics* (Vol. 29, Issue 2). https://doi.org/10.1080/09645292.2020.1870936

Chu, L. K., & Hoang, D. P. (2020). How does economic complexity influence income inequality? New evidence from international data. *Economic Analysis and Policy*, *68*, 44–57. https://doi.org/10.1016/j.eap.2020.08.004

Doumbia, D., & Kinda, T. (2019). Reallocating Public Spending to Reduce Income Inequality. *IMF Working Papers*, *2019*(188). https://doi.org/10.5089/9781513511863.001

Gujarati, D. N., & Porter, D. C. (2011). *Dasar-Dasar Ekonometrika*. Selemba Empat.

Hartmann, D., Pinheiro, F. L., Chen, P., Elsner, W., & Pyka, A. (2022). Economic complexity and inequality at the national and regional level. *Handbook of Complexity Economics*, 1–26.

Hassan, M., Alizadeh, M., & Ahmadvand, N. (2021). *Optimal Amount of Government Expenditure Components with the Goal of Reducing Income Inequality (The Case of Iran)*. *9*(1), 117–146. https://doi.org/10.22099/ijes.2021.38897.1721

Heryanah, H. (2017). Kesenjangan Pendapatan Di Indonesia: Berdasarkan Susenas 2008, 2011 Dan 2013. *Jurnal BPPK : Badan Pendidikan Dan Pelatihan Keuangan*, *10*(2), 16. https://doi.org/10.48108/jurnalbppk.v10i2.26

Ihsani, S. F., & Rohman, M. F. (2022). Distribusi Pendapatan dan Kemiskinan di Indonesia: Kasus Kebijakan Sentralisasi, Desentralisasi, dan Pandemi Covid-19. *Jurnal Ekonomi-Qu*, *12*(1), 1. https://doi.org/10.35448/jequ.v12i1.16292

Jain-Chandra, S., Kinda, T., Kochhar, K., Piao, S., & Schauer, J. (2019). Sharing the Growth Dividend: Analysis of Inequality in Asia. *Journal of Banking and Financial Economics*, *2*(2019), 5–28. https://doi.org/10.7172/2353-6845.jbfe.2019.2.1

Mankiw, G. N. (2003). *Teori Makro Ekonomi*. PT. Gramedia Pustaka Utama.

Novianti, T., & Panjaitan, D. V. (2022). Income Inequality in Indonesia: Before and during the Covid-19 Pandemic. *International Journal of Economics and Financial Issues*, *12*(3), 29–37. https://doi.org/10.32479/ijefi.12996

Nurul, A., Arief, A., & Ekonomi, I. (2021). *Kemandirian Fiskal , Pertumbuhan Ekonomi dan Ketimpangan Pendapatan di Indonesia*.

Sulistyaningrum, E., & Tjahjadi, A. M. (2022). Income Inequality in Indonesia: Which Aspects Cause the Most? *Journal of Indonesian Economy and Business*, *37*(3), 229–253. https://doi.org/10.22146/jieb.v37i3.2015

Todaro, M. P. (2004). *Pembangunan Ekonomi Di Dunia Ketiga* (Edisi Kedu). Erlangga.

Ulu, M. I. (2018). The Effect of Government Social Spending on Income Inequality In OECD : A Panel Data Analysis. *International Journal of Economics Politics Humanities and Social Sciences*, *1*(3), 184–202.

UN DESA. (2018). *Promoting Inclusion Through Social Protection Report On The World Social Situation 2018*.

Urata, S., & Narjoko, D. A. (2017). International Trade and Inequality. *ADBI Working Paper Series*, *675*, 20–27. https://www.adb.org/publications/international-trade-and-inequality

Yasni, R., & Yulianto, H. (2020). Peran Belanja Modal Dan Belanja Bantuan Sosial Pemerintah Daerah Terhadap Ketimpangan Pendapatan Di Indonesia. *Substansi: Sumber Artikel Akuntansi, Auditing, Dan Keuangan Vokasi*, *4*(1), 39–63.

Published by AFEBI Economic and Finance Review