

Primary Economics Sustainability in the National Strategic Area of Gerbangkertosusila

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Abstract

Evaluation of sustainable development that has been carried out becomes the main discourse in this study, as a basis for further development planning and creating regional economic sustainability. This issue will be analyzed using the Regional Sustainability Account (RSA) method to quantify the primary sector sustainability situation in Gerbangkertosusila which significantly affects the capacity to create sustainable development pathways and industrial policies that are more reflective in understanding the implications of sustainable development cycles. The limitation of this method is that the values and data presented come from partial sources per Regency/City. Thus, the results presented are in the form of partial economic sustainability status as well. The results of the analysis found that regencies/cities in the national strategic area of Gerbangkertosusila with a large industrial support base experienced disruptions to the continuity of the primary supply base which in turn could lead to unsustainability. In general, the results obtained are Gresik and Bangkalan districts with Chronic unsustainable criteria. Mojokerto and Sidoarjo Regencies on the Almost unsustainable criteria. Surabaya City on Sustainable criteria and Lamongan Regency on Good sustainable criteria.

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1. Introduction

The Gerbangkertosusila national strategic area is an area determined administratively by the government on a geostrategic and geoeconomic basis. The area is given administrative facilities to create investment attractiveness. The same is true for the Jabodetabeka area which consists of Jakarta, Bogor, Depok, Tangerang, Bekasi and Karawang; Gerbangkertosusila is also an area in East Java, the area includes Gresik, Bangkalan, Mojokerto, Surabaya, Sidoarjo and Lamongan. This is one of the government's strategies in accelerating equitable development. In general, the process of development planning or development that has been carried out still lacks access to the center of the economy. This deficiency is one of the important points of development evaluation. Some of what is being done is still focused on development-oriented development planning in mega-industrial areas (Naharuddin et al., 2019). Apart from that, there are also several other opinions that the water area planning process requires sectoral cooperation in regional work (Senuk et al., 2021).

Development planning in an equitable economy demands balance in the management of existing resources. This is because economic development in an area will certainly increase the rate of urbanization towards a source of economic turnover (Wilza et al., 2022; Zhou et al., 2021). Thus causing the economic area to become densely populated. Meanwhile, an increase in population density further suppresses environmental degradation (Priyono & Dadan, 2016). Therefore, it is necessary to evaluate the sustainability of the existing development with the development that is being planned or will be carried out (Iswari et al., 2020). The degradation of the economic environment that occurs has an impact on the availability of resources for the human needs that are in it.

The regional economic sustainability assessment disseminated must face many challenges, especially for developing countries which have a high focus on economic development and carry out development in many sectors, including the development areas that are even smaller in terms of policy authorities. Therefore, sustainability issues are often ignored or given less attention than economic exploitation itself. Indonesia is a developing country with very diverse geographical, demographic, socio-cultural characteristics and potential natural resources (SDA) (Calero & Turner, 2020). The concept of regional development through regional autonomy is an interesting example for study, because each province, district and city has different characteristics in terms of regional development potential, burden and orientation (Margiyono, 2019)

Therefore, evaluating the sustainability of development as the basis for further development is the main point of this study. In addition, it is one of the important data in creating regional economic continuity and ensuring appropriate investment distribution based on regional potential. This situation substantially affects the capacity to create alternative paths of development and policies that are more reflexive in understanding the implications of a cycle of sustainable development (Fan et al., 2019).

2. Methods

Economic planning carried out at certain periods requires evaluation as part of the commitment to advancing economic development itself. The analysis of the study was determined purposively using the Regional Sustainable Account (RSA) analysis tool. RSA can record dynamics between regions and explain how changes in one area can affect other regions. The RSA method includes seven indicators for economic sustainability, eight for environmental sustainability, and six for social sustainability. The results of each indicator and area are averaged to determine the sustainability criteria for each area, which are grouped into seven levels, namely: good sustainable, sustainable, almost sustainable, medium, almost unsustainable, unsustainable, and chronic unsustainable. In addition, this research is based on several assumptions that can optimize the use of RSA, that the situation does not occur shifts in economic, environmental, and social structures during the analysis period, the areas analyzed are varied, and all dimensions have the same weight. The formula for RSA in Margiyono in 2019 is as follows

$$RSA = \pm (F_{is}/F_{\Sigma is}) / (G_{is}/G_{\Sigma is}) \dots\dots\dots(1)$$

Information:

- RSA : Regional Sustainable Accounts
- ± : "positive" or "negative" relationship of the indicator to sustainability
- F_{is} : indicator value i in city S
- F_{Σis} : total potential value of indicator i in city S
- G_{is} : indicator value i in the comparison area (East Java Province)
- G_{Σis} : total potential value of indicator i comparison area (East Java Province)

The RSA analysis process goes through several stages, Margiyono explained in his writings that the calculation of the RSA value for each region takes into account three dimensions, namely economic, environmental and social. To do this, economic indicators on economic indicators, the formula is as follows:

$$\Sigma RSA_E = U_E + P_p + C_{HH} + Y_M + Y_A + Y_H + Y_E \dots\dots\dots (2)$$

Information:

- ΣRSA_E : RSA Economics
- U_E : Unemployment
- P : Poverty
- C_{HH} : Percentage of Household spending to GRDP
- Y_M : Percent of Mining to GRDP
- Y_A : Percent of Agriculture to GRDP
- Y_H : Percentage of Health Services to GRDP
- Y_E : Percentage of Education Services to GRDP

The next step is to continue the first stage by explaining that the tabulation results in Table 1 can provide three possible RSA values. If the number of positive and negative indicator values is the same, then the RSA value will be zero. If the sum of the positive indicators is greater than the negative indicators, then the RSA value will be positive. Conversely, if the negative indicator value is greater than the positive indicator, then the RSA value will be negative. For RSA values equal to zero, medium criteria are applied, while RSA values in the range $0 < \text{RSA} \leq 1$ are included in the almost sustainable criteria.

Meanwhile, for RSA values that are in the range $-1 \leq \text{RSA} < 0$, the criteria applied are almost unsustainable. In addition, for RSA values greater than one, they are divided into two categories based on the limiting value of $\text{RSA} > 1$ avg. This value is determined using a certain formula with N = number of cities.

$$\text{RSA} > 1 \text{ avg} = (\sum 1^N \text{RSA} > 1) / N$$

Areas with $\text{RSA} \geq \text{RSAavg}$: $\text{RSA avg} > 1$ are in good sustainable criteria and areas with $\text{RSA} < \text{RSAavg}$: average $\text{RSA} > 1$ are in sustainable criteria. As is the case with RSA values > 1 , for RSA values < -1 it is also divided into two with a limiting value of $\text{RSA} < -1$ avg. Areas that have $\text{RSA} \leq \text{RSAavg}$: $\text{RSA avg} < -1$ are chronic unsustainable, while areas that have $\text{RSA} < -1$: $\text{RSA avg} < \text{RSA}$ are classified as unsustainable.

3. Results and Discussion

3.1. Results

The economic sustainability assessment was carried out purposively in six (6) Cities/Districts in East Java Province which are the Gerbangkertosusila economic area. The assessment was carried out by taking data from the Central Bureau of Statistics in 2020-2021 (BPS Jawa Timur, 2022). The selection of the year period is based on the availability of the same data as the desired classification in the RSA classification. This method is a modification of the Location Quation (LQ) analysis method, so there is comparative data that needs to be harmonized between data from the City/Regency and data from the Province. The economic sustainability in this study was chosen by researchers based on Rostow's opinion that the primary sector (raw material) is an important sector that is still a top priority for trade in developing countries (Kurnia et al., 2023). Presentation of the data in table 1 illustrates the contribution of variables to GRDP. The variables displayed are adjusted based on the primary sector variables (Margiyono, 2019). In the EU variable, namely Gresik unemployment, the highest has an index value of 0.11 and the lowest is 0.06. Unemployment in Gresik is higher than the value index for East Java Province, which is 0.10. The Pp variable, namely poverty in Mojokerto Regency, has the highest index value of 0.21, exceeding the index value of East Java province of 0.05. The contribution of household consumption to the CHH variable, Bangkalan Regency, Mojokert Regency, and the City of Surabaya have index values above the value index for East Java province, each of which has a value of 0.65; 0.70; and 0.63. In the index value of the mining and agricultural sectors, namely YM and YA, the value index of each City and Regency is above the value index of East Java Province. In the YH health services sector, the value index is below the value index of East Java Province. Next, for the value index in the YE education sector, only Mojokerto Regency is above the value index for East Java Province, which is equal to 0.04.

Table 1 Average Primary Sector Economic Variable Index for 2020-2021

ERSA_E	Gresik	Bangkalan	Mojokerto	Surabaya	Sidoarjo	Lamongan	Jawa Timur
U_E	0,11	0,10	0,08	0,07	0,06	0,08	0,10
P_p	0,12	0,16	0,21	0,16	0,11	0,08	0,05
C_{HH}	0,60	0,65	0,70	0,63	0,56	0,58	0,60
Y_M	0,06	0,12	0,18	0,10	0,01	0,00	0,00
Y_A	0,07	0,16	0,25	0,16	0,08	0,04	0,00
Y_H	0,00	0,00	0,00	0,00	0,00	0,01	0,01
Y_E	0,01	0,03	0,04	0,03	0,01	0,02	0,03

Source: Data Processed (2023)

Presentation of the data in table 1 illustrates the contribution of variables to GRDP. The variables displayed are adjusted based on the primary sector variable. In the EU variable, namely Gresik unemployment, the highest has an index value of 0.11 and the lowest is 0.06. Unemployment in Gresik is higher than the value index for East Java Province, which is 0.10. The Pp variable, namely poverty in Mojokerto Regency, has the highest index value of 0.21, exceeding the index value of East Java province of 0.05. The contribution of household consumption to the CHH variable, Bangkalan Regency, Mojokert Regency, and the City of Surabaya have index values above the value index for East Java province, each of which has a value of 0.65; 0.70; and 0.63. In the index value of the mining and agricultural sectors, namely YM and YA, the value index of each City and Regency is above the value index of East Java Province. In the YH health services sector, the value index is below the value index of East Java Province. Next, for the value index in the YE education sector, only Mojokerto Regency is above the value index for East Java Province, which is equal to 0.04.

The data is then processed, then the results are obtained in the presentation of Figure 1, the result with the lowest average is Bangkalan Regency, with a value of -2.85. This is influenced by the high poverty rate among regencies/cities in the economic area. Poverty is still a fundamental problem for regions whose productive sector is based on the agricultural sector. Rostow classifies the area as still in the traditional community category. Traditional societies have limited means of production, and tend not even to own the means of production. This is linear when viewed from the high cumulative unemployment rate in the productive sector (Pratama et al., 2022)

Lamongan Regency has the highest average score with an average value of 3.98. If one looks at its contribution to GRDP in the variables within the scope of this assessment, the agricultural sector is the highest contributor and is the quantifier with a large difference. In contrast to several Regencies/Cities which are regions with a more modern economic structure, there has been a decline in the contribution of the agricultural sector (Ngarawula et al., 2022). This condition is reinforced by the argument that the high level of household spending power in Lamongan Regency is also a contributing variable that supports the high value of the economic dimension in Lamongan Regency. In some areas that have minus values in their results, the unemployment and poverty variables are the high quantifiers. This shows that wealth inequality in industrial areas needs to be given special attention to increase economic sustainability in these areas.

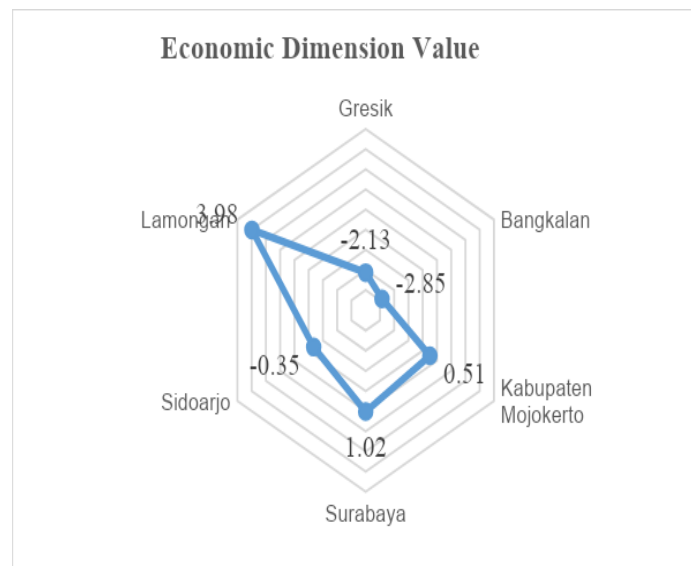


Figure 1. Economic Dimension Value Chart
Source: Data Processed (2023)

Surabaya City, Gresik Regency, and Sidoarjo Regency have an average value of 1.02, -2.13, and -0.35, respectively. These areas are priority areas for the processing industry which in this case do not show a large number of sustainability values. The author prioritizes the fundamental sector of supplying the production of raw goods as a product that is able to significantly provide growth and forward linkage distribution. Rustiadi in his writings also said, as industrialization increases

in the area, the level of urbanization is also increasing towards the center of economic growth activities (Wilza et al., 2022)

Bangkalan Regency has an average value of -2.86 and is the smallest score among the Cities/Regencies in the region. Factually, Bangkalan Regency is indeed an area that has high levels of unemployment and poverty. This area is of particular concern to the provincial government because it is the gateway for economic flows that connect the islands of Java and Madura. In addition, according to these data this value is influenced by high levels of consumption but with low accumulation of resource capital.

Discussing regional sustainability in the Gebangkertosusila area based on the average value that has been calculated, the City/Regency sustainability criteria in this area are listed in table 2. In this table, the reference average is at a value of 0.03 as a reference control to determine economic sustainability criteria. There are five criteria that emerge to describe the economic sustainability of this region. Gresik and Bangkalan Regencies have Chronic unsustainable criteria. Mojokerto and Sidoarjo Regencies on the Almost unsustainable criteria. Surabaya City on Sustainable criteria and Lamongan Regency on Good sustainable criteria.

Table 2. Value of the Economic Dimensions for 2020-2021

No	Cities	Sustainability Criteria
1	Gresik	Chronic unsustainable
2	Bangkalan	Chronic unsustainable
3	Kabupaten Mojokerto	Almost Sustainable
4	Surabaya	Sustainable
5	Sidoarjo	Almost unsustainable
6	Lamongan	Good sustainable

Source: Data Processed (2023)

In general, these results are an evaluation of the development process that has been and is currently underway. To achieve sustainable development, economic growth must be carried out by taking into account the principles of sustainability. Even though economic growth can increase people's welfare, it is necessary to be aware that high production activities can damage the utility of the economic environment and increase poverty which is evenly distributed throughout society. Therefore, sustainable development requires efforts to increase the productive potential of society and ensure equal opportunities for everyone (Nasution & Firmansyah, 2022). Even though the concept of sustainability looks simple, in reality, many aspects must be considered and are interrelated. The primary sector becomes the regional economic contribution and the basis of the economic structure of a region itself (Kurnia et al, 2023). Therefore, a good understanding of sustainable development is very important for policy makers, both at the macro and micro levels, so that development goals can be achieved in an effective and sustainable manner. In order to properly apply this concept, a theoretical and conceptual basis is needed that can be used as a reference for developing strategies and policies for sustainable development. In addition, commitment from the government is also very important in setting short, medium and long term development directions and policies to maintain sustainable development (Sudiar et al., 2023)

4. Conclusion

Based on the results of the analysis conducted by the researchers, it was found that Gresik and Bangkalan Regencies were classified as Chronic unsustainable, while Mojokerto and Sidoarjo Regencies were classified as Almost unsustainable. Surabaya City is categorized as Sustainable and Lamongan Regency is categorized as Good sustainable. The sustainability criteria for these areas apply periodically based on the transformation of the economic structure based on policy directions and development. This evaluation in the primary sector of the economy will trigger the next policy direction and of course it will also be followed by changes in ecology and social behavior which need to be studied more holistically.

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