CONDITIONS OF THE 8th SUSTAINABLE DEVELOPMENT GOAL IN THE BALI PROVINCE

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ABSTRACT

The concept of sustainable development is able to unite economic, social and environmental dimensions without sacrificing any of these dimensions. The eighth sustainable development goal are an indicator for inclusive and sustainable economic growth, as well as dignified, productive, and comprehensive work. The goal of this study was to examine the correlation between the conditions of the eighth sustainable development goal indicator and the Bali province's sustainable development index (SDI). This quantitative research uses secondary data obtained from BPS and The Ministry of Finance for the 2017-2021 period, which is analyzed using the panel data regression method. Annual data on indicators or variables such as per capita GRDP growth rate, unemployment rate, labor force participation rate, own-source revenue growth rate, MSMEs growth rate, and sustainable development index in Bali Province. The results of this study indicate that the eighth sustainable development goal indicators have no positive and insignificant effect on the sustainable development index in the Province of Bali. Bali's sustainable development index did not meet the indicator for the eighth Sustainable Development Goal. The new sustainable development policy must be properly implemented by The Bali Provincial Government in order to achieve economic development that is not only on a macro scale but also on a small and medium scale that works smoothly and is sustainable. The government must provide a documented and associated index value in sustainable development that serves as an indicator of a development's future viability.

Keywords: Sustainable Development Goals, GRDP, Sustainable Development Index

INTRODUCTION

The popularity of the concept of sustainable development is increasing every year with the offer of sustainable development goals (SDGs) as a substitute for the millennium development goals (MDGs) which ended in 2015. The emergence of the concept of sustainable development is based on a growing critical awareness of the limitations of available natural resources, while human needs continue to rise, necessitating more efficient natural resource utilization strategies that do not seriously affect future generations' needs (Rustiadi, Saefulhakim and Panuju, 2009). Sustainable development includes three dimensions, namely the dimensions of economic development, social development and environmental protection. These three dimensions cannot be separated because of a causal relationship, one dimension will affect the other aspects.

Indonesia is one of the countries participating in the concept of sustainable development in national development. The Government of Indonesia's commitment to realizing sustainable development is outlined in the 2015-2019 and 2020-2024 Medium Term Development Plan. The government is committed to realizing

balanced sustainable development in economic (economic growth), social (human development index (HDI)) and environmental (environmental quality index). In Indonesia, the implementation of sustainable development goals already has a legislative framework in Presidential Regulation No. 59 of 2017, allowing all stakeholders to carry out this promise.

The Provincial Government of Bali has implemented this commitment by issuing Bali Governor Regulation No. 39 of 2019 concerning Regional Action Plans for the Sustainable Development Goals of the Province of Bali for 2019 – 2023. Sustainable development goals (SDGs) are monitored and evaluated in the SDGs Regional Action Plans according to with assignments to local government stakeholders in Bali. The United Nations General Assembly established 17 goals for sustainable development in 2015. This research discusses the eighth sustainable development goal, namely "Decent Work and Economic Growth" which aims to "Promote Sustained, Inclusive and Sustainable Economic Growth, Full and Productive Employment and Decent Work for All".

The growth rate of GRDP per capita, own-source revenue and micro, small and medium enterprises (MSMEs) is an indicator in viewing per capita economic growth according to national targets that are inclusive and sustainable. In addition, there are indicators of the percentage of unemployment and the labor force participation rate which are able to provide an overview of productive employment opportunities and decent work for the community. According to Sasmita, Restiatun, and Yani (2021) stated that the gross regional domestic product index and the human development index (HDI) have a positive and significant effect on the Sustainable Development Index (SDI) in 34 Provinces in Indonesia.

The indicators in the metadata of sustainable development goals for the economic pillar in this study are the growth rate of GDP per capita, the percentage of unemployed, the labor force participation rate, own-source revenue growth rate and the growth rate of MSMEs have not been widely studied jointly in influencing the sustainable development index in Bali province. This research is different from previous studies in terms of research variables or indicators, data collection period and research themes.

The research goal is to analyze the relationship between the conditions of the eighth sustainable development goal indicators and the sustainable development index in Bali, based on a description of the background and research challenges. The study was conducted in 1 city and 8 regencies in the Province of Bali. These five indicators are able to represent the conditions of the eighth SDGs that are already underway, so that later they will become a new consideration and public policy for local governments to be able to achieve sustainable development that is evenly distributed in each region.

1.   RESEARCH METODOLOGY

The data in this study is using secondary data. This research was processed using the panel data method from 8 districts and 1 city from 2017 to 2021 in the Province of Bali. The analysis tool used is E-Views 9.0. Variable names, variable definitions, units and types of research data are summarized in Table 1.

Table 1. Variable names, variable definitions, units and types of research data

Variable Name	Operational Definition	Unit	Data Type
GRDP growth rate per capita (X1)	Increase or decrease in gross regional domestic income per capita in the area	%	*Quantitative*
Percentage of open Unemployment (X2)	Number of people not working to the total labor force	%	*Quantitative*
Labor Force Participation Rate (X3)	The percentage of the number of the labor force to the number of people aged ten years and over.	%	*Quantitative*

Own-source revenue growth rate (X4)	Increase or decrease in the realization of own-source revenue in the regions	%	*Quantitative*
MSMEs growth rate (X5)	Increase or decrease in micro, small and medium enterprises in the regions	%	*Quantitative*
Sustainable Development Index (Y)	Measurement of the level of sustainable development by economic, social and environmental aspects	%	*Quantitative*

The selection of the model used is linear regression with 5 independent variables, namely X1, X2, X3, X4 and X5 with the dependent variable being the calculation of the Sustainable Development Index (Y) in the Province of Bali. Based on the explanation above, the econometric research model will be the following model:

$$Y = \beta_0 + \beta_1 X1 + \beta_2 X2 + \beta_3 X3 + \beta_4 X4 + \beta_5 X5 + e \qquad (1)$$

Where:

Y	= Sustainable Development Index (SDI)
β_0	= Constant
$\beta_{1,2,3,4,5}$`	= Regression Coefficient
X1	= GDP growth rate per capita
X2	= Percentage of open unemployment
X3	= Labor Force Participation Rate
X4	= Own-source revenue growth rate
X5	= MSMEs growth rate

The panel data regression model has 3 approaches, namely the common effects model (CEM), the fixed effects model (FEM), and the random effects model (REM). In selecting the model approach, the Chow Test, Hausman Test and LM Test were first tested (Gujarati, 2004).

2. LITERATUR REVIEW

The concept of sustainable development will attempt to establish a new discourse on the need of protecting the natural environment for future generations. Development that serves the requirements of the present without jeopardizing future generations' ability to meet their own needs (Mulligan, 2015). Referring to Salim (2010) that sustainable development is sought to form investments in 3 (three) dimensions, namely the economic dimension (financial, machine capital, etc.), the social dimension (investment in education, health and social intimacy) and the environmental dimension (investment in natural resources renewed and recycling and substitution of non-renewable natural resources). The main three-dimensional framework of sustainable development can be seen in Figure 1.
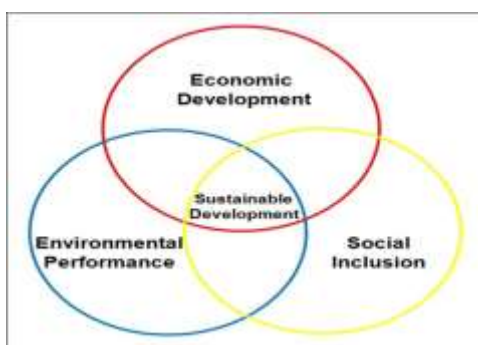

Figure 1. Three Main Dimensions Framework for Sustainable Development.

Source: Mulligan (2015)

The Ministry of National Development Planning (Bappenas) carried out various studies related to the preparation of the 2007 Sustainable Development Index (SDI) (Fauzi and Oxtavianus, 2014). The preparation of SDI uses various parameters in the three dimensions of sustainable development, namely economic, social and environmental.

The social dimension in the preparation of IPB uses the human development index (IPM). The human development index is a measure used to measure the level of success in attempts to improve the quality of life for individuals in a region or country. The HDI is measured using three factors: longevity and healthy living, knowledge, and a decent standard of living (UNDP, 2020). Whereas for the preparation of SDI for the environmental dimension it is measured using the Environmental Quality Index (EQI). According to The Ministry of Environment and Forestry (2019) that the Environmental Quality Index is an indicator that explains the condition of regional environmental management. The measurement of IKLH indicators is based on 3 aspects namely Water Quality Index (WQI), Air Quality Index (AQI), and Land Cover Quality Index (LCQI).

The economic dimension in measuring SDI uses the Gross Regional Domestic Product Index (GDP Index). According to Fauzi et al. (2014), the GRDP Index is an indicator that explains the successes of regional economic growth and welfare. The calculation and compilation of The GDP per capita index without oil and gas was obtained from research by Fauzi et al. (2014), where the maximum value is determined based on the achievement target of GRDP per capita at constant prices in the 2020-2024 RPJMN document, while the minimum value is determined from the poverty line in urban areas in 2020.

The values of three economic, social and environmental indicators are then continued. by measuring the Sustainable Development Index (SDI). The calculation of IPB uses literature from research by Fauzi et al. (2014) in the form of scheme 1, where the value of each GRDP, HDI and EQI index is divided by three and then multiplied by 100 to obtain SDI in percentage form. According to Sasmita, Restiatun, and Yani (2021) stated that the determinants of the GRDP, HDI, WQI, AQI and LCQI indexes have a positive effect on the Sustainable Development Index in 34 Provinces in Indonesia.

The eighth sustainable development goal is "Decent Work and Economic Growth" to promote inclusive and sustainable economic growth, productive employment and decent work for all. In this study to measure the condition of the eighth sustainable development goal using several indicators, namely the growth rate of GRDP per capita, the percentage of open unemployment, the labor force participation rate, own-source revenue growth rate, and the growth rate of MSMEs. These five indicators are based on Indonesia's SDG Indicator Metadata on the Pillars of Economic Development (Ministry of National Development Planning, 2020).

The eighth sustainable development goal components serve as independent factors, with the sustainable development index serving as the dependent variable. The panel data regression method will be used to determine the degree of significance. Based on the theory, several research hypotheses were formulated regarding the condition of the 8th sustainable development goal in the province of Bali, including:

H1   : The growth rate of GRDP per capita has an effect on IPB in Bali
H2   : The percentage of open unemployment has an effect on IPB in Bali
H3   : The labor force participation rate has an effect on IPB in Bali
H4   : Own-source revenue growth rate has an effect on IPB in Bali
H5   : The MSMEs growth rate has an effect on IPB in Bali

3.   RESULTS AND DISCUSSION

Based on the data analysis performed with E-Views, the Hausman test results show a probability value of 0.000 <0.05 (α = 5%), so Ho is rejected. It can be concluded that the chosen model is FEM, so for hypothesis testing and goodness of fit tests, the results from FEM will be used. The Adjusted R-square value 0.962 or 96.20% indicates that the independent variation has a large ability to explain the dependent variation, while the rest is explained by other independent variables that are not included in this study. Table 2 describes the results of the FEM estimation in this study.

Table 2. FEM Estimation Result of Bali Province Sustainable Development Index

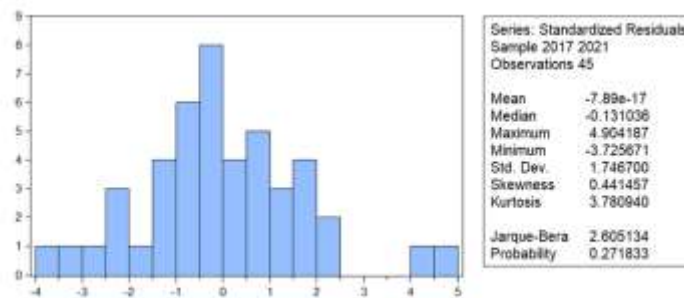| Independent	Coefficient	Prob	Decision
C	82.989	0.000	
X1	-0.047	0.745	H1 rejected
X2	0.090	0.824	H2 rejected
X3	-0.101	0.486	H3 rejected
X4	-0.017	0.320	H4 rejected
X5	-0.012	0.295	H5 rejected
R^2	0.973		
Adjusted R^2	0.962		
Prob F-stat	0.000		
Chow Test	0.000		
Hausman Test	0.112		

Source: Data analysis with E-views 9.0

Figure 2. Normalization Test
(Source: Data analysis with E-views 9.0)

Figure 2 informs the results of the residual normalization test from the results of the study, the probability value of 0.272 is greater than the significant value of 0.05, so that the research model can be concluded to be normally distributed. Next is the multicollinearity test to test the relationship between the independent variables (Table 3). The test results revealed that there was no independent variable with such a high correlation (greater than 0.9), indicating that this research model did not exhibit symptoms of multicollinearity.

Table 3. Multicollinearity Test

	X1	X2	X3	X4	X5
X1	1.000000	-0.823468	0.161794	0.509995	-0.271902
X2	-0.823468	1.000000	-0.476623	-0.404766	0.219992
X3	0.161794	-0.476623	1.000000	0.174517	0.009300
X4	0.509995	-0.404766	0.174517	1.000000	-0.094085
X5	-0.271902	0.219992	0.009300	-0.094085	1.000000

sssssSource: Data analysis with E-views 9.0

The growth rate of GRDP per capita (X1) is one of the metadata indicators for the eighth sustainable development goal in Indonesia which explains the increase or decrease in per capita gross regional domestic income in the regions. The test results from Table 2 show that the X1 coefficient is -0.047, meaning that if X1 increases by 1 unit, the average Sustainable Development Index will decrease by 0.047, assuming ceteris paribus. The results of the significance test show a probability value of 0.745 > 0.05 (alpha 5%), so H1 is rejected. It was concluded statistically that at the 95% confidence level there was no effect between the growth rate of GRDP per capita on the Sustainable Development Index (SDI) and this was not in accordance with previous research by Sasmita et al. (2021). This condition was caused by the growth rate of GRDP per capita which experienced quite sharp fluctuations, especially in 2020 during the Covid-19 Pandemic, so that the goals of sustainable development did not run optimally.

The percentage of unemployed (X2) is a metadata indicator pillar of economic development that aims to see comprehensive and productive employment options, as well as decent work for all. According to the research authors, the X2 coefficient is 0.090, which means that if X2 increases by one unit, the average Sustainable Development Index decreases by 0.090, assuming ceteris paribus. When the significance test results show a probability value of 0.824 > 0.05, H2 is rejected. It is concluded statistically that at the 95% confidence level there is no effect between the percentage of unemployed on the Sustainable Development Index and this is not in accordance with previous research by Sasmita et al. (2021). According to Sasmita et al. (2021) that a decent standard of living in the GRDP index has a positive influence on the sustainable development index. However, the research results differ because, in 2020 and 2021, there will be a significant increase in the percentage of unemployed people compared to the previous year, owing to the Covid-19 Pandemic, which has resulted in a large number of layoffs in the Bali hotel industry.

The labor force participation rate (X3) is the percentage of the labor force to the population aged ten years and over. Table 2 shows the X3 coefficient of -0.101 and the probability value is above 5%, namely 0.486. In conclusion, there is no influence between the labor force participation rate and the Sustainable Development Index. The findings of this study differ from those of Sasmita et al. (2021) because the quantity of work participation simply measures how much people work and receive cash without considering the long-term viability of this activity.

The Own-source revenue growth rate (X4) shows the realization of local-owned revenues in the cities and regencies of Bali Province. Based on the results of the study, it was obtained that the X4 coefficient was -0.017 and the probability value was 0.320 (above the alpha value), so H4 is rejected. This suggests that there is no significant and positive relationship between the own-source revenue growth rate and the sustainable development index in the Bali area. Own-source Revenue is still not maximized and is still in the stage of economic recovery after the Covid-19 Pandemic in 2020 and 2021. To increase the economy of Bali, central and regional government policies supporting healthy tourism and following to health norms are required.

The MSMEs growth rate (X5) is one of the metadata indicators for sustainable development goals in the economic pillar which aims to inform inclusive and sustainable economic growth. Table 2 shows that the coefficient of X5 is -0.012, meaning that if X5 increases by one unit, the average Sustainable Development Index will decrease by 0.012, assuming ceteris paribus. The results of the significance test show a probability value of 0.295 > 0.05, then H5 is rejected. At the 95% confidence level, statistical analysis shows that the growth rate of MSMEs has no effect on the Sustainable Development Index. The growth of MSMEs has not resulted in significant long-term development; it is still limited to satisfying short-term demands and is not sustainable.

4.   CONCLUSION

This study aims to determine the effect of the relationship between the metadata conditions of the eighth sustainable development goal indicators on the sustainable development index in the Province of Bali in 2017-2021. Several conclusions can be drawn in the research based on existing research analysis and economic theory that the indicators for the eighth sustainable development goal (growth rate of GRDP per capita, percentage of unemployed, labor force participation rate, own-source revenue growth rate, and MSMEs growth rate) do not include a positive and insignificant effect on the sustainable development index in the Province of Bali. Sustainable development policies must be appropriately implemented by Bali's central and regional governments in order to create economic development that is not only on a macro scale but also on a small and medium scale that works smoothly and sustainably. The government needs to make an index value in sustainable development which is an indicator of the sustainability of a development.

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