

Bibliometric Analysis of Budgetary Slack

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Article Info	ABSTRACT
Article history: Received July, 2026 Revised July, 2026 Accepted July, 2026 Keywords: Budgetary Slack Management Accounting Budgetary Control Bibliometric Analysis VOSviewer	Budgetary slack has become an important research topic in management accounting due to its implications for budgeting effectiveness, managerial behavior, and organizational performance. Although numerous empirical studies have examined the antecedents and consequences of budgetary slack, the overall development, intellectual structure, and emerging research directions of this field remain insufficiently explored. Therefore, this study aims to provide a comprehensive bibliometric analysis of budgetary slack research by identifying publication trends, influential studies, author and institutional collaboration patterns, country contributions, and major thematic developments. Data were collected from the Scopus database using the keywords related to “budgetary slack” and analyzed using bibliometric techniques with VOSviewer. The analysis includes citation analysis, co-authorship analysis, institutional and country collaboration analysis, keyword co-occurrence analysis, and density visualization. The findings reveal that budgetary slack research is primarily centered on budget control, budgetary participation, information asymmetry, performance evaluation, and managerial behavior. Highly cited studies demonstrate the importance of behavioral accounting perspectives, particularly regarding negotiation processes, incentive systems, and managerial decision-making. Furthermore, recent research trends indicate an increasing integration of ethical considerations, trust, organizational commitment, and management control systems in explaining budgetary slack behavior. The collaboration analysis shows the growing contribution of international research networks, with Indonesia and the United States emerging as important contributors. This study contributes to the literature by mapping the evolution of budgetary slack research and identifying future research opportunities related to digital budgeting systems, sustainability-oriented control mechanisms, and technology-driven management accounting practices. <i>This is an open access article under the CC BY-SA license.</i> 

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1. INTRODUCTION The notion of budgetary slack has long been recognized as an important issue in the realm of management accounting and	budgeting literature. Specifically, budgetary slack is a phenomenon that involves the deliberate understatement of revenues and/or overstatement of costs by managers in the budget-making process [1], [2]. It has major
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repercussions for firm performance, incentive systems and resource allocation. While traditionally considered to be dysfunctional and undesirable in its nature, as it tends to obscure real performance measures and misallocate organizational resources [3], others believe that slack has its useful side and can provide an organization with some flexibility when dealing with the uncertainties of the environment [4], [5].

The increasing number of studies on budgetary slack demonstrates its relevance from an interdisciplinary point of view. For example, within accounting studies, research papers have concentrated on the factors that determine slack creation, which can be motivation-related aspects, cultural characteristics, budgetary participation, and organizational design [6], [7], [8]. Organizational behavior researchers pay attention to psychological aspects of creating slack, among other things, people's perception of risks, fairness, and ethics [9], [10]. In turn, strategic management researchers study how slack is related to competitive conditions, innovation process, and risk management [11], [12].

Even though the concept of budgetary slack has a rich background, contemporary research on budgetary slack has been undergoing transformation with emerging theories and techniques for empirical testing. Contemporary research employs cutting-edge statistical tools, longitudinal and comparative methods to investigate the effect of contextual factors on budgetary slack behavior [13], [14], [15]. In addition, the emergence of modern technologies, such as integrated enterprise system and real-time data analysis techniques, is transforming the budgeting environment and changing the way that slack behavior is formed [16], [17]. These developments make it pertinent to review the extant literature on budgetary slack in a systematic manner. Narrative literature reviews, however, might not reveal all the structures of the field.

Bibliometrics—a group of quantifiable methods of analyzing publication trends, citation patterns, and

thematic evolution—is a technique that offers analysis methods which are well-suited to mapping a research field systematically [18]. Using bibliometrics involves using citations, co-citations, and keywords in order to map the growth and evolution of certain concepts [18]. In budgeting studies, bibliometric methods have been used in such areas of the field as performance measures, management control systems, and participatory budgeting, showing how helpful this tool can be in uncovering knowledge structures and emerging themes. Up to now, however, there has not been a bibliometric analysis conducted of budgetary slack.

These are some of the reasons why an analysis of budgetary slack is necessary. First, studies on budgetary slack cover numerous issues and methods, and it is possible that reviews have failed to capture the structural connections between the various studies done [19]. Second, there have been seminal studies in the field that have had considerable influence on current research; however, the development of this influence has never been formally documented. Third, given the fast pace of change both in terms of technology and organization, changes in research trends might have taken place which cannot be easily noticed from existing reviews.

The application of bibliometric methods has become increasingly easier and powerful thanks to software like VOSviewer, CiteSpace, and Bibliometrix [20]. Such software allows one to cluster research themes, determine the intellectual basis of the area using co-citation analysis and discover emerging research themes based on keywords. In case such analysis relies on academically indexed databases (such as Web of Science and Scopus), the results become replicable maps of scientific activity and contribute to higher analytical quality. Therefore, bibliometric mapping is not just about description; it forms the grounds for theory building and identifies gaps in empirical evidence.

Taking this into account, the current study attempts to bridge the gap that exists in the literature in terms of methodology and content through carrying out a

comprehensive bibliometric analysis of budgetary slack literature. Through the systematic review of the publications, citations, themes, and dynamics associated with budgetary slack research, this study intends to produce a visual map of knowledge of this field. This will not only serve as a tool for the well-established scholars but also as a guide for upcoming researchers in this field.

Although numerous scholars have paid attention to the issue of budgetary slack, an integrated bibliometric review of the field has not been attempted to date that would describe the intellectual structure, topic evolution, and citation pattern in the field. Most of the previous literature review attempts are based on narrative or conceptual approaches which are quite insightful but do not fully account for the quantitative dependencies between researchers, their publications, and topics. The lack of a bibliometric approach results in the absence of an adequate view of the history and structure of budgetary slack research, which, in turn, makes further accumulation of knowledge difficult and hinders the identification of emerging research areas.

2. METHODS

This study utilizes a bibliometric research methodology to conduct an empirical evaluation of the body of knowledge on budgetary slack. Bibliometrics helps to investigate publication trends, citations, and intellectual structures in the research area using a quantitative approach [18]. The main source of data collection is the Scopus database that was chosen because of its rich content of peer-reviewed journals, proceedings of conferences, and book chapters related to the fields of accounting, management, and organizational studies. The keyword "budgetary slack" was used in the search strategy of articles' title, abstract, and

keywords to collect all relevant publications. It was decided to limit the search only to the documents in English language.

The gathered dataset was then exported in CSV and BibTeX format from Scopus, including author information, affiliation, year of publication, source, citation, and keywords. The dataset was further cleaned of irrelevant records to maintain accuracy of data for future analysis. For the bibliometric analysis, VOSviewer version 1.6.21 was used to create visualizations of the network of co-authorships, co-citations, and keywords. VOSviewer is a tool that allows clustering of relevant articles and authors in order to show the intellectual landscape of the research field, with its most influential publications and emerging topics [20]. Visualization settings were configured to a minimal occurrence threshold to create relevant clusters without overcrowding the visual graph.

The analysis procedure involved the following steps. First, bibliometric indicators that were used included publication trends per year, types of documents, top authors in terms of productivity, and top cited journals in order to give an overview of how research on budgetary slack developed. Second, a network analysis was done through co-authorship and co-citation to illustrate collaboration in the field and determine the intellectual foundations of the subject. Finally, keyword mapping was carried out in order to see the dominant themes and emergent themes in the research domain. The maps were interpreted together with bibliometric indicators to give a complete picture of the field.

3. RESULTS AND DISCUSSION

3.1 Network Visualization

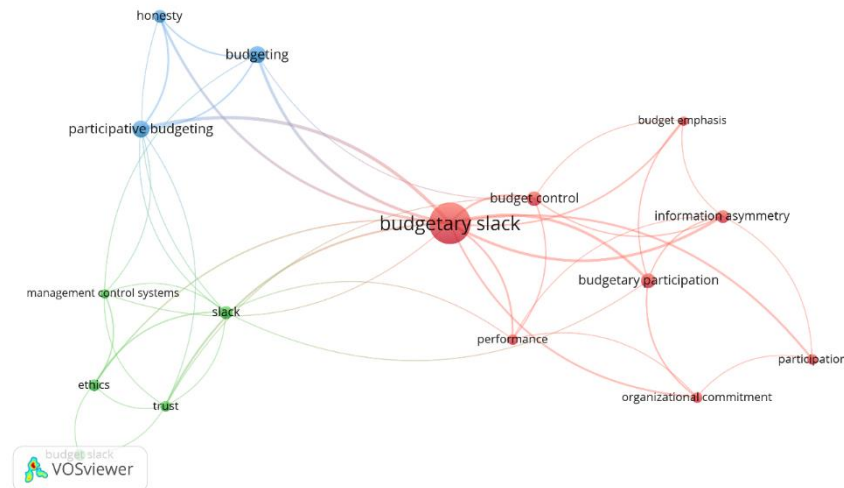


Figure 1. Network Visualization

Source: Data Analysis Result, 2026

Figure 1 portrays the structure of knowledge as well as the themes in relation to budgetary slack. From the figure, it can be seen that “budgetary slack” is the major or dominant keyword since it is portrayed by the biggest node size with the highest connectivity to other concepts. This implies that budgetary slack continues to be the main area of research, and researchers have been investigating the connection between budgetary slack and behavioral/managerial accounting.

The red cluster symbolizes the primary research stream concerning management control and behavioral budgeting theories. These keywords include budgetary slack, budget control, budgetary participation, information asymmetry, budget emphasis, performance, and organizational commitment. The connections between these keywords show that there are lots of studies focusing on budgetary slack within the managerial behavior framework, including the involvement of managers into the budgeting process and the information difference between managers and supervisors, which affect the motivation for budgeting slack. Information asymmetry underlines the relevance of agency theory, when managers use their private information to manipulate the budget goals.

The blue cluster highlights the significance of participative budgeting and

ethics in the explanation of budgetary slack behavior. The keywords, including participative budgeting, budgeting, and honesty, indicate that prior studies focused much on the analysis of whether the participation of employees in the process of preparing the budget helps reduce dysfunctional behavior or causes it. Participative budgeting can offer employees an opportunity to get involved in the process and become motivated; at the same time, it gives managers the chance to include budgetary slack in case they put personal interests above organizational goals.

The green cluster contains literature on studies concerning the management control systems, trust, ethics, and organizational behavior. The green cluster shows that budgetary slack is not only a technical aspect of the budget but can be affected by social and behavioral dynamics of organizations as well. Appearance of such terms as trust, ethics, and management control systems shows that there is an increasing focus on the way in which organizational culture and ethical climate of organizations can prevent budgeting problems. Good organizational trust and ethical management systems will lower the probability of the generation of unnecessary budgetary slack.

3.2 Overlay Visualization

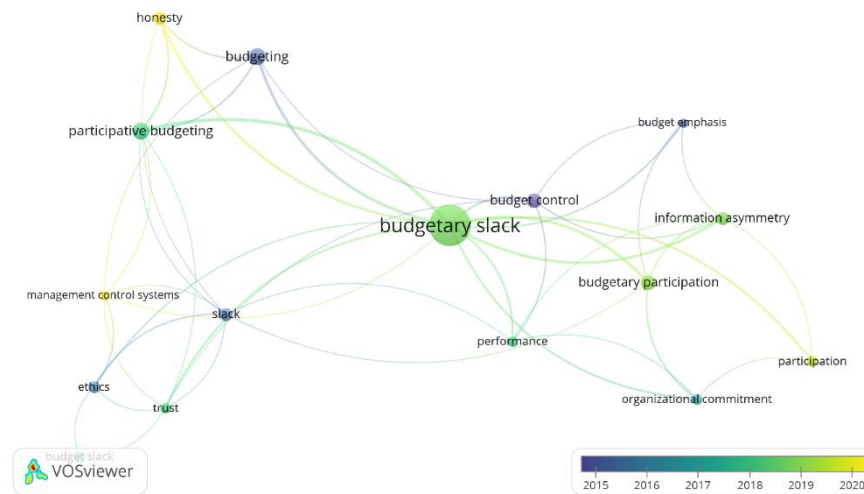


Figure 2. Overlay Visualization

Source: Data Analysis Result, 2026

Figure 2 shows the temporal evolution of the keywords used in budgetary slack literature between 2015 and 2020. Blue is used to show the period of publication of each keyword while yellow shows the recently used keywords. The result is indicative of the fact that budgetary slack is the core topic of the research. The keyword is strongly associated with several other accounting and organizational concepts. The dominance of the keyword shows the significance of studying the topic of budgetary slack.

The previous studies, depicted using blue and green nodes, mainly concentrated on management accounting-related issues such as budget control, budgeting, budget participation, information asymmetry, and performance. The aforementioned issues show that early attempts to study budgetary slack were heavily related to behavioral issues in accounting. In particular, budgetary slack was examined based on the impact of budgeting processes, managers' involvement

in these processes, and information asymmetry on the propensity of managers to generate slack. The link between budgetary slack and budget control shows the significance of control mechanisms.

The more recent themes, marked by yellow-colored keywords, demonstrate the increasing concern about ethical and behavioral aspects, especially such concepts as ethics, honesty, and management control systems. These themes imply that modern studies have moved away from purely economic and control-related arguments towards studying the influence of individuals' values, organizational culture, and trust on the prevention of slack behaviors in budgeting processes. The appearance of these themes implies the existence of potential avenues for future research through the combination of behavioral ethics, digital management control systems, and sustainable governance perspectives.

3.3 Citation Analysis

Table 1. Top Cited Research

Citations	Authors and year	Title
250	[21]	The relationship between two consequences of budgetary controls: Budgetary slack creation and managerial short-term orientation

120	[22]	Mediating effect of intrinsic motivation on the relationship between Islamic work ethic, job satisfaction, and organizational commitment in banking sector
105	[2]	Budgeting: An experimental investigation of the effects of negotiation
99	[23]	Why business unit controllers create budget slack: Involvement in management, social pressure, and Machiavellianism
98	[24]	Shared interest and honesty in budget reporting
96	[25]	Managing budget emphasis through the explicit design of conditional budgetary slack
93	[26]	The impact of participation in strategic planning on managers' creation of budgetary slack: The mediating role of autonomous motivation and affective organisational commitment
87	[15]	The effect of information asymmetry on negotiated budgets: An empirical investigation
85	[27]	Making virtue of necessity: The role of team climate for innovation in resource-constrained innovation projects
75	[28]	In defense of bureaucracy: Public managerial capacity, slack and the dampening of environmental shocks

Source: Scopus, 2026

Table 1 shows the most impactful scholarly publications in the area of budgetary slack research in terms of citation frequency. It can be seen from the findings that [21] publication was the most cited one (250), revealing an important role of the researcher's study in explaining the connection between the use of budgetary control system, budgetary slack creation, and managers' short-termism. This result reveals the fact that earlier scholars mostly concentrated on the issue of identifying the

role of control systems and incentive systems in explaining dysfunctional budgeting behaviors. Other frequently cited works, namely, the works of [2], [15] and [23] also reveal the significance of negotiations, information asymmetry, social influences, and managerial factors in explaining the budget slack decisions. Recent influential studies have broadened the discussion through introducing a behavioral and organizational perspective.

3.4 Density Visualization

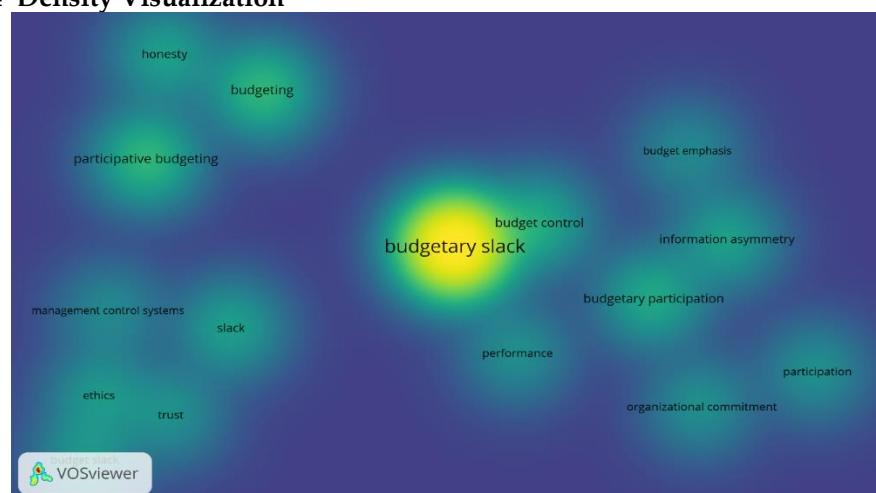


Figure 3. Density Visualization

Source: Data Analysis Result, 2026

As illustrated in Figure 3 below, the presence and significance of the keywords can be observed from the frequency and relevance of their usage in budgetary slack literature. As shown by the yellow circle around the term “budgetary slack,” it can be observed that this keyword denotes the main stream of research with the most significant level of interest among academics. This is due to the relationship of the term to such areas of budgetary slack as budget control, budgetary participation, information asymmetry, and performance, which means that budgetary slack literature deals mainly with budgetary slack in the management control system and behavioral accounting framework.

3.5 Author Visualization

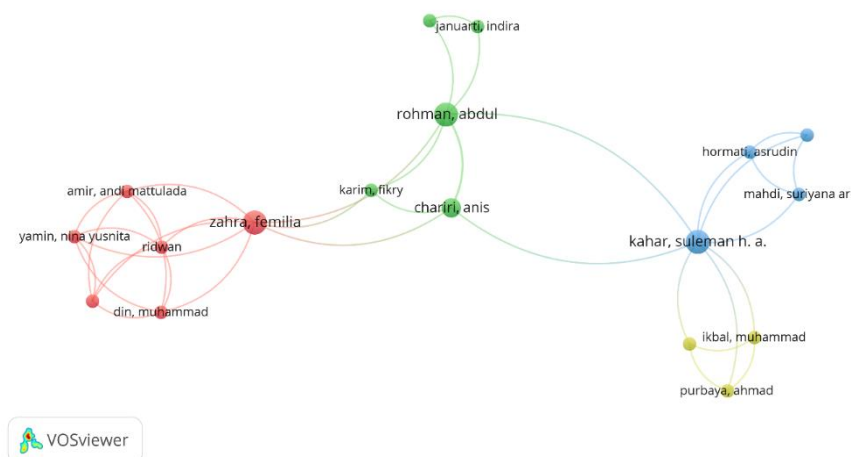


Figure 4. Author Visualization

Source: Data Analysis Result, 2026

The intellectual relationships and research collaboration of authors that have contributed to the field of knowledge as indicated by the dataset are presented in Figure 4 below. The network is segmented into various clusters, which imply that there are distinct sets of researchers that collaborate among themselves in terms of their work. The first cluster seen on the left side is the red cluster and implies the presence of an extremely collaborative research set that consists of researchers like Zahra, Femia; Ridwan; Yamin, Nina Yusnita; Amir; Matmulatada; and Din, Muhammad. The

This visualization also highlights some other fields that have less density but are still related, such as participative budgeting, honesty, ethics, trust, organizational commitment, and management control systems. This list shows the broadening of budgetary slack research from accounting issues to behavioral and organizational issues. The inclusion of ethical and trust issues shows growing interest in understanding the influence of people's values and organizational control environment on managers' behavior regarding budgetary slack creation and manipulation.

green cluster at the center, consisting of researchers like Rohman, Abdul; Karim, Fikry; Chariri, Anis; and Januarti, Indira, is also a significant research collaboration network that reaches out to other networks as well. Also evident from the visualization is that certain researchers serve as connecting nodes in various clusters of collaboration, especially Rohman, Abdul and Kahar, Suleman H.A. These bridging researchers seem to have more extensive connections with other research clusters, and might thus be important in terms of knowledge transfer between research perspectives.

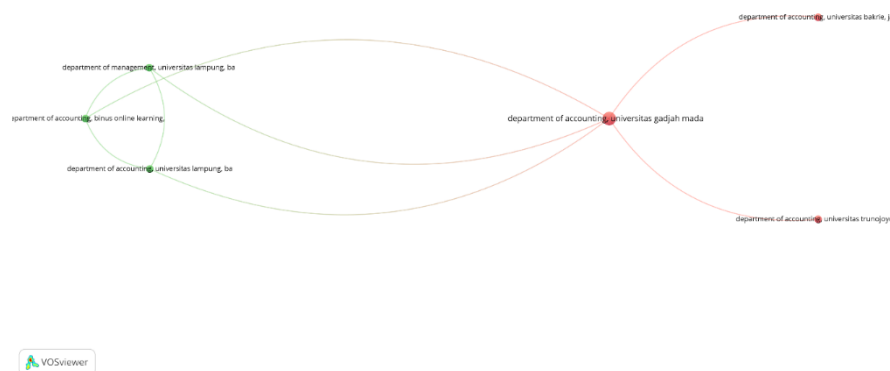


Figure 5. Institution Visualization

Source: Data Analysis Result, 2026

Figure 5 shows the pattern of collaboration between affiliated institutions in the budgetary slack research area. Figure 5 illustrates a number of clustered institutional groups. In particular, Department of Accounting, Universitas Gadjah Mada is presented as one of the key nodes in terms of linking various institutions through collaboration. The left side of the figure shows a number of institutional groups such as

Department of Accounting, Universitas Lampung and Department of Management, Universitas Lampung as a tightly-knit cluster of collaboration inside a university context. At the same time, the right side of the figure reveals that Department of Accounting, Universitas Bakrie and Department of Accounting, Universitas Trunojoyo collaborate through their relation to Universitas Gadjah Mada.

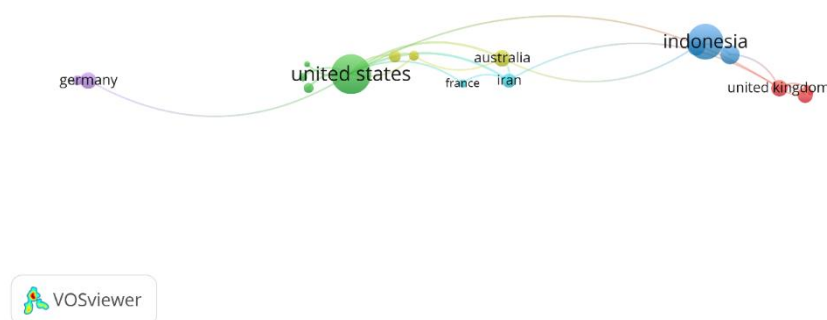


Figure 6. Country Visualization

Source: Data Analysis Result, 2026

This can be seen from Figure 6 below which shows how the research cooperation among nations for studies on budgetary slack takes place. This network shows that the two

major countries for such cooperation are Indonesia and USA, evidenced by their large nodes since they imply high research productivity and influence. From this figure,

it is clear that Indonesia collaborates with many other nations including the UK, Australia, Iran, and France, and this means that there are active research cooperations among Indonesian researchers and other nations. It is also clear from the figure that USA plays a role of collaboration center with other nations such as Germany, France, Australia, and Iran.

The visualization also proves the fact that international cooperation within this field of study occurs rather concentrated in relation to a few countries. The relationship between Indonesia and the United States constitutes an example of a research connection, while the rest of the countries like Germany, the UK, Australia, and Iran represent the small connected countries. The distribution of budgetary slack research can be seen as evolving not only from Western accounting but also becoming increasingly more globalized in its nature.

4. CONCLUSION

This paper represents a full-scale bibliometric review of budgetary slack research through an analysis of its publication pattern, important works, intellectual structure, and network of collaborations. The results obtained suggest that the topic of budgetary slack is still relevant to the field of management accounting, and the research mostly concentrates on the link between the budgeting control system, budgetary participation, information asymmetry, managerial behavior, and performance of an organization. As it was shown through the analysis of citations, the key contribution to the field was made by papers that studied the behavioral outcomes of budgeting. However, as seen from the keywords' analysis, the field has moved from conventional budgeting theories to wider discussion covering the issues of ethics, trust, organizational commitment, and management control.

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