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ANALYSIS OF THE IMPACT OF LOCAL GOVERNMENT EXPENDITURE ON HAPPINESS INDEX IN PROVINCES IN INDONESIA

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ABSTRACT

Research Originality — The happiness index is an important indicator to examine the progress of a country's development. This research is the first to study the impact of local government expenditure on happiness, particularly in Indonesia.

Research Objectives — This study aims to investigate the impact of local government expenditure on happiness. Additionally, it examines the effect of GRDP per capita, school life expectancy, and inequality on happiness.

Research Methods — This study used panel data from Statistics Indonesia and the Ministry of Finance in 2014, 2017, and 2021 for case studies in 34 provinces in Indonesia. The methods used were pooled least square, fixed effect model, random effect model, and quantile regression.

Empirical Results — The estimation results showed that local government expenditure, GRDP per capita, school life expectancy, and inequality significantly affected the happiness index. The correlation between local government expenditure and inequality on the happiness index was negative in all quantiles. Meanwhile, the relationship between GRDP per capita and school life expectancy on the happiness index was positive in all quantiles.

Implications — The negative impact of local government expenditure on happiness shows that local government expenditure is not optimal for development. Sub-optimal expenditure allocations, such as capital expenditure for infrastructure development, are lower than personnel expenditure, which makes people less happy. Therefore, the government needs to evaluate and improve the effectiveness of local government expenditure and allocate government expenditure that directly affects society, such as infrastructure development, education and health facilities, MSME financing, and the creation of new jobs.

Keywords: Development, Happiness Index, Local Government Expenditure, Quantile Regression, Subjective Well-Being
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INTRODUCTION

Gross domestic product (GDP) was initially the only indicator to analyze economic growth and development. Well-being measurement was then developed and involved the use of GDP per capita, unemployment rates, poverty, and inequality. In 1990, the human development index (HDI) was introduced as an objective measure that provided a more comprehensive picture of the development outcomes. However, these various indicators remained insufficient to fully capture the quality of development. Therefore, in 2012, the happiness index was compiled and introduced to assess how the community perceived the results of development (Statistics Indonesia, 2021; Helliwell et al., 2012).

Measurement of the happiness index at the global level has been included in the World Happiness Report since 2012 (Helliwell et al., 2012). Figure 1 shows information about subjective well-being or happiness in Indonesia. According to the World Happiness Report (2021), in 2021, the happiness level of Indonesian people was ranked 82nd in the world. The happiness index from 2018 to 2021 showed a positive trend. This indicates that the happiness of Indonesian people has continued to increase since 2018. Some of the indicators used for calculating the happiness index are income (GDP per capita), life expectancy, social support, freedom of choice in life, quality of relationship between individuals, and perception of corruption.

In Indonesia, the measurement of happiness has been carried out three times since 2014 using the happiness level measurement survey (SPTK). In 2021, the level of happiness of the Indonesian population was measured using a three-dimensional approach consisting of life satisfaction, affect (feeling), and *eudaimonia* (meaning of life) (Statistics Indonesia, 2021). In 2014, the Riau Archipelago had the highest happiness index (72.42), while Papua ranked the lowest (60.97). In 2017, North Maluku was in the highest position (75.68), and Papua remained in the lowest position (67.52). Furthermore, in 2021, North Maluku occupied the highest position again (76.34), and Banten had the lowest position (68.08). Nationally, the happiness index increased from 68.79 in 2014 to 71.47 in 2017 and 72.61 in 2021.

Measuring happiness is highly beneficial. Analyzing happiness offers insights that can inform

APPLICATION IN PRACTICE
- The government needs to evaluate local government expenditure, considering the negative correlation between local government expenditure and the happiness index.
- The government needs to ensure that the expenditure planned is properly implemented and spared from political problems and corruption.
- The government must continue to implement equitable development to reduce the Gini ratio.
- Improving the quality and achievement of community education will lead to greater happiness of the community.

planning, development, and policy evaluation that are useful for the efforts to alleviate poverty an d tackle inequality (Lee & Goh, 2023; Liao, 2021). According to Frey and Stutzer (2002), the measurement of happiness can be beneficial for the government to formulate economic policies. One of the benefits of happiness measurement is that it provides a new way to evaluate government expenditure (Flavin, 2019). It has been widely reported that greater government expenditure will accelerate development, thus allowing the improvement of people's well-being, but the evaluation of government expenditure with the happiness index allows a negative correlation between them (Gauche, 2022). The happiness index can also be used to evaluate policies on unemployment alleviation, tax collection, and productivity. Research conducted by DiMaria et al. (2020) found that subjective well-being and productivity have a positive correlation, making it important to pay attention to the aspect of people's life satisfaction to improve the economic performance of a country.

Government expenditure also has a vital role for the growth and economic development of a country, including Indonesia (Ahuja & Pandit, 2020). Since the implementation of fiscal decentralization in 2001, there has been a significant increase in education and health expenditure at the regional level (Kis-Katos & Sjahrir, 2017). In addition, government expenditure can reduce unemployment rates and increase human development index (HDI) (Masduki et al., 2022). Fiscal decentralization allows regions to have the flexibility to manage their own budgets in accordance with the needs and priorities of regional development (Wiryawan & Otchia, 2022). However, the implementation of fiscal decentralization needs to be closely monitored as numerous budget irregularities, including corruption, have been identified (Lewis, 2017). In addition, Indonesia has a relatively low corruption perception index, reaching 34 in 2022, and corruption also occurs in the regions (Alfada, 2019).

Therefore, it is interesting to examine whether local government expenditure can increase happiness. Previous literature has primarily explored happiness at the state level (DiMaria et al., 2020; Lee & Goh, 2023). Research by Akgun et al. (2022) has identified the influence of government expenditure and GDP on

Figure 1 Indonesia's World Happiness Ranking and World Happiness Index
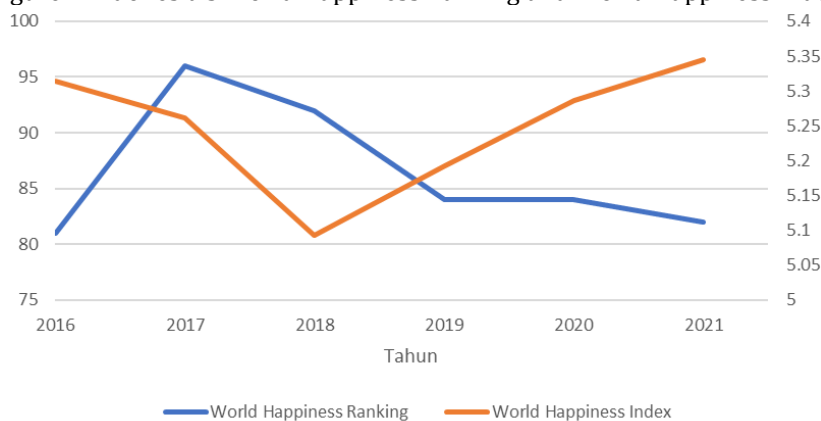
Source: World Happiness Report (2021)

happiness. In addition, one study identifies the influence of income and income inequality on happiness (Tavor et al., 2018). However, research on the influence of local government expenditure, GDP per capita, inequality levels, and school life expectancy remains limited, and such studies at the regional level are rarely found. Previous studies show that the correlation between several variables and happiness remains inconsistent, making the analysis of the happiness index particularly interesting for further studies, especially in terms of how these variables relate to the happiness index in Indonesia.

Therefore, this study aims to analyze the determinants of happiness at the regional level. We investigated the influence of local government expenditure, GDP per capita, school life expectancy, and inequality on the happiness index. We added the school life expectancy variable as a control variable since several studies at the individual level have identified a relationship between education and happiness (Araki, 2022). This has encouraged us to test the effect of education at the macro level. The results of this study can be used to evaluate the local government expenditure in 34 provinces in Indonesia. In addition, the results of this study are expected to provide policy recommendations to allow the government's development efforts to yield tangible results and have a direct impact on the community to improve their well-being.

LITERATURE REVIEW
Happiness Index
The term happiness, frequently known as subjective well-being, is an individual's positive or negative assessment or perception of all aspects of life (Angner, 2010). Subjective well-being is not only about happiness but also about life satisfaction (Sender et al., 2021). Meanwhile, objective well-being is the well-being measured using well-being indicators and poverty lines (Jäntti et al., 2014). It is different from subjective well-being, which is assessed based on the level of happiness and life satisfaction (Frey, 2018).

Happiness is often used as a proxy variable of life satisfaction. Most research on well-being focuses on happiness by using response data from questions about overall life satisfaction (Piekałkiewicz, 2017). The use of happiness index contributes to human development because the results from its analysis help identify what society really needs. Low happiness or satisfaction can be addressed by implementing policy interventions (Dolan et al., 2008). Through the happiness index, the government can identify people's preferences in facilities and infrastructure as well as the need for goods and services (Anand, 2016). Understanding subjective well-being can help improve the quality of health services and education for human development (Elliott, 2022; Deaton, 2008).

Local government expenditure
The government increases its expenditure to improve public services and accelerate the construction of better facilities and infrastructure. However, an increase in government expenditure does not necessarily increase people's happiness. Research conducted by Frey and Stutzer (2002) shows that increasing government expenditure does not necessarily increase subjective well-being. This is in line with a case study in the United States and the United Kingdom, which indicates that increasing government expenditure does not correlate with an increase in happiness (Schmukler et al., 2010). This is because the increase in government expenditure is funded by government revenue generated from the taxes paid by the public, thus reducing public satisfaction (Perovic & Golem, 2010).

One of the problems of government expenditure is budget misappropriation due to corruption (Welsch, 2008). Corruption is a key contributor to a decline in life satisfaction (Wu & Zhu, 2016). A study found that a ten-point increase in corruption reduces subjective well-being by 0.23 points (Li & An, 2020). Research conducted by Arvin and Lew (2014) shows that corruption reduces happiness levels but only in the high-income countries and upper-income countries.

Per Capita Income
A study by Easterlin shows that GDP per capita has a negative correlation with happiness (Easterlin 1974, 2013) due to income inequality. Another study states that increasing GDP per capita has no effect on happiness, indicating that the rich are not necessarily happier than the poor (Perovic & Golem, 2010). However, a study in Germany reveals that GDP per capita has a positive correlation with happiness (Frey & Stutzer, 2000). One aspect to consider when investigating the correlation between income and happiness is the existing inequality (Alesina, et al., 2004). In countries with high levels of inequality, an increase in income tends to have limited impact on happiness. According to Kenny (1999), the correlation between the Gini ratio as a proxy of inequality and happiness is negative.

Education and Happiness
Considering that the measurement of happiness is aimed at observing human well-being, it is necessary to investigate the correlation between education and happiness (Scott, 2022). Education has a

positive correlation with happiness because a high level of education can lead to a better standard of living (Clark, 2018; Veenhoven, 2010). Therefore, research on education and happiness needs to be conducted to generate appropriate policy recommendations (Easterlin, 2013). Moreover, education on a macro scale will affect national revenue and productivity as reflected in the total factor productivity value (DiMaria et al., 2020; Piekałkiewicz, 2017).

Previous Research

To analyze happiness, some studies use panel data at a macro scale (Akgun et al., 2022; Perovic & Golem, 2010). Research conducted by Akgun et al. (2022) uses two stages of estimation: pooled least square regression to measure the variables that determine the happiness index and the quantile regression method to identify the effect of quantile differences in happiness index. The quantile regression model was developed by Koenker and Bassett in 1978 (Koenker & Hallock, 2001). This model divides data into groups that has been previously sorted from the smallest to the largest values. This model can overcome the heteroscedasticity problem in the model (Cade & Noon, 2003; Machado & Mata, 2005). The development of research on happiness uses many quantile regression models to obtain different possible estimation results (Akgun et al., 2022).

Hypothesis

As regards to the above-mentioned subject, there is a pressing need to measure happiness as an evaluation tool and to provide recommendations for the government in making policies. Moreover, previous studies show various findings. It is likely that there is a negative correlation between local government expenditure and happiness due to budget problems, especially corruption, causing suboptimal fund allocation for the community. In addition, the GDP per capita and education variables may have a positive correlation with happiness. Meanwhile, the Gini ratio negatively correlates with happiness.

METHODS

This research used secondary data from the Statistics Indonesia (BPS) and the Ministry of Finance. The happiness index was a dependent variable obtained from the website of BPS, covering data from 2014, 2017, and 2021. BPS has conducted a happiness level measurement survey (SPTK) in three different years. In 2012, SPTK trials were conducted twice to test the instruments and make refinements. The trials continued in 2013 with a broader survey involving 11,000 respondents. A survey in 2014 was conducted at the provincial level with the aim to obtain a happiness index at the provincial level with the number of respondents reaching 75,000 respondents. The survey was conducted again in 2017 and 2021 by improving and developing the happiness framework in accordance with the international standards.

This study used independent variables, including local government expenditure, GRDP per capita as a proxy for community well-being from the income aspect, school life expectancy as a proxy for education, and Gini ratio as a proxy for inequality. The data on local government expenditure was used to determine the correlation and to evaluate the local government expenditure. School life expectancy was selected as a proxy for education because it shows how long a seven-year-old can attend school in the future. Employing the school life expectancy may provide an overview of development in the education sector from various levels of education (Central Statistics Agency, 2022). In the estimation, the variables of local government expenditure and gross regional domestic product per capita were converted into logarithmic forms to obtain normally distributed data.

The methods used in this study were pooled least square (PLS) and quantile regression, which is in accordance with the research conducted by Akgun et al. (2022). This study also used the fixed effect model (FEM) and random effect model (REM), in which FEM treated unobserved factors as fixed variables, whereas REM treated them as random models (Gujarati, 2003). The PLS, FEM, and REM methods were used to measure the determinants of happiness index in the overall data. To determine the best model, we carried out the Chow test and Hausman test. The Chow test was conducted to determine the best model between the pooled least square and fixed effect model. If the results of the Chow test showed that FEM was the best model, the test proceeded with the Hausman test. The Hausman test was done to determine the best model between FEM and REM. This study also used the quantile regression as an estimation method by dividing the data into several groups, where the data was previously sorted from the smallest to the largest values. This method was used because several studies have used this method to measure happiness in various groups (Akgun et al., 2022; Binder & Coad, 2011).

The quantile regression was used to measure the differences in the heteroscedasticity of each quantile of the happiness index to obtain information on whether there was a difference in the estimation results (Cade & Noon, 2003). The quantile regression method can be used to detect heteroscedasticity among the provinces in Indonesia and identify important correlation between happiness index and independent variables (Buchinsky, 1998). In addition, the quantile regression allows the acquisition of more complete

estimation results, as it can capture the different estimation results of each dependent variable's distribution, whereas conventional regression performs the estimates based on its average value (Binder & Coad, 2011; Machado & Mata, 2005). The pooled least square, fixed effect model, and random effect model used in this study are as follows:

$$IK_{it} = \beta_0 + \beta_1 lBelPD_{it} + \beta_2 lPDRBPK_{it} + \beta_3 HLS_{it} + \beta_4 GR_{it} + u_{it} \quad .... (1)$$

where i is an individual, and in this study it was a province, t is the time in years, and u is the error term. In addition, the quantile regression model proposed by Koenker and Bassett was formulated as follows:

$$y_{it} = x'_{it}\beta_\theta + u_{\theta t} \text{ with } Quant_\theta(y_{it}|x_{it}) = x'_{it}\beta_\theta \qquad (2)$$

where y_{it} is a dependent variable, x is a vector regressor, β is an estimated vector parameter, and u is a residual vector. $Quant_\theta(y_{it}|x_{it})$ shows the quantile conditional at θ from y_{it} determined by x_{it}. The quantile conditional at θ, $0 < \theta < 1$ can be denoted by the following equation:

$$\min_\beta \frac{1}{n} \left\{ \sum_{i,t:y_{it} \geq x'_{it}\beta} \theta|y_{it} - x'_{it}\beta| + \sum_{i,t:y_{it} < x'_{it}\beta} (1-\theta)|y_{it} - x'_{it}\beta| \right\} = \min_\beta \frac{1}{n} \sum_{i=1}^{n} \rho_\theta(u_{\theta it}) \quad .... (3)$$

where $\rho_\theta(.)$ is the "check function", which is denoted as follows:

$$\rho_\theta(u_{\theta it}) = \begin{cases} \theta u_{\theta it} & \text{jika } u_{\theta it} \geq 0 \\ (\theta - 1)u_{\theta it} & \text{jika } u_{\theta it} < 0 \end{cases} \quad .... (4)$$

Equation (2) was then solved through the linear method. When θ continuously rose from 0 to 1, it would trace the entire conditional distribution y against conditional x (Binder & Coad, 2011; Buchinsky, 1998). To obtain more accurate results, this study based the statistical inference on bootstrap standard errors in both the result table and the quantile regression graph.

The quantile regression can be seen as weighted regression. Different weights are given to the data point depending on where the data is located, including whether it is above or below the most appropriate line. For example, if the quantile regression equation is estimated at q80, the data point above the line is best weighed eight times higher than the data point below the line. Therefore, the quantile regression coefficient can be estimated at different points of the (conditional) distribution of the dependent variables by varying the θ weights. The basic model of the quantile regression panel in the study is formulated as follows:

$$Q_{yi,t}(\theta_k|\alpha_i, x_{it}) = \alpha_i + x'_{it}\beta(\theta_k) \quad .... (5)$$

The quantile represents the conditional distribution *of x to y*. The quantile regression panel model for this study is denoted as follows:

$$Q_{yi,t}(\theta_k|\alpha_i, \xi_t, x_{it}) = \alpha_i + \beta_{1\tau} lBelPD_{it} + \beta_{2\tau} lPDRBPK_{it} + \beta_{3\tau} HLS_{it} + \beta_{4\tau} GR_{it} + \xi_t \qquad .... (6)$$

where the province is indicated by i, the time is indicated by t, and y indicates IK (happiness index). Meanwhile, *lBelPD, lPDRBPK, HLS,* and *GR* indicate independent variables, and α is a constant and error term. In this study, the results of panel quantile regression were defined by q10, q25, q50, q75, and q90. The percentile was used to obtain different probability outcomes from the estimate (Akgun et al., 2022).

RESULTS AND DISCUSSION

This study involved 101 observations derived from the data of 2014, 2017, and 2021 across 34 provinces in Indonesia. As shown in Table 1, the average happiness index was 70.98 with a low score of 60.97 and a high score of 76.34. The GDP per capita had an average of IDR 40,021,000, with the lowest value of IDR 10,742,000 and the highest value of IDR 174,963,000. The government expenditure had an average value of IDR 9 trillion, with the lowest value of IDR 1.2 trillion and the highest value of IDR 72.96 trillion.

Table 1 Descriptive Statistics

Variables	N	Mean	SD	Min	Max
IK	101	70.98	2.523	60.97	76.34
PDRBPK	101	40,021	30,815	10,742	174,963
BelPD	101	9,093	11,169	1,204	72,967
GR	101	0.362	0.0445	0.247	0.459
HLS	101	12.89	0.833	9.940	15.64

Source: Processed by the author

The Gini ratio had an average of 0.362, indicating no inequality. The lowest value was 0.247, and the highest value was 0.459.

Meanwhile, the average school life expectancy was 12.89 years, indicating that a child at the age of 7 years is expected to complete education until reaching the D1 level (a one-year diploma program). Meanwhile, the lowest and highest scores were 9.9 years or junior high school equivalent and 15.64 or S1 (bachelor's degree) equivalent, respectively. Based on the results of the Skewness test, the Prob>chi2 value (0.0296) < alpha (0.05) indicated that the data in this study was normally distributed. The results of the heteroscedasticity test showed that it did not suffer from heteroscedasticity because the Prob>chi2 (0.8563) was higher than the alpha (0.05) value. Meanwhile, the results of the multicollinearity test showed that the average value of vif was 1.14, indicating that it did not suffer from multicollinearity.

The results of the estimation of the pooled least square, fixed effect model, and random effect model indicated that the independent variables had the same direction of influence with different levels of significance. The negative local government expenditure coefficient showed that there was a negative correlation between local government expenditure and the happiness index. These findings are in line with the research hypothesis proposed by Perovic and Golem (2010), who found that there is a negative correlation between government expenditure and happiness. This negative correlation may occur because an increase in government expenditure does not necessarily increase happiness (Frey & Stutzer, 2002). Political problems, corruption, and tax rates are factors that may contribute to this negative correlation (Frey & Gallus, 2013).

Furthermore, corruption decreases the level of happiness in both developed and developing countries (Behera et al., 2024). Therefore, the government needs to investigate further whether the expenditure incurred has been effective and efficient in fostering development. The negative impact of local government expenditure on happiness can occur due to factors related to institutional quality (Hessami, 2010). Moreover, Indonesia is facing numerous challenges related to corruption, which can adversely affect the assessment of institutional quality (Tambunan, 2023). Therefore, it is important for the government to improve the quality of its institutions because it has a great impact on national competitiveness (Jazuli et al., 2022).

In addition, we found that in 2021 the total expenditure of regional government personnel was much greater than the capital expenditure allocated for infrastructure development (Ministry of Finance, 2022). Therefore, the expenditure allocation for infrastructure development remained relatively low even though the availability of sufficient public goods can increase people's happiness (Flavin, 2019). The availability of quality public facilities, such as adequate green open spaces and easy access to transportation, can increase people's happiness (Mouratidis & Yiannakou, 2022; Patino et al., 2023).

The correlation between GRDP per capita and the happiness index was positive, which indicates that if GRDP per capita increases, the happiness index also increases. An increase in GRDP per capita, which indicates an increase in income, can encourage higher consumption levels, resulting in increased satisfaction (Deacon & Maha, 2015). Therefore, the findings are in line with the utility theory which posits that when consumption increases, utility also rises (Hirschauer et al., 2015). In addition, the increase in GRDP per capita also increases the standards of living, which may suggest an increase in people's well-being (Akgun et al., 2022; Clark, 2018). These findings are also in line with the findings of research in

Table 2 Estimation Results

Variable	(1) PLS	(2) FEM	(3) BRAKE
lBelPD	-0.717***	-0.816	-0.258
	(0.249)	(1.048)	(0.325)
lPDRBPK	1.753***	3.988**	1.964***
	(0.383)	(1.968)	(0.533)
HLS	1.478***	4.066***	2.155***
	(0.234)	(0.735)	(0.297)
GR	-14.17***	-9.659	-21.64***
	(4.466)	(7.885)	(5.185)
Constant	45.05***	-12.35	32.84***
	(5.232)	(18.50)	(6.887)
Observations	101	101	101
R-squared	0.438	0.759	
Number of id		34	34

Standard errors in parentheses
*** p<0.01; ** p<0.05; * p<0.1
Source: Processed by the author

Indonesia that uses the data from the Indonesia's Family Life Survey (IFLS). The research shows that better economic condition leads to increased levels of happiness (Sujarwoto et al., 2018). In addition, in the short term, an increase in income can increase happiness, but in the long term these two are not interconnected (Easterlin, 2015).

However, in looking at the correlation between income and happiness, it is important to consider how inequality occurs in a region (Okulicz-Kozaryn, 2022; Tavor et al., 2018). The estimation results showed that the Gini ratio had a negative correlation with the happiness index. This indicates that the higher the Gini ratio or inequality, the lower the happiness index. The negative correlation is in line with the findings of the research conducted by Clark et al. (2016) and Kenny (1999), who found that income inequality reduces happiness. In addition, for the condition of Indonesia as a country with middle-to-lower income, increased Gini ratio will decrease happiness due to the increased social gap (Kundu et al., 2024).

The school life expectancy had a positive correlation with the happiness index. If the school life expectancy increased by one year, the happiness index increased by an average of 1.4. The results of this estimate are in accordance with the goal of education, which is to improve the quality of life of individuals (Powdthavee et al., 2015). A high level of education gives a greater opportunity for a decent job and income (Shafiq et al., 2019). These results are in line with the results of a case study in Europe where education has a positive correlation with life satisfaction because higher levels of education allow an individual to have better and productive abilities and skills (Scott, 2022). A study in East Asia reveals that higher levels of education allow individuals to have better networking and well-being, thus increasing happiness (Chen, 2012).

The estimation results in Table 2 using the pooled least square, fixed effect model, and random effect model were not significantly different from the results of the quantile regression estimation in Table 5. The results of the quantile regression showed that the correlation between local government expenditure and inequality and the happiness index in all quantiles was negative. The correlation between GRDP per capita and school life expectancy and the happiness index in all quantiles was positive. However, there was a difference because not every quantile showed that the independent variable had a significant effect on the dependent variable. In the quantile regression, the Pseudo R^2 value can be interpreted as R^2 (Binder & Coad, 2011). The estimation results showed that the highest Pseudo R^2 value was in the highest happiness quantile, indicating that the combination of independent variables was able to explain the happiness index at the highest level of 32.04%, while 67.96% was explained by other variables outside the models of this study. The results also showed that the correlation between the independent variable and the happiness index at the 0.9 quantile level was 32.04%.

Table 3 Chow Test Results

Prob >F	0.0000
	Source: Processed by the author

Table 4 Hausman Test Results

Prob>Chi2	0.0000
	Source: Processed by the author

The result of the Chow test in Table 3 confirmed that FEM was a more suitable model than the PLS model. The result of the Hausman test in Table 4 showed that FEM was a more suitable model than REM. Therefore, FEM was determined to be the best model.

The results of the quantile regression showed that with a significance level of 5%, local government expenditure had a significant effect on the happiness index in the q75 and q90 groups. Meanwhile, in the q10 group, local government expenditure had a significant effect at a significance level of 10%. These results indicate that in the provinces within the top 25% happiness index, there are indications of problems in local government expenditure because the increase in local government expenditure has a significant effect on the decline in the happiness index.

However, this condition is not exclusive to the group within the top 25% happiness index. It is also evident in the bottom 10% happiness index group, where an increase in government expenditure also has a significant effect on the decline in the happiness index. These findings are in line with the finding of research by Gaucher (2022) which shows that public expenditure can have a negative impact on happiness due to the influence of social conditions and people's needs. Therefore, it is necessary to improve local government expenditure to ensure that the community see the tangible results of the development.

GRDP per capita had a significant effect on the happiness index in the q10, q25, q50, and q75 groups, indicating that the government needs to encourage the people to have higher income because the correlation between GRDP per capita and happiness index is positive. These findings are in line with the finding of previous research that shows a positive effect of GRDP per capita on happiness (Behera et al., 2024).

Table 5 Estimated Results of Quantile Regression

Variables	(1) Q10	(2) Q25	(3) Q50	(4) Q75	(5) Q90
lBelPD	-0.833*	-0.416	-0.602	-0.865**	-0.936***
	(0.496)	(0.474)	(0.386)	(0.336)	(0.235)
lPDRBPK	2,254***	1.393**	1.510***	1.359*	0.545
	(0.688)	(0.546)	(0.493)	(0.689)	(0.539)
HLS	1.542***	1.114***	1.255***	1.758***	1.579***
	(0.540)	(0.346)	(0.369)	(0.525)	(0.579)
GR	-8.396	-13.65**	-14.03**	-15.07***	-18.65***
	(9.181)	(5.781)	(5.872)	(5.312)	(6.442)
Constant	35.35***	49.57***	49.39***	48.75***	62.27***
	(8.666)	(6.559)	(6.706)	(10.65)	(11.83)
Pseudo R2	0.2159	0.2592	0.2438	0.2518	0.3204
Observations	101	101	101	101	101

Standard errors in parentheses
$p<0.01$; ** $p<0.05$; * $p<0.1$
Source: Processed by the author

The estimation results of the quantile regression method showed that education had a significant effect on the happiness index in all quantiles. This finding is also in line with the results of another study where education and standards of living have a positive and significant effect on happiness (Ngoo et al., 2021). Therefore, education has a great influence on the happiness index. It is important for the government to increase access to education for the community to allow people to obtain better income and achieve well-being (Cooper & Mulvey, 2015).

Inequality had no significant effect on the happiness index only in the q10 group, while in the other quantile groups inequality had a significant effect on the happiness index with a significance level of 5%. Even in the q75 and q90 groups, inequality had a significant effect at a significance level of 1%. The findings are in line with those of case studies in India and Japan which found that income inequality decreases happiness (Fang & Niimi, 2017; Lakshmanasamy & Maya, 2020). Therefore, inequality should be suppressed by providing access to health, education, and employment to reduce the gap in life satisfaction and increase the level of happiness (Lakshmanasamy & Maya, 2020).

Research in Bhutan found that happiness indicators are currently used as a top priority in development rather than objective economic indicators (Nidup et al., 2018). The use of happiness indicators aims to give attention to the aspect of sustainability and reduce the likelihood of mistakes in setting economic targets (Thinley & Hartz-Karp, 2019). The evaluation of economic development using objective indicators may lead to errors, such as targeting continuous GDP growth without paying attention to social and environmental aspects (Meier & Chakrabarti, 2016; Nidup et al., 2018). Therefore, the use of happiness indicators for the evaluation of development can be applied by the government to maintain sustainable development.

CONCLUSION

This study aims to investigate the influence of local government expenditure on happiness. The results showed that the correlation between local government expenditure and inequality against the happiness index in all quantiles was negative. The negative impact of local government expenditure on happiness showed that the utilization of local government expenditure has not been optimal in increasing the happiness of the community. This study also found that GRDP per capita and school life expectancy had a positive and significant effect on happiness levels. In addition, this study found that a higher Gini ratio significantly reduced people's happiness. Based on these findings, the government should adopt an approach to evaluate and measure the efficiency and effectiveness of the utilization of government expenditure for increasing people's happiness. The government can also ensure a larger budget allocation for activities that have a direct impact on the community, such as infrastructure development, education and health services, MSME financing, and new job creation.

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