The Impact Of Banking Productive Financing And Mineral Industry Hillirisation Policy On Sumatra's Economic Growth

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Abstract. One of the Indonesian islands, Sumatra Island has a wealth of natural resources, including mining. Their utilization will necessitate capital investments, particularly from bank production finance. The goal of this study is to ascertain how Sumatra Island's economic growth is influenced by banking policy, production financing, and downstream coal and mining businesses. As independent variables, working capital and investment financing were utilised. Meanwhile, a dummy variable is used to evaluate the influence of downstream policy. GDRP was used as the dependent variable, and the independent and dummy variables were associated using panel data regression of the Random Effects Model (REM) of the five provinces of Sumatra. The findings indicate that working capital finance is the sole kind of production financing that has a substantial impact on Sumatra Island's economic growth. Additionally, downstream policy toward the coal and mining industries has been demonstrated to have a beneficial impact. And have a big impact on Sumatra's economic development. The results of this study are anticipated to be helpful in assessing how downstream policies on the mining and coal industries and banking production financing have an impact on Sumatra Island's economic growth.

Keywords: Sumatra, downstream strategies in the coal and mineral industries, productive finance

1 Introduction

By acting as a catalyst for financial intermediation, banking plays a crucial strategic function in its economy. In other words, according to Utari, Arimurti, and Kurniati (2012)[1], banks have a responsibility to allocate capital and conduct monitoring to make sure that public monies are used efficiently. The efficiency of bank lending enables businesses to make investments that wouldn't be feasible with their own resources and better enables households to consume more effectively.

Since Sumatra Island is the second-largest contributor to Indonesia's economic growth, which is 21.49 percent, and the oil, gas, and heat mining sector Earth is one of the two largest sectors that contribute to the economic growth of Sumatra Island, the effect of banking financing on economic growth in this study focuses on the type of banking productive financing that is tested for its effect on economic growth on Sumatra Island (BPS, 2020)[2].

Ideally, the regulation regarding the downstreaming of the Minerba mining industry, which is regulated in Law Number 4 of 2009 and in more detail regulated in Government Regulation Number 1 of 2017 and Regulation of the Minister of Energy and Mineral Resources Number 5, can make the contribution of productive banking credit distribution to the economic growth of Sumatra Island more optimal. The year 2017 will have an impact on mining product prices rising as added value and expanding investment options, particularly through banking productive financing.

However, given that the mining industry was regarded as a dangerous one due to its relatively low success rate, there was no immediate growth in the distribution of productive banking finance in this sector. Additionally, the mining industry is one that is very reliant on broader economic factors, such as the impact of global oil prices (OJK, 2015a)[3]. This ultimately has an impact on the banks' level of non-performing loans (NPL), which is often extremely high (OJK, 2020b) [4].

This ultimately has an impact on the mining and quarrying sector's contribution to Indonesia's GDP, which tends to be on the decline. The mining and quarrying sector's share of the overall GDP in 2015 was 7.65 percent. However, up to 2019, Indonesia's GDP's share of the mining and quarrying sector was only 7.26%. A decrease in exports and investment in this industry led to a drop in the mining and quarrying sector's contribution to Indonesia's GDP (Ministry of Industry, 2020) [5].

With reference to the justifications in the paragraphs above, it can be seen that the downstream strategy of the Minerba sector and the contribution of banks productive finance to Sumatra Island's economic growth cannot be deemed to be ideal. In order to explore and demonstrate the discrepancy between das sollen and das sein scientifically, this investigation was undertaken.The research on this subject, as carried out by Purwanto & Yanuar (2017)[6], Zumaidah & Soelistyo (2018)[7], Mardiana, Robiani & Susetyo (2019)[8], or evaluation of the effect of banking productive financing on economic growth in Sumatra Island, tends to be divided into two discussions or a qualitative, legal assessment of the downstream policy of the impact of the Minerba mining industry on economic growth, as carried out by

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According to the past research mentioned above, there is a research hole that can be addressed by this research, making it innovative. In order to discuss the impact of productive banking financing and downstream policies of the Minerba industry on the economic growth of Sumatra Island, this research was conducted comprehensively using a quantitative research approach. This was made possible by the segmentation of the topic of this research into two discussions. It is anticipated that the findings of this study will be helpful to banks, the government, and banking regulators as a source of information for evaluating the effects of productive banking credit distribution and the downstream policy of the Minerba industry on economic growth in Sumatra Island.

RESEARCH METHODS

2.1 Research design

In order to analyze the impact of the independent variable on the dependent variable, this study used an explanatory research design with a quantitative research approach and a deductive research style (Rahi, 2017)[9]. The use of a quantitative research approach and a deductive research style means that this research uses research data that is then processed using statistical methods to produce perspective as a basis for formulating recommendations. This research seeks to verify the relationship between the independent variable and the dependent variable based on the assumptions that have been set.

The study's research data are secondary data with a panel data type. The term "panel data" refers to a collection of cross-sectional and time series data from the first quarter of 2014 to the first quarter of 2020 from the five provinces of Aceh, Riau, Jambi, Bangka Belitung, and Lampung on the Sumatran island. The five provinces were chosen as a representation of Sumatra Island based on research data availability, and the research period was chosen based on knowledge of the downstream policy's effects for the three years prior to its implementation and the three years following its implementation in 2017, as detailed in the Regulation of the Minister of Energy and Mineral Resources Number 5 of 2017.

The research information used in this study was gathered online through the province-specific economic reports released by Bank Indonesia, particularly the independent variables made up of working capital finance and investment financing funneled through BUK. Meanwhile, research data for the dependent variable—2010 ADHK GDP based on expenditure as a proximate for economic growth—was gathered online through the Central Statistics Agency's provincial publications. The dummy variable for the downstreaming of the mineral and coal industry is denoted by 0, which represents before the policy regarding the downstreaming of the mineral and coal industry is implemented, and 1, which represents during the implementation of the policy regarding the downstreaming of the mineral and coal industry, which is implemented, as specified in Regulation of the Minister of Energy and Mineral Resources Number 5 of 2017.

2.2 Data analysis technique

Techniques for data analysis can be used once data collecting is complete. Panel data regression using the Random Effect (REM) model is the data analysis method employed in this study. The panel data regression model can be expressed as follows since panel data is a blend of cross-sectional and time series data (Nachrowi & Usman, 2018) [10]:

$$Y_{it} = \alpha + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \varepsilon_{it} \quad (1)$$

The best model must first be chosen using the Chow test to identify the best model between the Common Effect Model (CEM) and Fixed Effect Model (FEM), as well as the Hausman test to select the model, before being decided in this study using panel data regression with the REM model..A random cross-section probability value is used in the Hausman test to make decisions; if it is less than 0.05, the best model is the FEM, and if it is more than 0.05, the best model is the REM. 2016 (Susanti & Nidar) [11]

A random cross-section probability value is used in the Hausman test to make decisions; if it is less than 0.05, the best model is the FEM, and if it is more than 0.05, the best model is the REM. 2016:

Table 1. Using the Chow and Hausman tests, regression model selection output

Output Chow Test			
Effects Test	**Statistic**	**d.f.**	**Prob.**
Cross-section F	5328.34567189	(5,0387)	0.0000
Cross-section Chi-square	754.6783221	4	0.0000
Output Hausman Test			
Test Summary	**Chi-Sq. Statistic**	**Chi-Sq. d.f.**	**Prob.**
Cross-section random	0.000000	3	1.0000

According to the results of the Chow test, which is used to choose between CEM and FEM as the best model, it can be seen from the table above that FEM is the best model, as evidenced by the cross-section probability value F0.05. The Hausman test can also be used to choose between the FEM and REM models. The

Hausman test indicates that the random cross-section probability value is greater than 0.05, leading to the conclusion that REM is the superior model than FEM.

It is known that the optimal model selected for this study is REM based on the results of choosing the regression model utilizing the Chow and Hausman tests. Additionally, based on the traditional assumption test, it is declared that the final model has satisfied the requirements as a predictor or BLUE so that additional interpretation and analysis may be done on the regression model that results. This study's regression model is as follows:

$$PDRB_{it} = 2.664453 + 0.243145X_{1it} + 0.0012146X_{2it} + 0.08745X_{3it} \quad (2)$$

Hypothesis:

H_0: $b_1, b_2, b_3 = 0$ (X does not affect Y)

H_1 : $b_1, b_2, b_3 \neq 0$ (X affect Y)

From the above model, it can be interpreted in a parisal (T-statistic) or simultaneous (F-statistic) way, as follows:

1. The average economic growth of Sumatra Island prior to the introduction of the Minerba industry downstream policy, which is concerned with Increasing the Added Value of Minerals through Domestic Mineral Processing and Refining Activities, was 2.664453, which is a constant value.
2. The working capital financing variable's b1 value is 0.243145, which indicates that every time the distribution of working capital financing by the BUK of IDR 1 trillion is increased, Sumatra Island's economic growth will increase by 0.243 percent. Working capital financing has a positive and significant impact on economic growth in Sumatra Island, it can be concluded based on the results of panel data regression testing with the REM model, where it was determined that the p-value was 0.0000 0.05. Therefore, it can be decided that H0 is rejected because the working capital financing hypothesis is true.
3. The investment financing variable's b2 value is 0.0012146, which means that every time the BUK distributes investment financing at a rate of Rp. 1 trillion, Sumatra Island's economic growth will increase by 0.00121 percent. Given that the panel data regression testing with the REM model produced a p-value of 0.9988 > 0.05, it is possible to conclude that the hypothesis H0 is accepted, or, in other words, that investment finance has a positive but marginal impact on Sumatra Island's economic growth.
4. The average economic growth of Sumatra Island during the implementation of policies regarding the downstreaming of the Minerba industry, which is regulated in detail through the Minister of Energy and Mineral Resources Regulation Number 5 of 2017, is higher than the average economic growth of Sumatra Island before the enactment of the policy regarding the downsizing of the Minerba industry. The value of b3 for the dummy variable for the downstreaming of the Minerba industry is 0.08745.In other words, it can be concluded that there is a positive and significant difference between the economic growth of Sumatra Island during the implementation of policies regarding the downstreaming of the Mineral and Coal industry compared to the economic growth of Sumatra Island based on the results of panel data regression testing with the REM model, where it is known that the p-value is 0.0000 < 0.05.
5. According to the F-statistic test, it is known that the probability value of the F-statistic is 0.000000< 0.05, meaning that regulations governing the downstreaming of the Minerba industry and the productive financing of BUK both have a major impact on the economic growth of Sumatra Island..
6. The independent variable employed in this study is able to explain the variation of the dependent variable by 67.89 percent, and the remaining 32.11 percent is explained by other factors not included in this research model, according to the R-squared value of 0.6789.

2.3. Discussion

Working capital finance is recognized to have a favorable and considerable impact on economic growth in Sumatra Island based on the findings of panel data regression analysis using the REM model. This supports the findings of Mardiana, Robiani, and Susetyo's (2019)[8] research. In the meanwhile, investment funding is known to have a favorable but insignificant impact on Sumatra Island's economic growth.

The distribution of productive finance by banks tends to be able to move the economy, as evidenced by the positive and considerable impact of working capital financing on the economic development of Sumatra Island. The COVID-19 pandemic produced a slowdown in virtually all business sectors, with the exception of agriculture, which led to a contraction of the distribution of banking productive financing, which presented significant problems to this circumstance (Bank Indonesia, 2020)[12].

Meanwhile, the declining global economic conditions exacerbated by the COVID-19 pandemic, which tends to cause business sectors to hold back on investing or behave in a wait-and-see manner, can be used to explain the positive but negligible effect of investment financing on the economic growth of Sumatra Island. In the current environment, business actors typically use internal cash flow or capital from the parent company to cover production costs (Bank Indonesia, 2020) [13].

The findings of this study also demonstrate a good and considerable impact of the downstream policy of the minerba sector on Sumatra Island's economic development. This happens as a result of the requirement to

construct smelter plants in the nation, which might affect employment and lower the unemployment rate. The multiplier effect on the local economy is another result of building domestic smelting plants. Additionally, the building of a smelting facility can boost state income through taxes and other sources (Ika, 2017; Contesa, Sintaningrum & Rahmatunnisa, 2018) [14][15].

CONCLUSION, LIMITATIONS AND SUGGESTIONS

3.1 Conclusion

Based on the outcomes of the data analysis and the discussions that have been held, it is possible to draw the conclusion that during the study period, Sumatra Island's economic growth was significantly influenced by both the downstream policy of the mining industry and the financing provided by productive banks. But just a small portion of working capital financing has a positive and meaningful impact on Sumatra Island's economic development. The economic development of Sumatra Island is recognized to be positively but not significantly impacted by investment financing. Additionally, some of the study's findings might demonstrate that Sumatra Island's economic growth is positively and significantly impacted by the downstream policy of the minerba sector.

3.2 Research Limitations

Due to the restricted research data that researchers can obtain, this study has limitations on the research data used, which only comprises of five provinces on the island of Sumatra (Aceh, Riau, Jambi, Bangka Belitung, and Lampung). In order to produce more representative research results, further researchers are anticipated to be able to finish the research data into 10 provinces in accordance with the number of provinces on the island of Sumatra.

3.3 Suggestion

Based on the discussions that have been carried out, the following recommendations can be put forward for the banking industry, banking regulators and the government. First, although it is recognized that the mining sector has a relatively high credit risk, banks should not close themselves off from channeling productive financing to this sector considering that downstream policies require large investment funds, especially for the construction of smelter plants.

Second, the government should be able to give legal stability for the Minerba industry's downstream policy, which has typically tended to ease the export policy for mining product concentrates in the past. Additionally, even though Sumatra Island has the potential for abundant mining products, the government should be able to find alternative sources of economic growth in the future rather than continually relying on this industry so that Sumatra Island's economic growth is not dependent on non-renewable natural resources.

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