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# The Influence of Government Spending and Audit Opinion on the Human Development Index in Java

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## Abstract

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This study aims to analyze the influence of government spending and audit opinion on the Human Development Index in six provinces on the island of Java, namely DKI Jakarta, West Java, Central Java, East Java, DI Yogyakarta, and Banten, during the 2022 period. The approach used is quantitative, with secondary data obtained from the Central Statistics Agency and the Financial Audit Agency. Data analysis was carried out using SPSS version 26 through classical assumption tests and multiple linear regression. The results of the study show that the audit opinion of all provinces on the island of Java obtained the title of Reasonable Without Exception, indicating good regional financial governance. However, the regression results showed that government spending had no significant effect on HDI, with a significance value of 0.454 (> 0.05). An $R^2$ value of 0.146 indicates that only 14.6% of the variation in HDI can be explained by government spending. These findings indicate that the large allocation of public spending has not guaranteed an increase in human development, so it is necessary to increase the efficiency and effectiveness of the use of the budget to support people's welfare.

## 1. Introduction

Human development is a key indicator of regional development success, reflecting not only economic achievement but also quality of life in education, health, and living standards. In Indonesia, the Human Development Index (HDI) is a strategic benchmark in both national and regional planning. Java Island, as the center of economic and governmental activity, plays a major role in contributing to national HDI. However, disparities among provinces on Java remain evident. DKI Jakarta consistently ranks highest, while provinces such as Central Java, East Java, and Banten remain at a medium HDI level. These differences indicate variations in the effectiveness of development policies and regional financial management across provinces.

One important factor believed to influence HDI improvement is local government spending. Public economic theory suggests that government expenditure directed toward productive sectors such as education, health, and infrastructure can strengthen human capital and enhance public welfare (Wardhana et al., 2021). Nevertheless, higher public spending does not automatically translate into proportional HDI improvement. Kurniawan and Murtala (2021) show that although government spending increases annually, its efficiency remains low in many provinces. This finding implies that development success depends not only on the size of the budget but also on how effectively and accountably public funds are managed.

Within the framework of public financial management, audit opinions issued by the Audit Board of Indonesia (BPK) serve as a key indicator of accountability and transparency. A Reasonable Opinion Without Exception (WTP) signals that financial statements are prepared according to accounting standards and reflect good governance practices. Research by Nor et al. (2018) finds that local governments with better audit opinions tend to demonstrate stronger development performance, including improvements in human welfare. This suggests that favorable audit opinions may reflect efficient financial management, enabling public expenditure to be used more effectively in supporting HDI-related programs. Such findings align with good governance principles, which emphasize transparency and accountability as foundations for sustainable development outcomes.

Despite this, the relationship between audit opinions, government spending, and HDI remains underexplored, particularly at the provincial level on Java Island. Most prior studies have focused on the direct impact of government spending on HDI (Indrayana, 2021; Sutono, 2022) without incorporating the role of financial governance represented by audit opinions. Moreover, much of the existing research examines regions outside Java, such as Riau or eastern Indonesia, which differ significantly in fiscal capacity and administrative complexity. Given Java's more complex socio-economic and fiscal characteristics, the interaction between audit quality, spending, and human development may yield different insights, highlighting a clear research gap.

This study aims to address this gap by analyzing the effects of audit opinions and government spending on HDI across six provinces on Java Island DKI Jakarta, West Java, Central Java, East Java, DI Yogyakarta, and Banten during the period prior to 2022. This timeframe was selected to capture human development dynamics before the full socio-economic impact of the COVID-19 pandemic. Using an empirical approach, the study tests two hypotheses: (1) audit opinion has a positive effect on HDI, and (2) government spending has a positive effect on HDI.

Conceptually, the study is grounded in human development theory, which emphasizes the role of public policy in expanding human capabilities (Amartya Sen, UNDP), and is supported by good governance and agency theories, which stress the importance of accountability and fiscal governance quality. By integrating these perspectives, this research seeks to provide a more comprehensive understanding of how public financial management quality influences human development outcomes. The findings are expected to contribute to the literature on public economics and local governance while offering policy-relevant insights for local governments and BPK in strengthening accountability, spending efficiency, and ultimately, human development on Java Island.

## 2. Literature Review

### 2.1. The Influence of Audit Opinion on the Human Development Index (HDI)

An audit opinion is a professional assessment issued by an auditor regarding the fairness of local government financial statements based on government accounting standards. In Indonesia, the Audit Board (*Badan Pemeriksa Keuangan*/BPK) (2020) provides four types of audit opinions: Reasonable Without Exception/Unqualified Opinion (*Wajar Tanpa Pengecualian*/WTP), Reasonable with Exception/Qualified Opinion (*Wajar dengan Pengecualian*/WDP), Unreasonable/Adverse Opinion (*Tidak Wajar*/TW), and No Opinion/Disclaimer Opinion (*Tidak Memberikan Pendapat*/TMP). Among these, the WTP opinion represents the highest recognition of financial reporting quality, indicating that financial management is conducted transparently, accountably, and in compliance with applicable regulations.

Within the framework of local governance, audit opinions function as a key indicator of fiscal accountability. Based on Good Governance and Agency Theory, local governments act as agents accountable to the public as principals in managing public funds. The issuance of a WTP opinion reflects a high level of compliance and integrity in financial reporting, thereby strengthening public trust in budget management (Bastian, 2021). This accountability contributes to more effective public spending aimed at achieving development objectives, including improvements in human development as measured by the Human Development Index (HDI).

Empirical studies support the relationship between audit quality and development outcomes. Nor et al. (2018) found that regions receiving better audit opinions tend to achieve higher HDI levels, suggesting that sound financial governance enhances the efficiency of public budget utilization. Similarly, Masduki et al. (2022) demonstrate that public financial accountability indirectly influences human development through improved spending quality. Transparent financial reporting enables governments to allocate resources more efficiently to priority sectors such as education and health. The relationship between audit opinion and

HDI operates through two main mechanisms: enhancing the efficiency and effectiveness of public spending and increasing public trust, which strengthens the legitimacy and impact of human development policies. Based on the theoretical framework and the results of the previous research, the first hypothesis in this study is formulated as follows:

**$H_1$:** Audit Opinion has a positive effect on the Human Development Index (HDI).

### 2.2. The Effect of Government Spending on the Human Development Index (HDI)

Local government spending is a key fiscal policy instrument for promoting economic and social development, particularly human development. Effective public expenditure is essential for improving quality of life through investments in education, health, and basic infrastructure. Human Capital Theory, as developed by Schultz and Becker, explains that investments in education and health enhance long-term productivity and well-being. Similarly, Amartya Sen's Human Development approach emphasizes that development should be assessed by the expansion of human capabilities rather than economic growth alone (Adrianto & Sembiring, 2022).

Empirical studies in Indonesia consistently demonstrate a positive relationship between government spending and the Human Development Index (HDI). Wardhana et al. (2021) found that increased expenditure in the education and health sectors significantly improved interprovincial HDI levels. Supporting this finding, Indrayana (2021) showed that public sector budget allocations directly increased district and city HDI in East Java, indicating that higher spending in productive sectors contributes more strongly to human development.

However, the effectiveness of public spending depends not only on its amount but also on efficiency and accountability. Kurniawan et al. (2020), using Data Envelopment Analysis (DEA), revealed that many regions remain inefficient in utilizing budgets to improve HDI despite high spending levels, highlighting the importance of expenditure quality. Additionally, Sutono (2022) emphasized that provincial government spending significantly enhances HDI components, particularly access to education and health services. Overall, efficient and well-targeted public spending plays a strategic role in improving human welfare and HDI outcomes. Therefore, the hypotheses of these two studies are formulated as follows:
**$H_2$**: Government Spending has a positive effect on the Human Development Index (HDI).

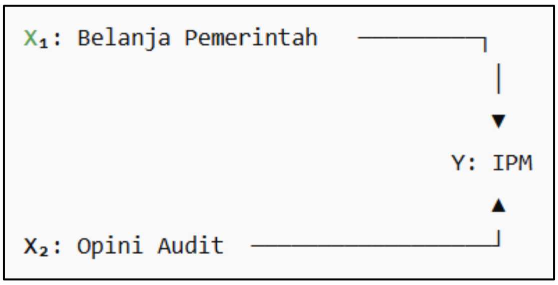


**Figure.1** Conceptual Framework

Figure 1 show Variable Y (dependent) is the Human Development Index (HDI), while the variables $X_1$ and $X_2$ are independent variables that are suspected to affect HDI. $X_1$ (Government Expenditure) describes the amount of local government spending to finance development programs, such as education, health, and infrastructure, which is expected to increase HDI. $X_2$ (Audit Opinion) indicates the level of accountability and transparency of regional financial management based on the results of BPK audits; the better the audit opinion (e.g. WTP), the more effective and positive the financial governance is expected to have a positive impact on HDI. Thus, the diagram explains that both government spending and audit opinions are assumed to have an effect on the increase in HDI, either directly or simultaneously, according to the research hypothesis.

## 3. Methods

This study employs a quantitative approach to examine the relationship between audit opinions, government spending, and the Human Development Index (HDI) across six provinces on the island of Java: DKI Jakarta, West Java, Central Java, East Java, DI Yogyakarta, and Banten. The quantitative method is chosen because the study focuses on hypothesis testing using numerical secondary data and statistical techniques to objectively measure the influence among variables. The data used are panel data, combining cross-sectional data across provinces with time-series data for the year 2022. This period was selected to ensure relevance to the post–regional fiscal reform context and to reflect development conditions prior to the full impact of the COVID-19 pandemic.

The study relies on secondary data obtained from official government sources. HDI data are sourced from annual publications of the Central Statistics

Agency (BPS), while data on provincial government expenditure realization are taken from audited local government financial statements (LKPD) issued by the Audit Board of Indonesia (BPK). Audit opinion data are obtained from BPK audit reports (LHP). These data are processed to construct the variables required for the analysis.

The research model includes one dependent variable and two independent variables. HDI (Y) serves as the dependent variable and is measured using the annual HDI score of each province. The independent variables consist of Government Expenditure ($X_1$), measured by total annual provincial expenditure and transformed into a natural logarithm, and Audit Opinion ($X_2$), measured using an ordinal scale and converted into a dummy variable, with a value of 1 for unqualified opinions (WTP) and 0 for non-WTP opinions.

Data analysis is conducted using SPSS version 26, including descriptive statistics, classical assumption tests, and multiple linear regression analysis. Classical assumption tests include normality, multicollinearity, autocorrelation, and heteroscedasticity tests. Hypotheses are evaluated using regression coefficients, t-tests, F-tests, and the coefficient of determination ($R^2$) at a 95% confidence level. This approach ensures objectivity, replicability, and statistical rigor in assessing the influence of audit opinions and government spending on HDI in Java's provinces.

## 4. Results

This study aims to analyze the influence of Government Expenditure on the Human Development Index (HDI) in six provinces on the island of Java, namely DKI Jakarta, West Java, Central Java, East Java, DI Yogyakarta, and Banten. The analysis was carried out using secondary data for the 2022 period obtained from the Central Statistics Agency (BPS) and the Financial Audit Agency (BPK). Data processing is carried out with the help of SPSS software version 26 through a series of statistical tests to ensure the feasibility of the model and prove the proposed hypothesis.

**Table.1** SPSS Output Descriptive Statistics

| **Descriptive Statistics** | | | | | |
|---|---|---|---|---|---|
| | N | Minimum | Maximum | Red | Hours of deviation |
| IPM | 6 | 72.75 | 81.65 | 75.7133 | 4.22465 |
| Trillions | 6 | 21.38 | 168.10 | 74.4333 | 61.64343 |
| OpiniAudit | 6 | 4 | 4 | 4.00 | .000 |
| Valid N (listwise) | 6 | | | | |

Based on table 1 of the results of the descriptive statistical test, the Human Development Index (HDI) variable has a minimum value of 72.75, a maximum of 81.65, with an average of 75.71 and a standard deviation of 4.22. This shows that the average HDI in the provinces of Java Island is included in the high and relatively equal category. Meanwhile, the Government Expenditure variable (in trillions of rupiah) has a minimum value of 21.38 trillion, a maximum of 168.10 trillion, with an average of 74.43 trillion and a standard deviation of 61.64. This figure shows that there is a considerable difference in fiscal capacity between provinces, where DKI Jakarta and East Java have much higher expenditures than other provinces such as Banten or DI Yogyakarta. The Audit Opinion variable showed a constant value of

4 (WTP) with a standard deviation of 0.00, indicating that all provinces on the island of Java obtained a Fair Opinion Without Exception from BPK during the study period. This illustrates good regional financial governance, although it does not provide a variety to test in the regression model.

**Table.2** Normality Test Output

| Tests of Normality | | | | | | |
|---|---|---|---|---|---|---|
| | Kolmogorov-Smirnova | | | Shapiro-Wilk | | |
| | Statistic | df | Say. | Statistic | df | Say. |
| IPM | .381 | 6 | .007 | .707 | 6 | .007 |
| a. Lilliefors Significance Correction | | | | | | |

Based on the table 2 show thickness of 2 normality test results using the Kolmogorov–Smirnov and Shapiro–Wilk methods, it shows a significance value (Sig.) of 0.007, which means it is smaller than 0.05. Thus, the HDI variable data is not normally distributed. However, since the sample count was only six observations, the violation of this assumption of normality was not a major obstacle in the analysis. According to statistical theory, at very small sample counts, normality tests tend to be sensitive and often produce abnormal results even though the distribution is still visually acceptable. Therefore, regression analysis can still be continued because linear regression is robust against mild normality violations, especially when the residual is randomly scattered and does not show a systematic pattern.

**Table.3** SPSS Output Multicollinearity Test Results

| **Coefficients**[a] | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Say. | Collinearity Statistics | |
| | | B | Std. Error | Beta | | | Tolerance | LIVE |
| 1 | (Constant) | 77.664 | 2.954 | | 26.288 | .000 | | |
| | Trillions | -.026 | .032 | -.382 | -.828 | .454 | 1.000 | 1.000 |
| a. Dependent Variable: IPM | | | | | | | | |

Based on table 3, the multicollinearity test was carried out to find out whether there is a high linear relationship between independent variables. The test results showed that the Government Expenditure variable had a Tolerance value of 1,000 and a Variance Inflation Factor (VIF) of 1,000. Based on general criteria, if the Tolerance value is > 0.10 and VIF is < 10, then it can be concluded that multicollinearity does not occur. A perfect value (1,000) on both of these indicators indicates that the independent variables in the model are not correlated with each other and can be used independently to explain the dependent variables. This is also natural considering that the model uses only one independent variable, so it is not possible to correlate between independent variables. Thus, the free assumption of multicollinearity is fulfilled.

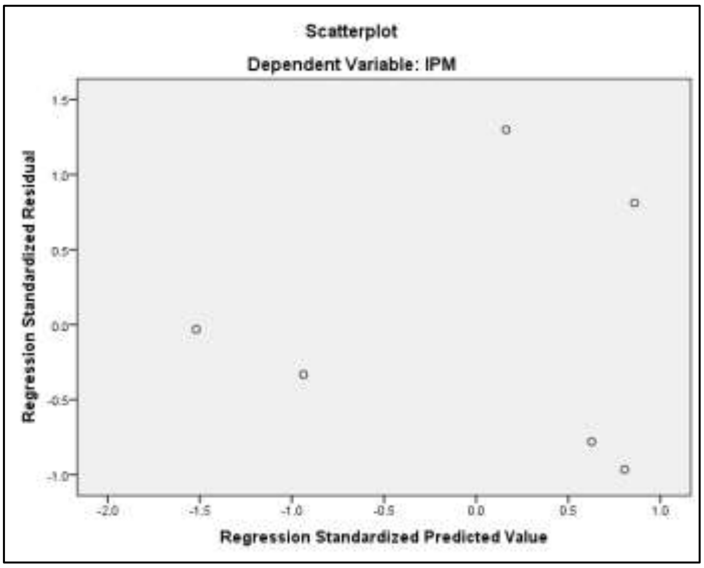


**Figure.2** Heteroscedasticity Test

Figure 2 show heteroscedasticity test was carried out by looking at the scatterplot between the standardized residual and the standardized prediction value. Based on the resulting graph, the data points are seen to be randomly spread above and below the horizontal (zero) axis without forming a specific pattern such as lines, cones, or curves. This pattern of random distribution suggests that heteroscedasticity does not occur in the regression model, so residual variance is considered constant (homoskedastic). Thus, the regression model meets the assumption of homocedasticity, which means that the errors of each observation are random and are not affected by the value of independent variables.

**Table.4** SPSS Output Autocorrelation Test Results

| **Model Summary**$^b$ | | | | | |
|---|---|---|---|---|---|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
| 1 | .382a | .146 | -.067 | 4.36417 | 2.437 |
| a. Predictors: (Constant), BelanjaTriliun | | | | | |
| b. Dependent Variable: IPM | | | | | |

Based on the tabel 4 show results of the Durbin–Watson (DW) test in the Model Summary table, a DW value of 2.437 was obtained. The decision-making criteria state that a DW value between 1.5 and 2.5 indicates the absence of autocorrelation. Since the DW value is within this range, it can be concluded that the regression model is free of autocorrelation, both positive and negative. Thus, the residual between observations is independent and uncorrelated, which means that the residual independence assumption is met.

Multiple linear regression analysis was used to determine the influence of Government Expenditure on the Human Development Index (HDI). Based on the results of data processing, a value of R = 0.382 was obtained, indicating a weak relationship between the two variables. The R-Square ($R^2$) value of 0.146 indicates that only 14.6% of the variation in HDI can be explained by government spending, while the remaining 85.4% is influenced by other factors such as education, health, and economic productivity. An Adjusted $R^2$ value of -0.067 indicates that the model's ability to explain dependent variables tends to decline when used in larger populations, which is common in small sample sizes.

**Table.5** SPSS Output Test Results F (Simultaneous)

| **ANOVA** | | | | | | |
|---|---|---|---|---|---|---|
| Model | | Sum of Squares | df | Mean Square | F | Say. |
| 1 | Regression | 13.054 | 1 | 13.054 | .685 | .454b |
| | Residual | 76.184 | 4 | 19.046 | | |
| | Total | 89.238 | 5 | | | |
| a. Dependent Variable: IPM | | | | | | |
| b. Predictors: (Constant), BelanjaTriliun | | | | | | |

The F test (simultaneous) showed an F value of 0.685 with a significance of 0.454 (> 0.05). This means that simultaneously the regression model is not significant, so government spending has no overall effect on HDI.

The results of the t-test (partial) in the Coefficients table (table 3) showed a calculated t-value of -0.828 with a significance of 0.454 (> 0.05). This means that government spending does not have a significant effect on HDI partially. The value of the regression coefficient of -0.026 indicates the direction of a negative relationship, but the effect is not statistically significant. Thus, the research hypothesis ($H_2$: Government Spending has a positive effect on HDI) is rejected. The regression equations obtained are as follows: HDI = 77.664−0.026 (Government Spending)

The interpretation of the equation shows that every increase in government spending of 1 trillion rupiah, on average, will decrease the HDI value by 0.026 points, assuming other factors are constant. However, because the effect is not significant, this negative direction does not indicate a definite causal relationship, but may reflect the condition that the increase in nominal expenditure is not always accompanied by an increase in the effectiveness of the use of the budget on human development.

Based on all test results, it can be concluded that government spending did not have a significant influence on HDI in the provinces of Java during the study period. This shows that the large budget allocation is not a guarantee of improving the quality of human development, especially if the effectiveness and efficiency of spending are not optimal. This result is in line with the research of Kurniawan and Murtala (2021), which emphasizes that the efficiency of the use of the public budget has a greater impact on HDI than total spending.

Although all provinces have obtained a Fair Without Exception (WTP) opinion, which indicates good financial governance, it is not enough to ensure the improvement of people's welfare. Therefore, the results of this study indicate that the quality and direction of public spending is more important than just the amount of budget spent in an effort to improve human development on the island of Java.

## 5. Discussion

The findings of this study indicate that Government Expenditure does not have a significant effect on the Human Development Index (HDI) across six provinces on the island of Java in 2022. Despite these provinces having relatively high fiscal capacity and uniformly receiving Unqualified Opinions (WTP) from the Audit Board of Indonesia (BPK), the level of public spending has not directly translated into improvements in human development. This suggests that increases in nominal government expenditure are not automatically followed by higher HDI outcomes, pointing to weaknesses in the effectiveness of budget utilization.

Theoretically, these results diverge from Keynesian theory and Human Capital Theory, which emphasize that government spending in productive sectors such as education, health, and infrastructure should enhance welfare and accelerate human development. However, in the Indonesian context, particularly in Java, large budget allocations do not necessarily produce proportional development outcomes when spending is not optimally targeted. Provinces with strong fiscal capacity tend to allocate a substantial share of their budgets to operational and bureaucratic expenditures rather than to capital spending that directly improves public services.

These findings are consistent with Kurniawan et al. (2020), who demonstrate that public spending efficiency across Indonesian provinces remains low despite high levels of budget realization. Their study emphasizes that the quality of expenditure is more critical than its quantity in improving HDI. Similar conclusions are drawn by Indrayana (2021) and Wardhana et al. (2021), who find that only well-targeted spending in education and health significantly influences HDI. Thus, this study reinforces the argument that effective budget management is more important than the absolute level of expenditure.

Another explanation for the weak relationship between government spending and HDI is the relatively high level of human development already achieved by Java's provinces. Most have reached the "high" or "very high" HDI category, meaning that further improvements require qualitative policy interventions rather than merely increased spending. In such conditions, the marginal impact of additional expenditure on HDI becomes limited. Moreover, structural differences among provinces such as urban–rural disparities, variations in human resource quality, and institutional capacity also influence spending effectiveness.

Although all provinces received WTP audit opinions, this uniformity reduces the explanatory power of the audit variable in statistical analysis. While WTP reflects strong administrative accountability, it does not necessarily guarantee economic efficiency or effective development outcomes. This supports the argument of Masduki et al. (2022) that spending quality acts as a critical link between fiscal accountability and human development. The study concludes that human development is shaped not by how much governments spend, but by how effectively and strategically budgets are used. Efficient, transparent, and performance-oriented public spending is more influential in improving HDI than increases in nominal expenditure alone.

## 6. Conclusion

Based on the results of data analysis and discussions that have been conducted, this study concludes that government spending does not have a significant effect on the Human Development Index (HDI) in six provinces on the island of Java during the 2022 period. The results of the regression test showed a significance value of 0.454 (> 0.05) with a negative coefficient, which means that the increase in the nominal public expenditure has not been followed by a real improvement in the quality of human development. A determination coefficient value ($R^2$) of 0.146 also shows that only 14.6% of HDI variation can be explained by government spending, while the rest is influenced by other factors outside the model such as education, health, infrastructure, and the quality of public policy. All provinces on the island of Java obtained a Fair Without Exception (WTP) audit opinion from the BPK, which shows that regional financial governance has been administratively good.

However, the results of this study show that high financial accountability is not necessarily followed by effectiveness in the use of budgets for human development. These findings reinforce the view that the quality and efficiency of public spending is more important than the amount of budget allocated. Thus, it can be concluded that to increase HDI, local governments on the island of Java need to focus on optimizing and effectiveness of public spending, especially in strategic sectors such as education, health, and community economic empowerment, as well as strengthening the performance-based evaluation system so that every regional expenditure really has an impact on improving people's welfare.

## References


Bastian, I. (2021). *Manajemen Keuangan Publik*. Makassar: Penerbit Andi.

BPK RI. (2020). Ragam Opini BPK, Retrieved December 11, 2022 From https://www.bpk.go.id/news/ragam-opini-bpk

Indrayana, A. (2021). The Analysis Of Economic Growth, The Government Spending Educationsector, Health Sector, And Infrastructure Sector On

Human Development Index In East Java. *American Journal of Humanities and Social Sciences Research*, *5*(10), 33-39.

Kurniawan, I., & Murtala, M. (2021). Efisiensi Belanja Pemerintah Terhadap Indeks Pembangunan Manusia Secara Regional di Indonesia. *Jurnal Ekonomi Regional Unimal*, *4*(2), 1-8.

Kurniawan, I., Murtala, M., & Juanda, R. (2020). Efisiensi Belanja Pemerintah Terhadap Indeks Pembangunan Manusia Secara Regional di Indonesia. *Jurnal Ekonomi Regional Unimal*, *3*(3), 15-22.

Masduki, U., Rindayati, W., & Mulatsih, S. (2022). How can quality regional spending reduce poverty and improve human development index?. *Journal of Asian Economics*, *82*, 101515.

Nor, W., Hudaya, M., Novriyandana, R., Lesmanawati, D., & Yuliastina, M. (2018). Human Development Index And Audit Opinion. *Journal of Auditing, Finance, and Forensic Accounting (JAFFA), 6*(1), 13-22

Adrianto, S., & Sembiring, I. H. R. U. (2022). *Memposisikan Human Capital menuju Indonesia Tangguh dan Tumbuh*. Jakarta: Elex Media Komputindo.

Sutono, I. A. (2022). Pengaruh belanja pemerintah terhadap indeks pembangunan manusia di Provinsi Riau. *Jurnal Manajemen Perbendaharaan*, *3*(2), 150-168.

Wardhana, A., Kharisma, B., & Sulandari, D. S. (2021). Belanja pemerintah dan peningkatan sumber daya manusia di indonesia. *Jurnal Ecodemica: Jurnal Ekonomi Manajemen dan Bisnis*, *5*(2), 139-151.