



Analysis of Factors Influencing the Budget Surplus (SiLPA) and Financial Performance of Ampelgading Community Health Center

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Author's contribution

The sole author designed, analyzed, interpreted, and prepared the manuscript.

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ABSTRACT

Aims: This study aims to analyze the performance of regional budget management and identify the causes of the Budget Surplus (SiLPA) at the Ampelgading Community Health Center in Malang Regency during the period of 2021–2022 (Bali, 2021).

Study Design: A qualitative descriptive approach using a case study method was employed.

Place and Duration of Study: The research was conducted at the Ampelgading Community Health Center in Malang Regency from 2021 to 2022.

Methodology: Various data collection techniques were utilized, including observation, documentation, and interviews. The study focused on identifying factors contributing to SiLPA, such as revenue exceeding expectations, efficiency in regional spending, and the receipt of Health Operational Assistance (BOK).

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Results: The findings reveal that the main factors contributing to SiLPA include significant revenue surpluses, effective expenditure management, and substantial BOK receipts. These elements collectively influenced the financial performance of the health center.

Conclusion: This research provides insights into how exceeding revenue projections, efficient spending practices, and BOK receipts significantly affect SiLPA, ultimately impacting the overall financial management of the Ampelgading Community Health Center. Based on these findings, it is recommended that health centers implement strategic planning to enhance revenue generation, optimize expenditure processes, and strengthen the management of operational assistance programs to further reduce budget surpluses.

Keywords: Budget surplus (SiLPA); regional budget management; financial performance; revenue exceedance; spending efficiency.

1. INTRODUCTION

The necessity for accountability and transparency in regional fund management has become increasingly important (Amelia & Khoiriawati, 2022). The central government is required to prepare accountability reports using an accounting system established by laws and regulations that bind all local governments, as stipulated in Law Number 23 of 2014 and Law Number 33 of 2004. The economic objectives of decentralization aim to empower local governments by delegating financial management authority from the central government (Audyta, 2022). Consequently, local finances can be budgeted and executed to enhance overall regional welfare. Decentralization also represents an effort towards the democratization of local governance, involving the community in the management of government responsibilities (Nurjannah, 2022).

Under a decentralized system, local governments possess authority over financial management, particularly in allocating budgets to various sectors, especially the health services, which will subsequently be directed to community health centers (Puskesmas) in the form of Regional Budget (APBD) to finance health development programs and activities. The budget serves as a policy planning tool and acts as a link in the planning and control processes. It is formulated for implementation and realization, serving as an instrument to communicate government performance to the public (Ona et al., 2022). This process is part of the government's accountability to the public, and budget preparations must align with community needs. Budget management is not solely the responsibility of the central government but is also carried out by local governments and their respective regional apparatus organizations (Quamila, 2023).

In implementing the budget, Community Health Center (Puskesmas) follow a mechanism where they prepare a Business Strategy Plan (RSB) every five years (Syafira, 2022). The RSB outlines the work plan for the Puskesmas as a Regional Public Service Agency (BLUD) for the five-year period. Following the RSB, the Puskesmas must develop an Annual Business Budget Plan (Rencana Bisnis Anggaran, RBA) in line with the budget allocations established in the RSB. After the RBA is prepared, the BLUD Puskesmas reports to the Health Office (Dinas Kesehatan), which then incorporates the RBA allocations into the Budget Implementation Document (Dokumen Pelaksanaan Anggaran, DPA) prepared by the Health Office (Nwaorgu & Alozie, 2017). The Health Office subsequently reports to the Village Financial Management Implementer (PPKD) in the form of the DPA for budget approval.

When the BLUD Community Health Center receives the APBD from the PPKD, it manages revenues and expenditures and conducts accounting and financial reporting, which includes the Balance Sheet, Budget Realization Report (Laporan Realisasi Anggaran, LRA), and Budget Surplus Report (Laporan Perubahan Saldo Anggaran Lebih, LP-SAL). If the reports indicate a Budget Surplus (SiLPA) or a Budget Deficit (SiKPA), it suggests inaccuracies in budgeting and weaknesses in budget implementation, leading to suboptimal execution of planned programs and activities (Sari, 2022).

The issue arises when the annual allocation of the APBD increases, which is likely to be accompanied by an increase in public goods. However, if the processes of budget allocation and implementation do not proceed smoothly, with budget absorption not being optimal, achieving community welfare becomes challenging (Law of the Republic of Indonesia, 2022). Discrepancies in fund allocation manifest

in revenue accounting, where actual revenue exceeds budget estimates, while in expenditure accounting, unexpected expenditures may surpass budget projections without achieving the allocated budget. These discrepancies result in suboptimal execution of several government programs, ultimately increasing the budget surplus (SiLPA). SiLPA arises from budgeting inaccuracies and ineffective budget execution, preventing planned programs and activities from being fully realized. Hence, such SiLPA should be avoided, as it represents idle funds that do not contribute to the regional economy if not utilized wisely (Yuliyanto et al., 2022).

While the exact factors contributing to SiLPA remain uncertain, previous research by Bali (2021) suggests that SiLPA may be attributed to factors such as revenue surpassing budget calculations and lower-than-expected government expenditure realization. Additionally, other contributing factors include efficiency or savings in government spending or the non-implementation of programs/activities, resulting in unabsorbed budgets. This highlights a significant gap in the literature regarding specific factors influencing SiLPA that necessitate further investigation.

Decentralization in Indonesian governance has a substantial impact on public fund management, accountability, transparency, and the role of the APBD. Existing studies have primarily focused on theoretical aspects of decentralization, yet empirical evidence on its practical implications for SiLPA remains limited. Maintaining accountability and transparency in public fund management is crucial, with the APBD playing a vital role in this process. To address these gaps, this study aims to provide a comprehensive empirical review of factors affecting budget surpluses and to explore the influence of the Audit Board of the Republic of Indonesia (BPK) opinions on financial performance assessments. Efforts to reduce SiLPA and understand the influence of the Audit Board of the Republic of Indonesia (BPK) opinions on financial performance assessments are also key components of effective regional financial management.

1.1 Planning and Budgeting

Budgeting and planning are two of the most critical processes in government operations, intricately linked as planning leads to budgeting (Sugiyono, 2021). The budget serves as a planning tool, outlining the objectives that local

government organizations aim to achieve. Furthermore, the budget acts as a monitoring instrument, ensuring that public funds are allocated with the approval of legislative bodies.

The planning framework encompasses both the work plans of the Health Office and the community health centers (Puskesmas). The Health Office formulates a work plan to guide the implementation of health development programs, which includes the work plans of the Puskesmas. In turn, the Puskesmas develops its own work plan to direct the provision of health services, which is subsequently integrated into the Health Office's work plan.

The budgeting process for both the Health Office and the Puskesmas is an integral part of financial planning. The Health Office's budget plan outlines the work plan and budget that serve as guidelines for financing health development programs and activities, including the budget proposed by the Puskesmas through the Annual Business Budget Plan (RBA). The Puskesmas's budget plan consists of annual business planning and budgeting documents that detail programs, activities, performance targets, and budgets.

1.2 Components of Expenditure and Revenue Budget for Community Health Center

The revenue of the Regional Public Service Agency (BLUD) is recognized as an enhancement of net worth. The Puskesmas generates its own revenue from its capabilities and resources in providing health services, which include Individual Health Efforts (Upaya Kesehatan Perorangan, UKP) and health data services. Additionally, revenue may come from various sources, including: grants; partnerships with other parties; regional budget (APBD); national budget (APBN); capitation and non-capitation from the National Health Insurance (JKN)

Expenditures of the BLUD Puskesmas represent obligations that reduce net worth and are used to fund activities within their authority, categorized as follows:

- a) **Non-Operational Expenditures**
Expenditures incurred for purposes outside the Puskesmas but still within its obligations, including: interest expenses; bank administrative fees; losses from the sale of fixed assets; impairment losses; other operational expenses.

- b) **Operational Expenditures** Directly related to the activities of the Puskesmas, such as: service costs, including employee salaries, materials, service fees, maintenance costs, and other related expenses; administrative and general costs, including office administration, promotional expenses, and various administrative costs.
- c) **Capital Expenditures** All expenditures for acquiring fixed assets and other assets that provide benefits for more than 12 months in BLUD activities, including: land expenditures; equipment and machinery expenditures; building and construction expenditures; irrigation infrastructure expenditures; other fixed asset expenditures.

1.3 Health Operational Assistance (BOK)

The Health Operational Assistance (BOK) policy was initiated in 2010 to support Community Health Center and their networks in delivering promotive and preventive health services in accordance with Minimum Service Standards (SPM) towards achieving the Millennium Development Goals (MDGs). According to Regulation of the Minister of Health No. 3 of 2019, the allocation of BOK funds for provinces, regencies/cities, and pharmaceutical services is determined by the Minister of Health, with varying amounts allocated to different regions. The function of BOK is to assist Puskesmas and their networks in implementing promotive and preventive health services. The allocation of BOK considers several factors, including population size, geographical conditions, the number of healthcare personnel, the availability of health facilities and infrastructure, and service activities.

1.4 Budget Surplus (SiLPA)

SiLPA includes expenditures that exceed local revenue, expenditures that surpass allocations, additional revenues, unfulfilled obligations to third parties at the end of the year, and remaining funds for ongoing activities. According to Regulation of the Minister of Home Affairs No. 79 of 2018 concerning Regional Public Service Agencies, Article 95 states that there should be no discrepancy between the total money received and the total money spent over a fiscal year.

The utilization of SiLPA must be approved in the Detailed Budget Plan (DPPA) and included in the Budget Implementation Document (DPA) before allocation. SiLPA can be used for various

purposes, including: covering budget deficits; funding budget obligations that are not yet available; paying interest and principal on debts and/or regional bonds exceeding the available budget prior to changes in the APBD; settling interest and principal debt obligations; funding salary increases and allowances for state civil servants (ASN) resulting from government policies; financing programs, activities, and sub-activities that are not yet funded.

2. METHODOLOGY

This study employs a qualitative case study approach to explore specific phenomena within the community. The research is conducted in-depth to understand the background, conditions, and interactions involved. A case study focuses on a system unit, which may include a program, activity, event, or a group of individuals in a particular state or context. Unlike quantitative research, case studies do not aim to generalize findings to a broader population; instead, they concentrate on the specific phenomenon under investigation.

Data collection techniques for this case study include interviews, observations, and document analysis, which collectively contribute to the development of theoretical insights. The objective is to understand, analyze, and interpret the meanings derived from the studied phenomenon. The subject of this research is the Ampelgading Community Health Center (Puskesmas) in Malang Regency. Secondary data is collected from sources such as the Annual Business Budget Plan (RBA), Budget Realization Report (LRA), Notes on Financial Statements (CALK), and Budget Surplus Report (LP-SAL) for the period of 2021–2022.

Data collection is a crucial step in the research process, aimed at identifying the factors influencing the Budget Surplus (SiLPA). Interviews are conducted to obtain concrete secondary data, specifically the financial reports of the Ampelgading Puskesmas for the specified period. Data analysis follows the framework proposed by Miles and Huberman, which includes data collection, data reduction, data presentation, and conclusion drawing/verification. A flowchart of this data analysis process according to Miles and Huberman is provided.

To ensure the validity of the data, qualitative research employs credibility tests, which assess the trustworthiness of the research findings. According to Sugiyono, methods such as triangulation, reference materials, and member

checking are utilized. This study employs triangulation techniques, which involve verifying data from multiple sources, methods, and timeframes. There are three types of triangulation: source, method, and time. In this research, both source and method triangulation are implemented.

Source triangulation involves verifying the authenticity of several sources using the same technique. After data conclusions are drawn, the findings are cross-checked with three research informants: the Head of Finance, the Revenue Treasurer, and the Expenditure Treasurer. Method triangulation involves using different methods to examine the same data. For instance, information obtained through interviews is corroborated through documentation or observation. This comprehensive approach enhances the reliability and depth of the research findings.

3. RESULTS AND DISCUSSION

3.1 Local Own Source Income

From the Table 1, during the years 2021 and 2022 there was a revenue surplus of 118,585,024.29 (5%) in 2021 and 942,381,441.63 (41%) in 2022, contributing to an increase in the Budget Surplus (SiLPA) (Fikri, Putri, & Ernia, 2022). While the performance in managing the Regional Budget (APBD) over the two periods was generally satisfactory, achieving the targets set, the actual revenue realization exceeded expectations, which significantly impacted the increase in SiLPA. Therefore, the budget planning process needs improvement, as it has not effectively accounted for the revenue surplus.

3.2 Regional Expenditures

From Table 2, the efficiency of expenditures for the years 2021 and 2022 indicates that in 2021,

the efficiency was 217,747,250.00 (93%), while in 2022, it improved to 143,953,474.00 (96%). This suggests that the cause of the Budget Surplus (SiLPA) in those years was primarily due to the efficiency in regional spending.

However, examining the management of the Regional Budget (APBD) at the Ampelgading Community Health Center in Malang Regency reveals that it has not effectively managed regional expenditures. This inefficiency is largely attributed to unimplemented work programs, resulting in a discrepancy between the budgeted financing and the actual realization, leading to surplus funds. Ideally, good APBD management would mean no inefficiencies or wasteful spending, indicating that the budgeted financing aligns closely with actual expenditures.

3.3 Health Operational Assistance (BOK)

In Table 3, the Health Operational Assistance (BOK) is presented, which impacts the increase in the Budget Surplus (SiLPA). The primary function of BOK is to support community health centers (Puskesmas) and their networks in delivering promotive and preventive health services in accordance with Minimum Service Standards (SPM).

The allocation of BOK is influenced by several factors, including population size, geographical area, the number of healthcare personnel, the availability of health facilities and infrastructure, and service activities. However, when examining the management of the Regional Budget (APBD), the absorption rate of BOK remains inadequate, at only 64%, which is below the acceptable threshold of 90%. This indicates a mismatch between the real needs and the performance of budget absorption, as well as discrepancies in the allocation amounts based on the established formula.

Table 1. Yearly revenue from local own source income

Year	Other Local Own Source Income	Budget	Realization	Surplus
2021	Capitation	1,805,628,300.00	1,866,538,800.00	103%
	General Patients	181,035,036.00	278,762,000.00	154%
	Non-Capitation BPJS Claims	336,207,924.00	293,415,455.00	87%
	Bank Interest	-	2,740,029.29	-
	Total	2,322,871,260.00	2,441,456,284.29	105%
2022	Capitation	1,805,628,300.00	2,065,142,400.00	114%
	General Patients	181,035,036.00	714,963,000.00	395%
	Non-Capitation BPJS Claims	336,207,924.00	481,791,100.00	143%
	Bank Interest	-	3,356,201.63	-
	Total	2,322,871,260.00	3,265,252,701.63	141%

Table 2. Efficiency of expenditures

Year	Regional Expenditures	Budget	Realization	Efficiency
2021	Total Expenditure	3,282,472,660.00	3,064,725,410.00	93%
	Operational Expenditure	3,132,472,660.00	2,918,795,410.00	93%
	Employee Costs	1,433,722,756.00	1,490,989,483.00	104%
	Goods and Services	1,698,749,904.00	1,427,805,927.00	84%
	Capital Expenditure	150,000,000.00	145,930,000.00	97%
	Equipment and Machinery	150,000,000.00	145,930,000.00	97%
	Other Fixed Assets	-	-	-
2022	Total Expenditure	3,563,158,070.00	3,419,204,596.00	96%
	Operational Expenditure	3,438,158,070.00	3,323,136,196.00	97%
	Employee Costs	820,546,494.00	834,350,595.00	102%
	Goods and Services	2,617,611,576.00	2,488,785,601.00	95%
	Capital Expenditure	125,000,000.00	96,068,400.00	77%
	Equipment and Machinery	75,000,000.00	46,568,400.00	62%
	Other Fixed Assets	50,000,000.00	49,500,000.00	99%

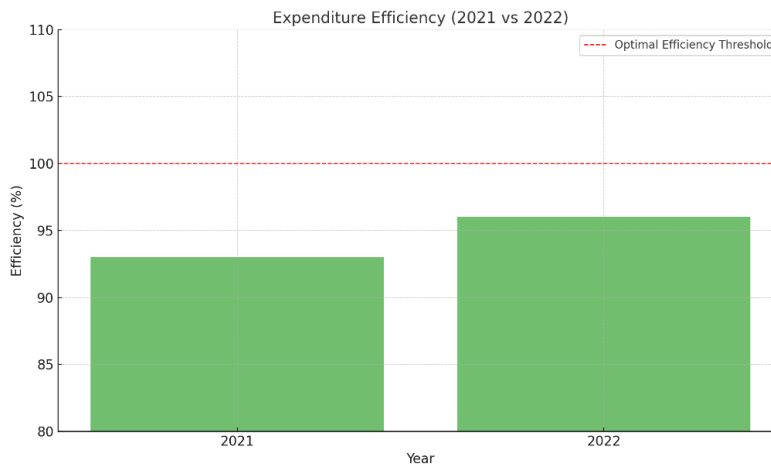


Fig. 1. Expenditure efficiency (2021/2022)

Table 3. Health operational assistance

Year	Health Operational Assistance (BOK)	BOK Utilization	Percentage
2021	587.892.000,00	377.705.189,51	64%
2022	799.081.899,00	-	0%

3.4 Budget Surplus (SiLPA)

Table 4. SiLPA

Year	SiLPA
2021	210.186.810,49
2022	855.316.815,12

In Table 4, it can be observed that there was a Budget Surplus (SiLPA) during the years 2021 and 2022 (Ratnasari & Meirini, 2022). This indicates that there were remaining funds from the budget in both periods. The highest SiLPA balance occurred in 2022, primarily due to efficient spending and low absorption of Health

Operational Assistance (BOK) funds. This situation is further illustrated in Tables 1, 2, and 3, which show revenue surpluses, expenditure efficiencies, and inadequate absorption of BOK funds during the 2021–2022 period.

The presence of SiLPA reflects the fiscal sustainability of public sector organizations. This suggests that the government can maintain credible finances and provide public services over the long term while effectively managing revenue and expenditure policies. However, SiLPA represents idle funds that will not generate a multiplier effect on the regional economy if not utilized wisely.

4. DISCUSSION

The analysis and findings indicate that revenue surpluses, expenditure efficiencies, the implementation of work programs, and the reception of Health Operational Assistance (BOK) all contribute to the occurrence of the Budget Surplus (SiLPA). While the regional expenditure efficiency table shows adequate absorption rates, the Notes on Financial Statements (CALK) reveal low absorption levels in several budget categories, remaining below 90%. Specifically, for the 2021 fiscal year:

Goods and Services Expenditures:

- Consumables: 37,671,180 (78%)
- Travel Expenses: 131,828,000 (74%)
- Maintenance Costs: 24,090,800 (41%)
- Vehicle Maintenance: 10,398,926 (53%)

For the 2022 fiscal year, the capital expenditures also reflected low absorption rates:

Capital Expenditures:

- Other Household Items: 2,333,000 (84%)
- Personal Equipment: 3,950,000 (67%)
- Other Office Equipment: 18,400,000 (44%)
- Cooling Equipment: 3,748,600 (75%)

As shown in Table 3, the absorption rate of BOK remains unsatisfactory, at only 64%, which is below the acceptable 90% threshold.

Consequently, SiLPA arises from low absorption rates, resulting in actual realizations that do not meet budget targets. This situation is exacerbated by revenue surpluses, expenditure efficiencies, and BOK reception, which stem from inaccuracies in budget planning. The management of the Regional Budget (APBD) at the Ampelgading Puskesmas is not yet adequate, as both budgeted amounts and realizations show absorption rates below 90%. Additionally, the realization of BOK funds is also below 90%, indicating a misalignment between actual needs and the performance of budget absorption, as well as discrepancies in the allocation amounts based on established formulas.

5. CONCLUSION

The findings indicate that the presence of revenue surpluses, inefficient spending, and inadequate absorption of Health Operational Assistance (BOK) suggest that the financial management of the community health center (Puskesmas) has not been effective (Safitri et al.,

2022). This inefficiency has hindered the ability to formulate effective planning, resulting in low budget absorption rates and the occurrence of a Budget Surplus (SiLPA).

6. RECOMMENDATIONS

For the Community Health Center:

To enhance the management of the Regional Budget (APBD), optimize fund utilization, and reduce the Budget Surplus (SiLPA), it is essential to improve budget planning, enhance the management of regional expenditures, optimize BOK absorption, implement effective supervision and evaluation of APBD execution, and build human resource capacity.

For the Government:

To improve equity in the allocation of funds through Health Operational Assistance, the government should regulate policies regarding BOK allocation by establishing clear thresholds and accurate measurement criteria. This will ensure that the distribution of BOK is equitable and effective.

DISCLAIMER (ARTIFICIAL INTELLIGENCE)

Author(s) hereby declares that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc.) and text-to-image generators have been used during the writing or editing of this manuscript.

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COMPETING INTERESTS

The author declares that there are no financial or personal relationships with other individuals or organizations that could potentially influence their work. Author has disclosed any relevant interests, and no conflicts of interest exist in relation to this study.

REFERENCES

- Amelia, F., & Khoiriawati, N. (2022). Analysis of SiLPA as a measuring tool for APBD management at the Blitar Regency Industry and Trade Service. *Journal of Islamic Accounting and Finance*, 2(1), 15-17.
- Auditya, B. (2022). The Influence of Local Original Income, Unexpected Expenditures, and Capital Expenditures on the Financial Performance of the DKI Jakarta Regional Government Before and After the Covid-19 Pandemic (Doctoral dissertation, Indonesian College of Economics, Jakarta).
- Bali, T. T. (2021). Analysis of factors influencing the budget calculation surplus (SiLPA) in local governments. *Journal of Accounting and Regional Finance*, 15(2), 123-135.
- Fikri, I., Putri, R. N., & Ernia, R. (2022). Analysis of the Policy for the Utilization of JKN Capitation Funds for Employees at Health Centers. *Journals of Ners Community*, 13(6), 623-541.
- Fitriyani, D. M. (2022). The Influence of Regional Original Income (PAD), Balancing Funds, and Budget Surplus (Silpa) on Capital Expenditure (Study on City Governments in Central Java Province for the 2017-2020 Period) (Doctoral dissertation, Sultan Agung Islamic University).
- Law of the Republic of Indonesia Number 1 of 2022 concerning Financial Relations between the Central Government and Regional Governments.
- Nurjannah, N. A. (2022). Analysis of Budget Refocusing on Program Achievements of the Majalengka Regency Health Office. Ona, A. D., Herdi, H., & Goo, E. E. K. (2022). Evaluation of Silpa on Physical Infrastructure Activities in Nelle Urung Village, Sikka Regency. *UNIPA Accounting Journal*, 1(2), 125-138.
- Nwaorgu I, Enyioma Alozie C. Budget Evaluation and Government Performance: A Case of the Nigerian Economy. *J. Econ. Manage. Trade*. [Internet]. 2017 Dec. 12 [cited 2024 Nov. 25];20(1):1-17. Available from: <https://journaljemt.com/index.php/JEMT/article/view/427>
- Quamila, T. M. (2023). Flypaper effect analysis on unconditional grants, fiscal capacity, and local revenue on regional spending in districts/cities in West Java Province in 2014-2021 (Doctoral dissertation, UPN "Veteran" Yogyakarta).
- Ratnasari, D., & Meirini, D. (2022). Local Revenue, Balancing Funds, Capital Expenditures, and Silpa in Their Influence on Financial Performance. *Journal of Accounting*, 17(1), 38-47.
- Safitri, S. S., Aryanto, K., Andriana, A., & Santoso, A. B. (2022). Analysis of the Causes and Impacts of the Existence of Budget Calculation Surplus (SiLPA) of the Bondowoso Regency Government. *E-Journal of Economics, Business and Accounting*, 9(2), 110-115.
- Sari, Sarah Dinda Permata (2022) Analysis of Accounting Implementation at the Sidomulyo Outpatient Health Center. Other thesis, Universitas Islam Riau.
- Sugiyono. (2021). Quantitative, qualitative and R&D research methods. Bandung: Alfabeta.
- Syafira, K. R. (2022). Disharmony of Relations between Regional Heads and DPRD in the Implementation of Government for the 2016-2021 Period in Jember Regency, East Java Province (Doctoral dissertation, Institute of Domestic Government).
- Yuliyanto, W., Khasanah, U., & Umami, R. (2022). Analysis of the efficiency and effectiveness of the APBD budget on the realization of the regional revenue and expenditure budget of the ABC Regency Government for the 2018-2020 period. *E-Bis Journal*, 6(2), 456-468.

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