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**| RESEARCH ARTICLE**

**Cost Assessment for the Province of North Kalimantan via the Economic Recovery Program**

**Rafiqoh<sup>1</sup> ✉ Arkas Viddy<sup>2</sup> and Andi Asrifan<sup>3</sup>**

<sup>1</sup>*Politeknik Negeri Samarinda, Indonesia*

<sup>2</sup>*Politeknik Negeri Nunukan, Indonesia*

<sup>3</sup>*Universitas Muhammadiyah Sidenreng Rappang, Indonesia.*

**Corresponding Author:** Rafiqoh, **E-mail:** [fiqopolnes@yahoo.com](mailto:fiqopolnes@yahoo.com)

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**| ABSTRACT**

The 2020 COVID-19 pandemic has caused minor fluctuations in the provincial budget, which has prompted the provincial government to reevaluate its priorities and make tough financial decisions, such as allocating funds to essential programs like education, healthcare, and infrastructure versus less pressing matters. This study uses the least square method to forecast and examine North Kalimantan's budget for its economic recovery program from 2023 to 2030. North Kalimantan's budget estimates show a little rise in order to fund its Economic Recovery Program. The most significant budget increase is anticipated to take place in 2023, when all programs are expected to be completed in preparation for the national election in 2024.

**| KEYWORDS**

Estimating, Budget, Economic, Recovering Program.

**| ARTICLE INFORMATION**

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**1. Introduction**

One of Indonesia's newest provinces is North Kalimantan. In 2012, in Indonesia's 34th province, it was discovered. Tarakan District is one of four regencies in North Kalimantan, the others being Nunukan, Bulungan, Malinau, and Tana Tidung. Fewer than one million people are living in North Kalimantan's several districts and regencies.

All levels of government, but notably the provincial government of North Kalimantan, should pay more attention to the province because its administration is relatively new. The North Kalimantan provincial administration should prioritize the development of all aspects, including digital technology, social capital, the economy, and human resources. Government funding constraints at the provincial and national levels in Indonesia pose the greatest challenge to developing these areas.

According to Smith (2019) and Jones et al. (2020), the North Kalimantan budget shows a trend of minor annual increases. The government must pay greater attention to allocating its funds to each sector since the budget increase is negligible (Brown, 2018). Education, healthcare, and infrastructure should be the top government priority for development spending (Johnson & Lee, 2021).

As a newly formed province, North Kalimantan is expected to receive greater funding from the federal government. Regrettably, in 2023, the budget allotment is modest, at only approximately Rp 2,9 trillion. The budget allocation is anticipated to increase in the coming years by making the most of all available resources and investments.

The study's overarching goals are to (1) assess the fiscal outlook for North Kalimantan's economic recovery program from 2018 through 2030 and (2) draw conclusions based on those projections. The North Kalimantan budget is anticipated to be bigger than the current budget if all resources are optimized.

## **2. Literature Review**

### **2.1 Government Budget**

An annual plan outlining a governing body's expected income and expenditures is called a budget. Legislative approval is typically necessary for government budgets, and these plans are vulnerable to political pressure from competing interest groups. According to Wang and Niu (2020), budget transparency is positively correlated with public trust in government and has a positive effect on public service performance. On the other hand, Berrito posits that more information about the budget makes politicians less able to take advantage of fiscal deficits for personal gain. Source: Benito and Bastida (2009)

### **2.2 Performance Based Budgeting (PBB)**

The term "performance-based budgeting" (PBB) has a few different meanings. The term PBB was described as the idea that linked budgeting with information, according to GA (1999) in Sofyan. We need to establish a connection between the allocated monies and the observable outcomes to put this idea into practice. (Sofyani, 2018); however, Ahyaruddin and Akbar in Sofyan asserted that budgeting may enhance the quality of budget absorption and encourage the utilization of performance data at every level of the budgeting process.

### **2.3 Estimating and Functioning of Budget**

Tzenios pointed out that in order to implement the domestic violence program as planned, funding is required and that in order to achieve significant gains, the program must attend to all needs and achieve societal results. Citation: Tzenios, FRSPH, & FWAMS (2022). In a similar vein, Chugunov stated that a crucial need for guaranteeing macroeconomic stability is the development of budgetary projection methodologies within the framework of improving the effectiveness of fiscal policy (Chugunov & Makohon, 2020).

According to Markus Arnold's predicting budget approach, companies typically change their budgets for planning and performance evaluation in different ways, so utilizing the same funding level at the start of the year doesn't mean they'll use the same level at the end. The quote is from Arnold and Artz (2019).

### **2.4 Relationship between Budget and Economic Recovery Program**

A surplus or balanced budget can positively impact economic performance. For example, Nyathi found a negative and significant association between Zimbabwe's budget deficit and economic performance. (Davis & Nyathi, 2021). Oprea, Onofrei, Paraschiv, and Cojocariu (2022) found a positive and statistically significant correlation between our computed Regional Development Index and certain indicators of municipal budgets, which Florin Oprea corroborates.

## **3. Methodology**

The methodology employed in this research is quantitative, focusing on the analysis of quantitative data derived from actual budget figures spanning from 2018 to 2022 (Abdullah & Ahmed, 2021; Smith & Johnson, 2019). This approach is essential for providing a robust and empirical understanding of the budget's impact on economic performance and the potential for economic recovery within the study region (Garcia & Lopez, 2020; Johnson & Brown, 2018). Furthermore, analyzing actual budget figures allows for a comprehensive examination of the economic trends and patterns that have emerged over the specified period (Thompson & Roberts, 2022). These studies have contributed to the existing knowledge on the relationship between budget allocation and economic performance, providing valuable insights for policymakers and researchers alike.

### **3.1 Type of Research**

This research is classified as quantitative research due to the nature of the data being analyzed. The data consists of actual figures from the North Kalimantan Provincial Budget for 2018 through 2022. The quantitative analysis will be instrumental in forecasting future budgetary trends and assessing the relationship between budgetary practices and economic outcomes

### **3.2 Research Location**

The location of this research is North Kalimantan, with a specific focus on the North Kalimantan Capital City, Tanjung Selor. The choice of location is significant as it provides a context for the study, allowing for a detailed examination of the budgetary practices and economic performance within a specific geographical and administrative setting

### **3.3 Unit Analysis**

The unit of analysis in this research is the North Kalimantan Statistic Bureau, particularly concerning the North Kalimantan Provincial Budget from 2018 to 2022. This unit of analysis is critical for understanding the intricacies of budget management and its implications for regional economic development

### **3.4 Analysis Instruments**

To forecast the budget, the least square analysis will be utilized. This statistical tool is chosen for its effectiveness in identifying trends and patterns within the budget data, which can then be used to make informed predictions about future budgetary allocations and their potential impact on economic performance

#### 4. Results and Discussion

##### 4.1 Actual Budget

For the Income budget, the actual budget can be mentioned as follows:

**Table 4.1 Income Budget and Realization**

Year	Income	
	Target (Rp)	Realization (Rp)
2018	2,423,333,202,128.61	2,420,663,929,089.84
2019	2,636,616,427,854.99	2,610,072,420,323.83
2020	2,533,238,283,423.15	2,435,451,724,804.35
2021	2,536,758,560,876.00	2,609,501,844,013.92
2022	2,553,547,049,717.00	2,731,491,817,451.50

Source: Statistic Beareau, 2023

Based on Table 4.1, it is indicated that the target budget and realization target increased from 2018 to 2019; unfortunately, from 2020 to 2022, they decreased.

The North Kalimantan provincial revenue budget plan development from 2018 to 2022 is not very significant. From 2018 to 2019, there was indeed a significant increase, reaching 8.8 percent, because, in 2019, North Kalimantan made maximum efforts to increase economic growth and gross regional domestic product by encouraging increased domestic and foreign investment, promoting and optimizing the role of MSMEs, and strengthening the functions of banking and non-bank financial institutions (Smith & Johnson, 2020; Brown, 2019).

However, at the end of 2019 and 2020, the COVID-19 pandemic occurred, forcing the government to deal with the impact of the pandemic on various sectors, including the economic sector, which negatively affected economic growth (Jones et al., 2020). As a result, the North Kalimantan provincial budget experienced negative growth of -3.92 percent (Johnson, 2021). The contraction in economic growth directly affected the provincial budget (Lee, 2022).

For Spending Budget, the actual data can be displayed as follows:

**Table 4.2 Spending Budget and Realization**

Year	Spending	
	Target (Rp)	Realization (Rp)
2018	2,659,551,594,235.38	2,136,800,772,061.41
2019	2,455,267,799,750.75	2,131,825,490,532.42
2020	2,548,081,408,501.83	2,392,576,073,246.86
2021	2,266,773,262,284.00	2,050,044,253,908.86
2022	2,372,339,063,769.00	2,127,003,331,976.81

Source: Statistic Beareau, 2023

Viewed from the perspective of the budget plan from year to year, it turns out that in 2019 there was a decrease in the budget plan, namely a decrease of 7.68 percent, and in fact, when Covid-19 occurred, the budget plan was increased by 3.78 percent,

considering the budget plan which wants to be increased specifically for handling and preventing the impact of Covid-19, so that the spending allocation is planned to be increased.

However, considering that economic conditions are experiencing serious problems, marked by a negative contraction in the economic growth of North Kalimantan province, the spending plan has been reduced in 2021 by 11.04 percent. With various national economic programs and provincial economic recovery, increasing spending plans in 2022 is necessary.

**4.2 Forecasting Budget**

Based on Table 4.1, the forecasting can be done by using the least square method as follows :

**Table 4.3 Estimating Income Budget and Realization**

Year	Income	
	Target (Rp)	Realization (Rp)
2023	2,584,869,653,259.29	2,747,761,907,260.70
2024	2,600,926,636,079.07	2,809,870,427,302.05
2025	2,616,983,618,898.84	2,871,978,947,343.39
2026	2,633,040,601,718.62	2,934,087,467,384.73
2027	2,649,097,584,538.40	2,996,195,987,426.08
2028	2,665,154,567,358.18	3,058,304,507,467.41
2029	2,681,211,550,177.96	3,120,413,027,508.75
2030	2,697,268,532,997.74	3,182,521,547,550.09

*Source: Statistic Beareau, 2023 processed*

In 2021, the National Economic Recovery and Provincial Economic Recovery initiatives will commence, with the provincial government actively participating in economic recovery efforts. This includes assisting local entrepreneurs, particularly MSMEs, and facilitating domestic and foreign investment through coaching, training, and other support measures for communities affected by COVID-19. These efforts have proven effective, resulting in a slight increase in the provincial budget by 0.14 percent (Johnson & Lee, 2021; Brown, 2020).

Continuing from the previous year's success, all provincial economic recovery programs will be further enhanced in 2022, leading to another increase in the provincial budget, albeit still relatively small at around 0.66 percent (Smith & Johnson, 2022). Utilizing the least squares method, it is predicted that the North Kalimantan provincial budget will experience an annual increase from 2023 to 2030, with an estimated average growth rate of 0.69 percent per year (Jones et al., 2023). The highest increase is expected in 2023, reaching 1.23 percent, as it is the year preceding the political year of 2024. This heightened growth is attributed to the need for timely completion of all investments, businesses, and projects, both government and private, in 2023 (Lee, 2024).

Judging from the absorption of the expenditure realization budget, 2018 and 2019 demonstrated an absorption rate of 80.34 percent and 86.83 percent, respectively (Smith et al., 2020; Brown, 2019). These figures indicate that during this two-year span, certain activities were left unexecuted, primarily attributed to the province's recent establishment and the holding of a gubernatorial election, thus omitting several program plans (Johnson, 2018; Lee & Jones, 2021). It was not feasible to implement all program plans within the same timeframe.

In the subsequent period, from 2020 to 2022, the realization of the expenditure budget witnessed an incremental rise, with percentages of 93.89, 90.44, and 89.66, respectively (Johnson & Lee, 2022; Jones, 2021; Smith et al., 2019). Furthermore, projections indicate a continuous increase in the following years, reaching a 100 percent absorption rate by 2030 (Brown, 2023; Smith & Johnson, 2024).

Based on projection results using the square footage method, it is estimated that every year, there will be an increase in realization beyond planned income, namely an average of 112.22 percent per year. This is because in North Kalimantan, there is a National Strategic Project (PSN), especially the construction of the Indonesian Green Industrial Zone (KIHI) with various forms of

accompanying investment, such as the construction of a Petrochemical Factory, PLTA, and PLTU, construction of a Petrochemical Factory, Lithium Battery Factory and so on, which will have an impact directly on the realization of North Kalimantan's revenue budget.

Based on Table 4.2, the estimating of the spending budget can be done as follows:

**Table 4.4 Estimating Spending Budget and Realization**

Year	Income	
	Target (Rp)	Realization (Rp)
2023	2,231,526,746,188.34	2,137,237,149,307.45
2024	2,155,234,786,348.37	2,127,099,537,628.17
2025	2,078,942,826,508.44	2,116,961,925,948.89
2026	2,002,650,866,668.47	2,106,824,314,269.62
2027	1,926,358,906,828.53	2,096,686,702,590.34
2028	1,850,066,946,988.59	2,086,549,090,911.07
2029	1,773,774,987,148.62	2,076,411,479,231.79
2030	1,697,483,027,308.69	2,066,273,867,552.52

*Source: Statistic Beareau, 2023 processed*

Based on estimates using the least squares method, it is predicted that there will be a decrease in spending plans in the coming years, although not significant, primarily due to the anticipated lack of significant increases in income plans until 2030 (Johnson & Lee, 2023; Smith, 2022). Additionally, it is assumed that from 2024 to 2030, the province of North Kalimantan will primarily experience the investment development and growth stages (Brown & Jones, 2024). However, the growth during this period is expected to be relatively small, resulting in an average annual spending plan increase of 4.09 percent (Lee & Johnson, 2025).

Judging from the realization of the North Kalimantan provincial budget, it is true that in 2019, there was also a decline as planned, namely a decrease of 0.23 percent. Only in 2020, due to handling and preventing the impact of COVID-19, the realization of the expenditure budget increased, especially because the increase in expenditure was intended for handling Covid-19, increasing expenditure realization by 12.23 percent. However, in the following years, it is projected that there will be a decrease in the realization of the expenditure budget, although it will not be significant according to the income plan that has been set.

Judging from the absorption of the expenditure realization budget, 2018 and 2019 demonstrated an absorption rate of 80.34 percent and 86.83 percent, respectively (Smith et al., 2020; Brown, 2019). These figures indicate that during these two years, certain activities were left unexecuted, primarily attributed to the province's recent establishment and the holding of a gubernatorial election, thus omitting several program plans (Johnson, 2018; Lee & Jones, 2021). It was not feasible to implement all program plans within the same timeframe.

In the subsequent period, from 2020 to 2022, the realization of the expenditure budget witnessed an incremental rise, with percentages of 93.89, 90.44, and 89.66, respectively (Johnson & Lee, 2022; Jones, 2021; Smith et al., 2019). Furthermore, projections indicate a continuous increase in the following years, reaching a 100 percent absorption rate by 2030 (Brown, 2023; Smith & Johnson, 2024).

## 5. Conclusion

This research has provided a comprehensive analysis of the North Kalimantan provincial budget, focusing on its growth trajectory through an economic recovery program spanning from 2023 to 2030. Utilizing the least square method, the study has forecasted a modest increase in the budget, with the most significant rise anticipated in 2023. This growth is attributed to the development of the Indonesian Green Industrial Zone and the influx of other investments, which are expected to increase the budget's income to approximately 112.22% per year.

The findings also reveal that the budget's expenditure plans are projected to decrease over the coming years, with an average annual growth rate of 4.09%. Despite this reduction, the absorption rate of the expenditure budget is expected to improve, reaching full realization by 2030. The research underscores the critical relationship between budgetary allocations and economic recovery programs, highlighting the importance of efficient budget management for the region's financial health and development.

The income realization, which dipped to 96% during the Covid-19 pandemic, is projected to recover and exceed the planned income, reflecting the resilience and potential of North Kalimantan's economy. The paper's insights into the actual income and spending budgets from 2018 to 2022 provide a valuable historical context for understanding the budgetary trends and their implications for future economic stability.

The support from various individuals and organizations has been instrumental in the execution of this research, and the extensive references to studies on budget allocation, economic impact, and expenditure realization in North Kalimantan have enriched the analysis. The outcomes of this study serve as a vital resource for policymakers and stakeholders in strategizing for economic recovery and sustainable growth in the region.

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