

GLOBAL PERSPECTIVES ON BUDGETARY SLACK: A COMPREHENSIVE BIBLIOMETRIC ANALYSIS FOR EMERGING RESEARCH TRENDS

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INFORMASI ARTIKEL

Article history:

Dikirim tanggal: 18/11/2024

Revisi pertama tanggal: 11/02/2025

Diterima tanggal: 26/02/2025

Tersedia online tanggal: 18/06/2025

ABSTRAK

Penelitian ini bertujuan mengevaluasi perkembangan penelitian global mengenai budgetary slack, termasuk evolusi historis, kondisi saat ini, dan arah masa depan. Dengan menggunakan analisis bibliometrik melalui PRISMA Protocol, dan VOS Viewer, penelitian ini menganalisis 53 artikel yang terindeks Scopus dalam periode 2014–2024 dari 170 studi yang diidentifikasi. Hasil penelitian menunjukkan dominasi metode kuantitatif (43 artikel), dengan Inggris dan Amerika Serikat sebagai negara dengan publikasi terbanyak. Topik utama yang sering diteliti meliputi partisipasi dalam penganggaran, kejujuran, eksperimen, kepercayaan, dan asimetri informasi. Analisis kolaborasi penulis menunjukkan jaringan kerja sama yang masih lemah, sehingga terdapat peluang untuk memperkuat interkoneksi penelitian. Penelitian ini memberikan wawasan bagi regulator dan organisasi untuk meningkatkan kebijakan penganggaran dan transparansi. Studi mendatang sebaiknya mengeksplorasi mekanisme tata kelola, faktor perilaku, inovasi teknologi, perbedaan antar industri, serta aspek etika dalam *budgetary slack*.

Kata Kunci: kesenjangan anggaran, analisis bibliometrik, PRISMA, SCOPUS

ABSTRACT

This study aims to evaluate the global research development on budgetary slack, including its historical evolution, current state, and future direction. Using bibliometric analysis through the PRISMA Protocol and VOS Viewer, this research analyzes 53 Scopus-indexed articles from 2014 to 2024 out of 170 identified studies. The findings indicate a dominance of quantitative methods (43 articles), with the United Kingdom and the United States having the highest number of publications. The main topics frequently studied include budget participation, honesty, experimentation, trust, and information asymmetry. Author collaboration analysis reveals weak research networks, highlighting opportunities to strengthen interconnections. This study provides insights for regulators and organizations to improve budgeting policies and transparency. Future research should explore governance mechanisms, behavioral factors, technological innovations, industry-specific differences, and ethical aspects of budgetary slack.

Keywords: budgetary slack, bibliometric analysis, PRISMA, SCOPUS



1. Introduction

Budgeting plays a critical role in managerial control, ensuring financial discipline and aligning strategic objectives within organizations. However, the presence of *budgetary slack*—a practice where managers intentionally underestimate revenue or overestimate expenses—poses significant challenges to organizational efficiency, resource allocation, and financial transparency. The urgency of this research stems from the need to understand how *budgetary slack* evolves in different contexts, given its implications for corporate governance, managerial accountability, and long-term financial stability. As a form of managerial control, budgeting is a manifestation of the concept of "control" (Ferreira & Otley, 2009; Malmi & Brown, 2008; Simons, 1995, 2000). On the one hand, budgeting helps with coordination, especially when planning is done well (Ewert & Wagenhofer, 2014); (Hansen & Stede, 2004). However, as (Hansen & Stede, 2004) points out, budgeting also includes motivational aspects; according to (Fisher et al., 2007), budgeting systems are essential as a performance evaluation tool because they help to align the interests of individuals and institutions as shown by (Dos Santos et al., 2022) analysis of how budgeting may be utilized to offer rewards for employee conduct that is in line with business objectives.

Many topics arise while discussing budgeting, including allocation, balance, involvement in the process, activity priority, and budgetary slack. An organization must thoroughly investigate if there is budgetary slack, defined as the deliberate underestimating of income or overestimating of expenses. Merchant (1985) has shown that budgetary slack is accurate and scholars have written extensively about it in several studies (Arnold, 2007; Bradley et al., 2014; Brown et al., 2009; Derfuss, 2009; Jensen, 2003). Even (Hansen & Stede, 2004) states that budgetary slack results from managers purposefully estimating lower income or more extraordinary expenses to maximize the likelihood that they will meet their budget and minimize risks. Budgetary slack can occur in all sectors of organizations that use budgeting as a control mechanism. The private and public sectors have equal opportunities to experience slack in budgeting.

Falikhatur (2008) identifies the three primary factors contributing to managers' budgetary slack: Budgetary slack is employed to mitigate uncertainty, enabling managers to surpass or fulfill budgetary projections; (a) Managers have the belief that their performance will be seen positively by their superiors if they achieve their budgetary goals; (b) Budget plans are often modified during the process of allocating resources. Managers' laxity in budgeting can hurt organizations, possibly leading to ineffective resource allocation, lower profits, and lost opportunities (Schiff & Lewin, 1970). The likelihood of budgetary slack increases when managers believe they have control over budgeting (Silva et al., 2023). The Effect of Budgetary Slack on Upcoming Budgeting is Another Problem. The budgetary requirements of the following period will always be impacted by an optimally poorly designed budget from the previous period (Arthaswadaya, 2015).

Despite the extensive discussions on *budgetary slack*, previous studies have often been fragmented, lacking a comprehensive analysis of trends, contributors, and methodological approaches in this field. This study fills that gap by systematically evaluating *budgetary slack* research from 2014 to 2024 using bibliometric analysis. By mapping key authors,

journals, and research directions, this study not only provides a clearer picture of the existing literature but also highlights underexplored areas that warrant further investigation. The contributions of this research to the literature are threefold. First, it provides an integrated bibliometric analysis that captures the evolution of *budgetary slack* research, identifying dominant themes and methodologies. Second, it offers insights for regulators and practitioners to develop policies that mitigate *budgetary slack* and enhance budgetary integrity. Third, it creates a foundation for future studies by identifying emerging trends and research gaps, particularly in the context of corporate governance, financial accountability, and managerial behavior.

This paper evaluates the global budgetary slack research landscape, including its historical evolution, current state, and future directions. To ascertain the present level of research and potential future directions, bibliometric analysis has emerged as a crucial component of literature development. The study's Research Questions (RQ) addresses how budgetary slack research is developing between 2014 and 2024 in terms of trends in the number of publications and citations annually, as well as which countries and authors are the most productive, which journals publish the most publications on the subject, and which keywords are most commonly used in this field of study. The information from this bibliometric study can be the basis for further research on budgetary slack. This approach can bring up variables rarely researched on budgetary slack, including sparking ideas that can give rise to new variables in panel research. Apart from that, knowing various keywords that lead to research variables can enable various parties to mitigate or anticipate the occurrence of budgetary slack in their respective institutions.

This investigation aims to deliver three crucial advancements to the prevailing scholarly discussions: 1) It endeavors to present an all-encompassing review of the extant research by applying bibliometric analysis; 2) analyzing to recognize the creators, publications, and nations involved in research publishing; and 3) Analyzing the implications of the findings for companies and regulators to improve the technical and regulatory implementation of budgetary slack in Indonesia.

2. Literature Review

This study is based on Agency Theory (Jensen & Meckling, 1976), which describes conflicts between principals (owners) and agents (managers). Managers may create budgetary slack to secure easier performance evaluations or incentives, prioritizing their interests over shareholder value. This highlights the need for strong governance to limit opportunistic budgeting (Eisenhardt, 1989). Agency Theory helps explain why budgetary slack occurs and how to mitigate its effects. Research suggests that corporate governance, budget transparency, and performance-based incentives can align managerial decisions with shareholder goals. This study applies Agency Theory to analyze budgetary slack and its broader financial implications.

During the budget implementation stage, signs of financial leeway can be seen. When actual income surpasses budgeted targets and expenses fall short of budgeted targets, this is known as budgetary slack (Junjunan & Yulianto, 2019). When budget forecasts differ from actual capabilities, there is slack in the budget development process, facilitating budget implementation. However, as stated (Ambarini & Mispiyanti, 2020), budgetary slack arises

when actual income tends to be higher than the targets and actual expenses tend to be lower. A formula to facilitate achievement and reduce risk produces budgetary slack (Dinanti & Taqwa, 2022). Lack of focus on the budget agreement process, decision-makers in the budget formulation process, non-selective leadership or a lack of choice, and the occurrence of poor communication among parties involved in budget formulation are the causes of budgetary slack (Junjunan & Yulianto, 2019; Mahmudi, 2003). Because the budget set needs to reflect the manager's actual skills accurately, it may not be able to serve as a valuable tool for lower-level managers to evaluate their performance.

The occurrence of budgetary slack has encouraged the emergence of thinking about the importance of budgeting reform in Indonesia. This began to be answered in 2003 when the New Public Management concept was offered. Mahmudi (2003) claims that using NPM results in a change from a strict, bureaucratic, and hierarchical management structure to one more adaptable and focused on the market. Agents may be encouraged to engage in budgetary slack to secure better career opportunities by having their performance evaluated depending on budget targets. Numerous parties participating in the budgeting process may have advantages and disadvantages. Engaging in the budget creation process can lead to positive behaviors, such as inspiring people by using the budget to improve performance (Carolina, 2020). This incentive may encourage managers to actively participate in planning processes, whether implementing, planning or assessing developed plans or budgets.

Much research has been carried out to comprehend the many sources of budgetary slack in the public and commercial sectors between 2014 and the present. These studies revealed that more research had been done on budgetary slack in the public sector, but the findings about the numerous causal variables needed to be more consistent. Numerous scholars, including (Danil Mirza & Maria, 2020; Fanani & Saudale, 2019; Wira Bharata et al., 2021), and others have written articles about budgetary slack in Indonesia and published their findings in reputable journals both domestically and abroad. As previously discussed regarding the significance of budgets as management controls, researchers set out to look at a number of the causes of budgetary slack. With a publishing range of 2014 to 2024, journals are indexed in SCOPUS. The observation material was selected from journals indexed in SCOPUS, whose publications have undergone a rigorous selection procedure that produces high-quality and credible studies. The methods of "charting the field" and "analyzing the community" were employed to map and assess the evolution of research on budgetary slack.

3. Research Method

The bibliometric analytic methodology employed in this study employs quantitative and qualitative mapping and bibliometric visualization. The research questions in this study were addressed using the PRISMA protocol (Rojas Molina et al., 2023). The protocol included identification, screening, eligibility, and inclusion. According to (Díaz Tautiva et al., 2024), numerous important factors are considered while identifying anything, such as the source type, search engine, categories, language, time, and keywords. Journal papers are the only type of published work considered in this study (Harsanto & Firmansyah, 2023). The authors of these articles recognize that journal articles can only

contribute to theoretical and empirical discussions. This analysis exclusively utilizes the Scopus database as its search engine. According to (Alves & Mariano, 2018), Scopus is an internationally recognized database that contains high-quality articles published by respected publishers (Ochoa et al., 2019). According to (Pranckuté, 2021), all of WoS's information may be accessed freely with just one subscription, unlike Scopus's limited coverage. This enhances the ability to reproduce research results in subsequent investigations. Specifically, this research looks at the following search terms: accounting, finance, business, management, economics, and econometrics. In order to mitigate any bias associated with language, the search is conducted exclusively in English (Alatawi et al., 2023; Gulluscio et al., 2020). According to (Ibrahim et al., 2022) these measures guarantee an exhaustive and high-quality evaluation. Additionally, (Nguyen et al., 2020) and other writers possess the necessary language abilities to evaluate non-English research independently. The time frame from 2014 to 2024 covers ten years, per the search. Lastly, "Budgetary Slack" or simply "Budget Slack" were the keywords that were utilized.

The bibliometric analysis employed the methodologies of co-occurrence and co-authorship analysis. Co-occurrence analysis examined the co-occurrence of two or more terms in the articles. Through bibliometric networks, this approach helps to visualize conceptual linkages by determining the relationships between keywords in the literature. Meanwhile, co-authorship analysis examines how two or more authors work together to write publications. Co-authors are writers who work together to produce research publications. Analyses of co-occurrence and co-authorship can yield insights into the development of budgetary slack research.

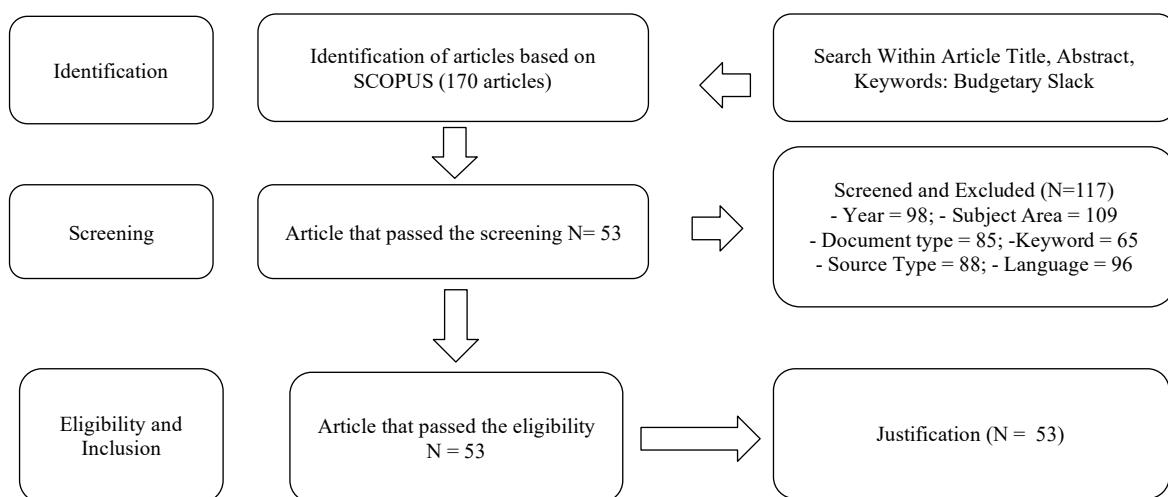


Figure 1. PRISMA Protocol Process

A total of 170 documents were discovered through initial keyword searches. Subsequently, specific criteria were used to conduct a screening process. The screening involved analysing the data based on language (96 documents), topic area (117 documents excluded), year (98 documents), and source type (88 documents). This screening phase led to a final count of 53 papers. A thorough examination of keywords and titles related to

accounting and management was conducted to ensure the relevance of the articles selected for the feasibility stage. Additionally, the data was error-checked to ensure its suitability for bibliometric analysis. The inclusion stage consisted of bibliometric analysis based on the 53 selected data points, publication statistics analysis, and validation examinations—the validation step aimed to verify the accuracy and robustness of the earlier stages through independent execution. An initial statistical study extracted key information, and a comprehensive bibliometric analysis utilizing VOSviewer as the primary tool and R for visualization was carried out (Aria & Cuccurullo, 2017).

4. Results and Discussion

With an average of 5 papers produced a year, Figure 2 and Table 1 illustrate the rising trend in the number of publications. A notable uptick in the number of documents was observed in 2017, 2019, and 2021, when there were eight research papers; in 2014, 2016, and 2018, there were five research papers; and in 2015 and 2023, there were four. Research in the field of budgetary slack looks stable every year; this shows that this topic will never be discussed thoroughly. The various possible causes are that slack often occurs without the public understanding that this is something that hurts budgeting.

**Table 1. Research on The Quantity and Technique of Budgetary Slack
From 2014 to 2024**

No	Year	Quantity	Quantitative	Qualitative
1.	2014	5	3	2
2.	2015	4	2	2
3.	2016	5	5	0
4.	2017	8	6	2
5.	2018	5	4	1
6.	2019	8	6	2
7.	2020	1	1	0
8.	2021	8	8	0
9.	2022	2	2	0
10.	2023	4	3	1
11.	2024	3	3	0
Total		53	43	10

Table 1 shows that the majority of research on budgetary slack was carried out using quantitative methods; this can be seen in the number of quantitative studies over ten years, 43, compared to qualitative research, 10. The topic of budgetary slack still has excellent opportunities for research using qualitative methods.

The United Kingdom has become the nation with the most publications, with 21 during the last ten years (Table 2). The US follows with eight publications, India with five papers, and Ukraine, Romania, Indonesia, and Brazil with three documents for each country. Figure 3 provides information on the global distribution of publications and highlights their contributions to the body of knowledge on budgetary slack.

Table 2. Global Dissemination of Publications and Citations by Country

No	Country	Publication	Citation
1	United Kingdom	21	366
2	United States	8	211
3	India	5	39
4	Indonesia	3	31
5	Brazil	3	29
6	Germany	1	24
7	Ukraine	3	18
8	Canada	1	11
9	Malaysia	2	10
10	Romania	3	7
11	Poland	1	6
12	France	1	2
13	Netherlands	1	2
Total		53	756

The United Kingdom and the United States have dominated research papers on budgetary slack over the last ten years. With up to 21 papers totaling 366 citations, the UK leads the world in research publications on budgetary slack. The United States comes in second with eight publications totaling 211 citations, while India comes in third with five publications totaling 39. With three total publications and 31 total citations, Indonesia is ranked 4th in the world. Meanwhile, other countries need to show results that can be ranked because there is an imbalance between publications and citations. Several countries show the same publications as Indonesia's three publications, but the number of citations varies, so a clear ranking cannot be compiled. Other countries do not show results that can be ranked because there is an imbalance between publications and citations. Several countries show the same publications as Indonesia's three publications, but the number of citations varies, so a clear ranking cannot be compiled. There are also those with high citations but not many publications in SCOPUS, which also results in the ranking not being significant.

Table 3. Journals on Budgetary Slack Literature

No	Journal	Year	Title	Citation
1.	Journal of Indonesian Economy and Business	2019	Do Leadership Styles Moderate The Relationship of Organizational Commitment and Budgetary Slack? An Experimental Approach (Nurani Islami & Nahartyo, 2019)	17
			Obedience Pressure Vs. Peer Pressure: An Explanation of Muslims' Religious Role In Budgetary Slack (Danil et al., 2021)	14
		2024	The Effect of Prepayment Contract Frames and Feedback on Budgetary Slack: An Experimental Investigation (Rohma & Anita, 2024)	0
2.	Journal of	2017	Deceptive Superiors And Budgetary Reporting:	2

No	Journal	Year	Title	Citation
	Management Accounting Research		An Experimental Investigation (Brink et al., 2017)	
		2017	The Effect of Injunctive Social Norms and Dissent on Budget Reporting Honesty (Altenburger, 2017)	7
		2018	Target Setting in Multi-Divisional Organizations (Matějka, 2018)	9
		2022	The Effect of Endogenous Discretionary Control Choice on Budgetary Slack: An Experimental Examination (Douthit et al., 2022)	13
3.	Accounting Review	2014	A Theory of Participative Budgeting (Heinle et al., 2014)	92
		2015	The Robustness of Honesty Effects on Budget Proposals When The Superior Has Rejection Authority (Douthit & Stevens, 2015)	57
4.	Accounting, Organizations, and Society	2019	Accounting and Passionate Interests: The Case of A Swedish Football Club (Baxter et al., 2019)	67
		2019	The Effects of Measurement Basis and Slack Benefits on Honesty In Budget Reporting (Church et al., 2019)	59
5.	Actual Problems of Economics	2014	Impact of Budgetary Slack on Organizational Goals (Yee & Wong, 2014)	1
		2016	The Impact of Budgetary Slack on Performance-Based Budgeting (Azar et al., 2016)	2
6.	International Journal of Applied Business and Economic Research	2016	The Consequences of Control Over Budgetary Slack and Managerial Orientation in Promoting Budgeting Harmonization (Damayanti, 2016)	2
		2016	The Effect of Budget Participation on Budgetary Slack In Local Government With Organizational Commitment and Environmental Uncertainty As The Moderating Variable (Setiawan & Ghazali, 2016)	3
7.	Quality - Access to Success	2019	Optimism, Participative Budgeting, and Managerial Performance In Regional Government Work Unit In Indonesia: A Contingency Theory Approach (Kahar et al., 2019)	6
		2021	Determinants of Budgetary Slacks in State-Owned Enterprises: Evidence From Indonesia (Lestari & Adi, 2021)	2
8.	R. Cont. Fin. – USP, São Paulo	2014	Do Shared Interests Affect The Accuracy of Budgets? (Beuren et al., 2015)	6
		2021	Influence of Budgetary Slack and Elements of The Budgetary Process on Perceptions of Justice (Dos Santos et al., 2022)	4
9.	Accounting	2021	The Role Of Budget Participation in Improving	11

No	Journal	Year	Title	Citation
			Managerial Performance (Amir et al., 2020)	
10.	Accounting Forum	2023	Modeling The Role of Strategic Planning, Strategic Management Accounting Information Systems, and Psychological Factors on The Budgetary Slack (Namazi & Rezaei, 2023)	8
11.	Advances in Management Accounting	2015	The Effect of A Leader's Reputation on Budgetary Slack (Chong & Loy, 2015)	5
12.	Asian Journal of Accounting Research	2017	A Study on Managers' Creation of Budgetary Slack In Emerging Economies: The Case of Vietnam (Ngo et al., 2017)	29
13.	Baltic Journal of Management	2023	Budget Participation and Employee Performance in Real Estate Companies: The Mediating Role of Budget Goal Commitment, Trust and Job Satisfaction (Silva et al., 2023)	3
14.	Comptabilité – Contrôle – Audit	2020	The Impact of The Budget Process on Budgetary Slack: The Moderating Role of Uncertainty Avoidance and Individualism (Mohanna & Sponem, 2020)	2
15.	Corporate Ownership & Control	2015	Exploring Budgetary Slack: The Influence of Organizational Commitment and Job-Related Tension (Yuen et al., 2015)	15
16.	Decision Sciences	2017	Project Portfolio Selection: A Newsvendor Approach (Hu & Szmerekovsky, 2017)	12
17.	European Accounting Review	2024	Managing Expectations Through Budgetary Slack: Evidence From Project Financing (Bozanic et al., 2024)	
18.	International Journal of Business Science and Applied Management	2022	Mitigating The Harmful Effect of Slack: Does Locus of Commitment (Organizational Versus Colleague) Play a Role? (Rohma, 2022)	22
19.	International Journal of Business and Society	2018	THE U-Shaped Relationships Between Business Units' Strategy, Use of Accounting Performance Measures and Budgetary Slack (Ratmono, 2018)	2
20.	International Journal of Civil Engineering and Technology	2017	Does E-Procurement Solve Indonesia's Local Government Budgetary Slack Through Its Adaptive Culture? (Zahra et al., 2017)	20
21.	International Journal of Economic Research	2017	The Dimensions of Organizational Commitment Moderates The Relationship Between Budget Participation And Budgetary Slack and Its Effects on Performance (Siallagan et al., 2017)	1
22.	International Journal of	2018	Budget Surplus Determinants in Indonesian Regional Government Budgets From A	8

No	Journal	Year	Title	Citation
	Economics and Management		Budgetary Slack Behaviour Point of View (Ariffianto & Andhariani, 2018)	
23.	International Journal of Law and Management	2021	A Study of Performance Model Development and Good Governance Budgeting (H. Haliah, 2021)	1
24.	International Journal of Mechanical Engineering and Technology	2017	The Impact of Participative Budgeting on Budgetary Slack: A Meta-Analysis (Zahra, 2017)	15
25.	International Review of Public Administration	2021	Asymmetric Information and Excess Budget: The Influence of Performance-Based Budgeting on Budgetary Slack in US States (Park & Jang, 2021)	5
26.	Journal of Management Control	2015	Budgetary Slack Under Budget-Based Incentive Schemes—The Behavioral Impact of Social Click or tap here to enter text.Preferences, Organizational Justice, and Moral Disengagement (Liessem et al., 2015)	24
27.	Journal of Accounting Literature	2018	Who is The Boss? The Economic and Behavioral Implications of Various Characterizations of The Superior in Participative Budgeting Research (Brink et al., 2018)	7
28.	Journal of Applied Business Research	2016	Participative Budgeting, Budgetary Slack, and Job Satisfaction In The Public Sector (Kahar et al., 2016)	16
29.	Journal of Applied Economic Sciences	2017	The Effect of Budgeting Participation and Slack Budget in Relationship Between Politic, Culture, and Regulation to Financial Performance (G. Haliah & Mediaty, 2017)	2
30.	Journal of Economics, Finance, and Administrative Science	2021	The Effect of Gender and Code of Ethics on Budgetary Slack Ethical Judgment: Experimental Evidence From Indonesia (Lucyanda & Sholihin, 2023)	5
31.	Journal of International Accounting Research	2017	Deceptive Superiors and Budgetary Reporting: An Experimental Investigation (Brink et al., 2017)	7
32.	Journal of Manufacturing Technology Management	2018	Innovation Capability Configuration and Its Influence on The Relationship Between Perceived Innovation Requirement and Organizational Performance Evidence From IT Manufacturing Companies (Su et al., 2018)	42
33.	Journal of Public Budgeting,	2019	Budget Preparers' Perceptions and Performance-Based Budgeting Implementation: The Case of	20

No	Journal	Year	Title	Citation
	Accounting and Financial Management		Iranian Public Universities and Research Institutes (Jalali Aliabadi et al., 2019)	
34.	Management Accounting Research	2021	Mood and Honesty in Budget Reporting (Altenburger, 2021)	15
35.	Management Decision	2016	Effects of Trust and Distrust on Effort and Budgetary Slack: An Experiment (Gago-Rodríguez & Naranjo-Gil, 2016)	9
36.	Pacific-Basin Finance Journal	2023	Information Technology Empowerment and Corporate Budget Control: Evidence From China (Shu et al., 2023)	2
37.	Polish Journal of Management Studies	2019	Managing Inefficiency of Participatory Budgeting by Investigating The Dark Side Personality of Managers (Suryadi et al., 2019)	6
38.	Procedia - Social and Behavioral Sciences	2014	The Influence Of Participative Budgeting on Budgetary Slack in Composing Local Governments' Budgets in Bali Province (Widanaputra & Mimba, 2014)	64
39.	RAUSP Management Journal	2019	Effects of The Management Control System on Unethical Behaviors (Klein et al., 2019)	19
40.	Revista Espanola De Financiacion Y Contabilidad	2023	The Effect of Frontline Employee Participation in Strategic Planning on Managers' Budget Slack Creation and Evaluation: A Lab-in-The-Field Experiment (Chen & Xede, 2023)	1
41.	Studies In Managerial and Financial Accounting	2014	Culture As a Recoupling Mechanism: Rationales For Construction of Budgetary Slack in Logistics (Nazarova, 2014)	1
42.	The Journal of Hospitality Financial Management	2019	The Tendency of Hotel Rooms Division Managers to Create Budgetary Slack (Ramdeen et al., 2019)	6
43.	Total Quality Management and Business Excellence	2024	Decoding Task Uncertainty: Moderating Effects on Participative Budgeting and Budgetary Slack Dynamics (Al Jasimee & Blanco-Encomienda, 2024)	6

Table 3 shows the names of journals containing budgetary slack publications from 2014 to 2024. Forty-three journals have published budgetary slack articles, and in that decade, two journals have successfully published budgetary slack articles, each with three articles, namely the Journal of Indonesian Economy and Business and the Journal of Management Accounting Research. Furthermore, with two budgetary slack publications

each, they are the journals Accounting Review, Accounting, Organizations and Society, Actual Problems of Economics, International Journal of Applied Business and Economic Research, Quality - Access to Success, and R. Cont. Fin. – USP, São Paulo. Thirty-five other journals contributed one budgetary slack article each. The table shows the distribution and opportunities that are still very large for research on budgetary slack, considering that slack incidents can occur in any business sector that uses participatory budgeting. Researchers can still publish in reputable international journals, especially SCOPUS-indexed journals.

Table 4. The Journal Data Indexed by SCOPUS and Classified According to Quartile Rankings

Year	Q1	Q2	Q3	Q4	Non Q	Total
2017	1	3	0	0	4	8
2019	3	3	0	1	1	8
2021	2	1	2	2	1	8
2018	2	1	2	0	1	6
2016	1	0	0	1	3	5
2014	1	1	0	1	1	4
2023	1	2	1	0	0	4
2015	3	0	0	0	0	3
2024	2	0	1	0	0	3
2022	0	1	1	0	0	2
2020	0	0	1	0	1	2
	16	12	8	5	12	53

Table 4 shows the distribution of articles published in SCOPUS-indexed journals with quartile 1 to no quartile. There were different quartile distributions in the three highest years of publication (2017, 2019, 2021). 2017 Scopus journals were the most prevalent, with four publications in non-quartile categories, three articles in Q2, and one in Q1. 2019 there were three publications in Q1 and Q2, while in Q4 and without Quartile, there was one publication each. Meanwhile, in 2021, there were two publications each in Q1, Q3, and Q4, while in Q2 and without Q, there was 1 article. The dominance of publications in SCOPUS-indexed journals is in Q1 and number Q, while in Q3 and Q4, there are still many publication opportunities for researchers who intend to research budgetary slack and publish in SCOPUS-indexed journals. However, look at the average publications in Q1 and Q2 each year. It does not show a significant distribution, considering that the journals indexed in Q1 and Q2 are also widely distributed among various reputable publishers. This shows that the opportunity to publish budgetary slack topics in reputable journals is still huge.

Figure 2 visually depicts the co-occurrence network generated by bibliometric analysis using VOSviewer. This bibliometric network has nodes and edges (van Eck & Waltman, 2014). Larger nodes indicate more in-depth study on specific topics. Circular nodes represent keyword occurrences (Donthu et al., 2021). Edges with greater thickness indicate more significant or more frequent connections between nodes. These edges form the links between nodes, showcasing the intensity of relationships within the study, according to

(Donthu et al., 2021). Additionally, how close the nodes are to each other demonstrates the extent of their interaction.

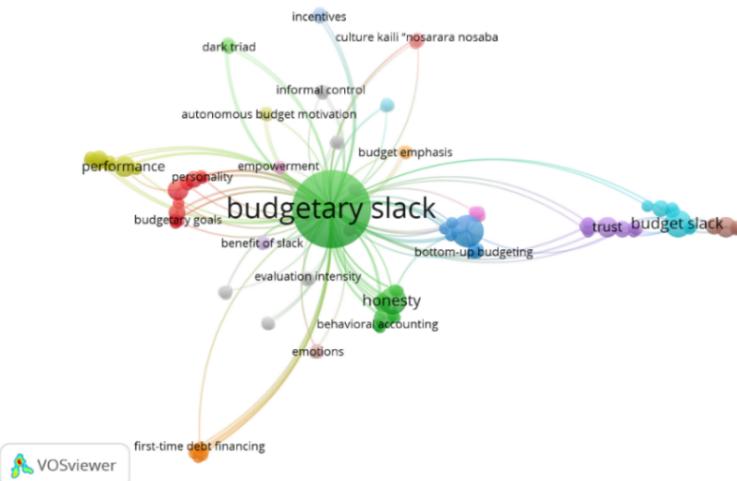


Figure 2. Network Visualization Co-Occurrence

From Figure 2, the VOS Viewer visual shows 126 items, 25 clusters, 333 links, and 101 total link strengths. The VOS Viewer shows various variables or topics related to discussing budgetary slack in research. Several other topics related to budgetary slack include participative budgeting, honesty, experimentation, trust, and so on. The table below shows the order of the top 10 other topics related to the budgetary slack topic.

Table 5. The Top 10 Terms That Are Used Most Frequently.

No	Cluster	Label	Links	Strength	Occurrences	Pub
1	10	budgetary slack	107	40	40	2017.62
2	8	participative budgeting	16	7	7	2018.14
3	6	budget slack	14	5	5	2020.20
4	1	honesty	13	5	5	2018.00
5	3	experiment	11	3	3	2020.33
6	5	trust	9	3	3	2020.33
7	1	budgeting	8	3	3	2016.67
8	1	reporting	8	2	2	2019.00
9	3	gender	8	3	3	2021.67
10	4	information asymmetry	8	2	2	2019.00

From Table 5, it appears that for the budgetary slack topic itself, there are nine topics with the highest links, starting from budgetary slack, participative budgeting, budget slack, honesty, experiment, trust, budgeting, reporting, gender, and finally, information asymmetry. For future research, if you want to discuss budgetary slack, it is better to avoid these topics because they have been discussed extensively. However, you can use topics other than those already mentioned and connect them to budgetary slack so that newness or novelty can emerge from the research.

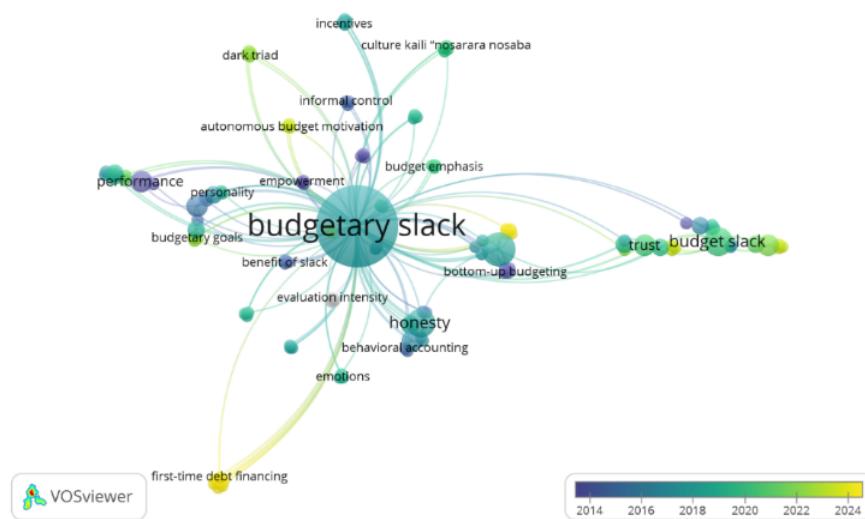


Figure 3. Overlay Visualization Co-occurrence

The VOS Viewer in Figure 3 shows the most recent year of research on budgetary slack. It moved from dark green to bright yellow, which means that the brighter the color, the more recently the research was conducted. The latest research on budgetary slack in 2024 in yellow was carried out on first-time debt financing, autonomous budget motivation, and budget slack.

Agency Theory highlights the conflict of interest between principals (owners) and agents (managers), where managers may engage in budgetary slack to secure personal advantages, such as easier performance evaluations or financial incentives. The dominance of quantitative methods in the analyzed studies supports the notion that budgetary slack is a measurable phenomenon that can be influenced by corporate governance mechanisms and incentive structures. Furthermore, Agency Theory suggests that the misalignment of interests between principals and agents can result in opportunistic behavior, leading to inefficiencies in resource allocation and financial misreporting. The prevalence of budgetary slack in various sectors underscores the need for stronger oversight mechanisms, including enhanced financial transparency, robust internal controls, and performance-based incentive systems to mitigate agency costs.

Table 6 presents the top 10 authors who have produced the most work in the field of budgetary slack, focusing on co-authorship analysis. **Zahra**, **Femilia**, and **Beuren** secured the first and second positions by having the most Scopus publications in the budgetary slack study. They each contributed three papers in 2018.

Table 6. Top 10 Most Productive Authors in Budgetary Slack

No	Cluster	Authors	Links	Strength	Doc	Pub
1.	1	Zahra, Familia	12	12	3	2018.00
2.	5	Beuren, Ilse Maria	6	6	3	2018.67
3.	1	Chariri, Anis	8	9	2	2016.50
4.	1	Rohman, Abdul	8	9	2	2016.50
5.	11	Douthit, Jeremy D	3	4	2	2018.50

No	Cluster	Authors	Links	Strength	Doc	Pub
6.	11	Stevens, Douglas E	3	4	2	2018.50
7.	14	Brink, Alisa G	2	4	2	2017.50
8.	14	Coats, Jennifer C	2	4	2	2017.50
9.	14	Rankin, Frederick W	2	4	2	2017.50
10.	25	Adi, Patria Prasetyo	1	2	2	2021.00

Furthermore, according to Table 6, [Zahra, Femilia, Beuren, and Ilse Maria](#), demonstrated the highest Total Link Strength, highlighting their strong ties with other writers and their effective teamwork. Collaborative research endeavors that involve numerous authors enhance the study of budgetary slack by utilizing a wide range of experiences and knowledge.

Co-authorship analysis reveals 43 clusters with 310 links and 316 total link strength, showing weak connections among researchers. [Zahra and Femilia](#) exhibited the highest network density. Figure 8 highlights recent contributions from authors such as [Rohma](#), [Frida Fanani](#), and [Bozanic](#) in 2023 and 2024. Limited collaboration presents opportunities for future researchers to strengthen interconnections in budgetary slack studies. This research provides insights for regulators and firms to improve budgeting policies and transparency. However, limitations include restricted access to Scopus-indexed journals and fragmented co-author relationships. Expanding research periods and using open-access sources can enhance future investigations.

Table 7. Potential Research Directions in the Future

Research Area	Research Questions	Suggested Methodology	Expected Contribution
Corporate Governance & Budgetary Slack	How do different governance mechanisms impact budgetary slack reduction?	Empirical study using panel data analysis	Provides insights into effective governance structures to mitigate slack.
Behavioral Aspects of Budgeting	How do managerial incentives influence budgetary slack creation?	Experimental or survey-based research	Enhances understanding of psychological and behavioral factors affecting budgeting decisions.
Technological Innovations & Budgeting	How can AI and data analytics improve budget accuracy and transparency?	Case studies and machine learning applications	Demonstrates the role of technology in reducing information asymmetry and slack.
Industry-Specific Budgetary Slack Analysis	Does budgetary slack vary across industries, and what factors drive these differences?	Cross-industry comparative study	Identifies sector-specific challenges and solutions for budgetary slack.
Ethical Considerations in Budgeting	How do ethical guidelines and	Qualitative research with in-depth	Examines the role of ethics in financial

Research Area	Research Questions	Suggested Methodology	Expected Contribution
	corporate culture impact budgetary slack?	interviews	decision-making and accountability.

Table 7 shows potential research areas that provide new avenues to deepen the understanding of *budgetary slack* in different contexts. By exploring governance mechanisms, behavioral incentives, technological innovations, industry-specific factors, and ethical considerations, future studies can contribute to more effective budgeting practices. Empirical and experimental methodologies will help validate theories and propose actionable recommendations for organizations and policymakers.

5. Conclusion, Implications, and Limitations

Budgetary slack refers to the deliberate underestimation of revenue or overestimation of costs to simplify target achievement, often benefiting managers. This study examines budgetary slack research from 2014 to 2024 using bibliometric analysis with PRISMA Protocol, VOS Viewer, and R Studio. Among 170 identified articles, 53 Scopus-indexed papers were analyzed, with 43 employing quantitative methods and 10 using qualitative approaches. The highest publication years were 2017, 2019, and 2021. The United Kingdom and the United States led in publications, with 21 and 8 articles, respectively. The most cited works included studies by [Heinle et al.](#) (92 citations), [Baxter et al.](#) (67 citations), and [Widanaputra et al.](#) (64 citations). Key journals publishing budgetary slack research include the Journal of Indonesian Economy and Business and the Journal of Management Accounting Research. Common keywords in budgetary slack studies include participative budgeting, honesty, experimentation, trust, and information asymmetry. Future research could explore underexamined variables beyond these topics.

This research provides a valuable addition by doing a bibliometric analysis to assess the existing literature on budgetary slack thoroughly. The findings of this research can also offer insights for regulators and firms to enhance legislation to reduce the incidence of budgetary slack. Various variables related to research on budgetary slack can be used as considerations for companies to make estimates and determine the right individuals to prepare the budget. In order to enhance the effectiveness of the budget, it should be more focused and encompass a wider range of activities to facilitate the attainment of company objectives. Several limitations of this research are: 1) many of the Scopus-indexed journals discussing budgetary slack need to be open access, which results in the author needing to be able to study in more depth the variables and variable relationships with budgetary slack. In future research, the author can use open-access sources so we can find a wider variety of research on budgetary slack; 2) VOS Viewer results for author and co-author show relationships split into many clusters; this makes it difficult for authors to determine relationships between authors. Furthermore, researchers can increase the number of years of observation, thus opening up the possibility of finding transparent relationships with researchers before the year currently used.

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