

# Mapping the Intellectual Structure and Research Trends of Budgetary Slack

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Article Info	ABSTRACT
<p><i>Article history:</i></p> <p>Received Jul, 2025 Revised Jul, 2025 Accepted Jul, 2025</p> <hr/> <p><i>Keywords:</i></p> <p>Bibliometric Analysis; Budgetary Slack; Participative Budgeting</p>	<p>This study aims to map the intellectual structure and research trends of budgetary slack through a comprehensive bibliometric analysis of peer-reviewed publications from 1980 to 2024. Utilizing data from the Scopus database and analytical tools such as VOSviewer, the study explores co-citation networks, country collaborations, keyword co-occurrences, temporal evolution, and research density. The results highlight key contributors such as Kenneth A. Merchant and Anthony S. Dunk, foundational theoretical frameworks including agency theory and management control systems, and dominant research themes like participative budgeting, information asymmetry, and performance-based budgeting. A temporal shift is observed from control-based frameworks to behaviorally oriented and contextual themes such as trust, procedural justice, and organizational commitment. The United States remains the central hub of scholarly activity, although research from Asia and the Middle East is increasingly contributing to the discourse. The findings reveal both well-established and underexplored areas, offering valuable direction for future research and practical implications for budgeting practices across organizational settings.</p> <p><i>This is an open access article under the <a href="#">CC BY-SA</a> license.</i></p> <div></div>
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## 1. INTRODUCTION

Budgetary slack has emerged as a critical topic within the fields of management accounting and organizational behavior due to its implications for performance evaluation, strategic decision-making, and managerial ethics. The concept refers to the deliberate underestimation of revenue or overestimation of costs by managers during the budgeting process, creating a cushion that can be used to ensure performance targets are met more easily [1]. This behavior, while often

rationalized as a defensive strategy against performance pressure or uncertainty, raises concerns about the accuracy and transparency of internal control systems. Over the decades, scholars have explored the antecedents and consequences of budgetary slack, ranging from psychological drivers and incentive systems to cultural influences and governance mechanisms [2], [3a].

The study of budgetary slack intersects multiple theoretical perspectives, including agency theory, behavioral economics, and contingency theory. Agency

theory, for example, explains budgetary slack as an outcome of divergent interests between principals (owners) and agents (managers), where information asymmetry allows agents to manipulate budget estimates for personal gain [4]. On the other hand, behavioral approaches emphasize the role of individual traits such as risk aversion, fairness perception, and ethical orientation in shaping slack-related behaviors [5], [6]. As organizations continue to shift toward participative budgeting processes, which encourage managerial input, the potential for slack creation becomes more pronounced, prompting further investigation into motivational and contextual factors [7].

Technological advancement and globalization have further complicated the dynamics of budgetary slack. In increasingly complex and decentralized organizations, budgeting involves negotiation across diverse units and cultures, which can influence the extent and form of slack creation. Furthermore, modern budgeting practices such as beyond budgeting, zero-based budgeting, and rolling forecasts are transforming the way managers engage with budget processes [8]. As these innovations challenge traditional assumptions, they also reshape the nature of budgetary slack, prompting the need for renewed scholarly attention. The proliferation of research in this area reflects its practical relevance and theoretical richness.

Despite the growing volume of literature, the intellectual landscape of budgetary slack remains fragmented. Studies often vary widely in terms of focus, methodology, context, and theoretical grounding, resulting in a body of work that is both diverse and diffuse. Some scholars have concentrated on experimental and survey-based methods to examine individual behavior, while others employ archival data or case studies to analyze organizational and institutional determinants. In addition, research has been conducted across various sectors and cultural settings, contributing to a complex mosaic of findings that can be difficult to synthesize. As such, there is a

growing need to systematically map the field and trace its intellectual development.

Bibliometric analysis offers a powerful tool to uncover the structural patterns and evolving themes within the literature on budgetary slack. By leveraging quantitative techniques such as co-citation analysis, bibliographic coupling, and keyword co-occurrence, scholars can identify influential authors, journals, and clusters of research that define the field's intellectual structure. This approach enables a macroscopic view of how the study of budgetary slack has progressed over time, revealing dominant paradigms, emerging trends, and potential research gaps [9]. Such insights are particularly valuable for guiding future inquiry and fostering theoretical integration.

While numerous studies have examined budgetary slack from diverse angles, the field lacks a cohesive understanding of its intellectual evolution and thematic development. The absence of a comprehensive bibliometric analysis has led to limited awareness of key research trajectories, influential contributions, and potential synergies across sub-disciplines. Consequently, scholars and practitioners may struggle to navigate the existing knowledge base, identify emerging trends, or pinpoint underexplored areas. A systematic mapping of the literature is thus essential to consolidate fragmented insights and support the advancement of this vital research domain. This study aims to map the intellectual structure and research trends of budgetary slack through a bibliometric analysis of peer-reviewed literature published between 1980 and 2024.

## 2. METHOD

This study employed a bibliometric analysis approach to systematically examine the intellectual structure and research trends of budgetary slack literature. Bibliometric analysis is a quantitative method that uses citation data to assess patterns of scholarly communication, identify key contributors, and map thematic developments within a

research domain [9]. The analysis was conducted using peer-reviewed journal articles indexed in the Scopus database, which was chosen for its comprehensive coverage of high-quality management and accounting publications. The search was limited to the period 1980–2024 to capture the evolution of the field over four decades, accommodating both foundational works and emerging research. Search terms included “budgetary slack,” “budget slack,” and “budget manipulation,” filtered by subject areas such as business, management, accounting, and economics to ensure relevance.

After applying inclusion and exclusion criteria such as document type (articles only), language (English), and relevance to managerial and organizational

aspects of budgeting, a total of [549] publications were retrieved. The bibliographic data (titles, abstracts, keywords, authors, affiliations, sources, and references) were exported in RIS or CSV format and processed using VOSviewer, a widely used software tool for constructing and visualizing bibliometric networks [10]. Three types of bibliometric analyses were performed: (1) co-authorship analysis to explore collaborative patterns among researchers and institutions, (2) co-citation analysis to identify the foundational intellectual structure of the field, and (3) keyword co-occurrence analysis to detect major research themes and their development over time. These techniques allowed for both structural and temporal mapping of the literature.

3. RESULT AND DISCUSSION  
3.1 Co-Authorship Analysis

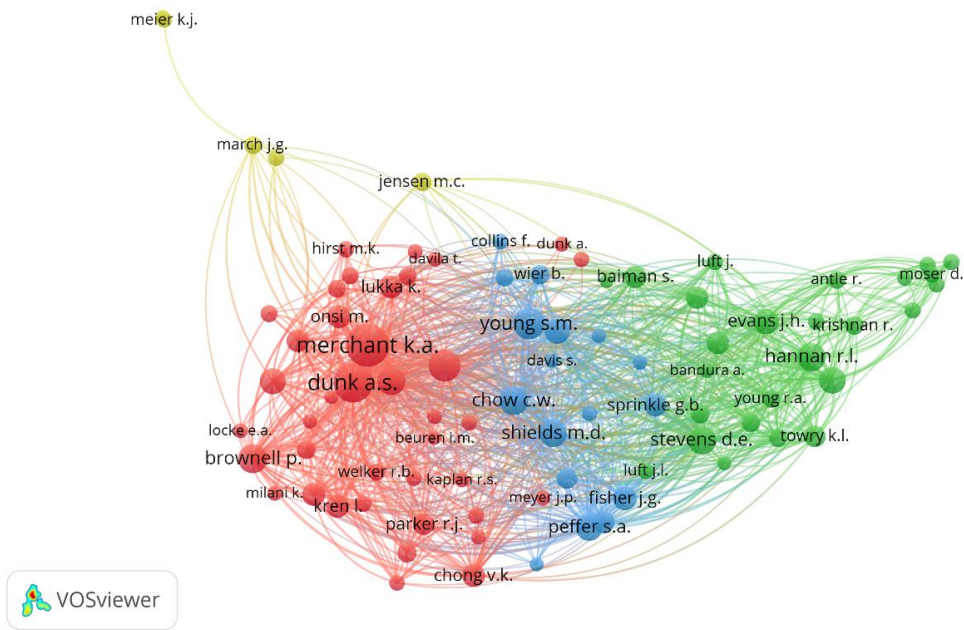


Figure 1. Author Visualization  
Source: Data Analysis

Figure 1 illustrates the co-citation relationships among influential authors in the field of budgetary slack and related areas. The map is divided into distinct clusters, each representing a different thematic or theoretical orientation. The red cluster, anchored by authors like Merchant K.A. and Dunk A.S., appears to

represent foundational works in management control systems and behavioral budgeting, emphasizing empirical investigations and organizational practices. The blue cluster, with central figures such as Young S.M., Shields M.D., and Chow C.W., suggests a focus on experimental

research and participative budgeting, including incentive design and information asymmetry. The green cluster, dominated by *Evans J.H.*, *Sprinkle G.B.*, *Stevens D.E.*, and *Towry K.L.*, is likely aligned with behavioral economics and psychological perspectives in accounting, exploring how individual cognition and motivation shape

budgetary decisions. Finally, the yellow cluster, more peripheral and centered around *March J.G.* and *Meier K.J.*, represents a more theoretical or strategic perspective, possibly drawing on organizational theory and decision-making frameworks.

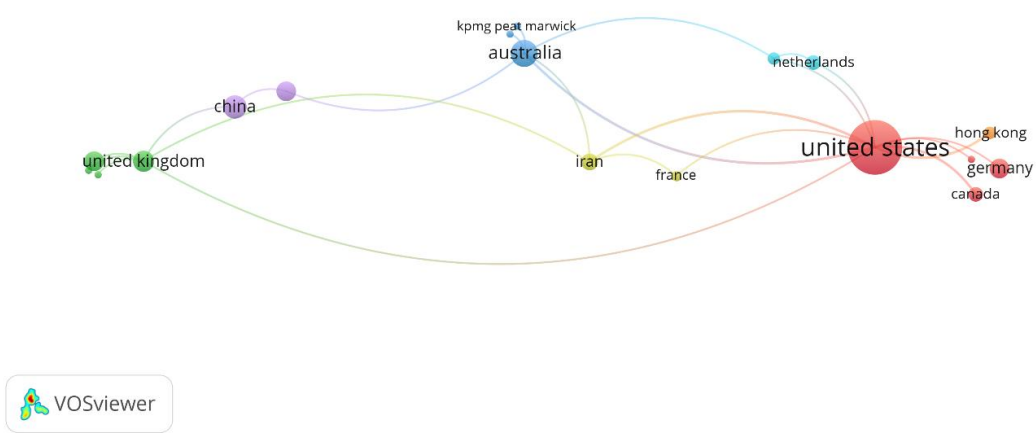


Figure 2. Country Visualization  
Source: Data Analysis

Figure 2 displays a country collaboration network in the field of budgetary slack research, where each node represents a country and the links signify co-authorship or institutional collaboration. The United States dominates the network, illustrated by its large red node and extensive connections, indicating its central role in producing and disseminating influential research. The U.S. collaborates closely with countries such as Australia, Netherlands, Iran, Germany, and Canada, highlighting its role as a global

hub in academic partnerships. Australia also emerges as a significant player, with links to both the U.S. and KPMG Peat Marwick, suggesting strong academic-industry collaboration. The United Kingdom, while slightly more peripheral, maintains ties with China and Iran, illustrating a growing East-West academic exchange. Countries like France, Hong Kong, and Germany are connected but with relatively smaller nodes, indicating their emerging yet still limited influence.

3.2 Citation Analysis

Table 1. Most Cited Article

Citations	Author and Year	Title
333	[11]	Toward a Theory of the Political Entrepreneur: Evidence from Local Government
236	[12]	The relationship between two consequences of budgetary controls: Budgetary slack creation and managerial short-term orientation

Citations	Author and Year	Title
172	[1]	Budgeting and the propensity to create budgetary slack
119	[13]	Impact Of Participation In The Budgetary Process On Managerial Attitudes And Performance: Universalistic And Contingency Perspectives
101	[14]	Mediating effect of intrinsic motivation on the relationship between Islamic work ethic, job satisfaction, and organizational commitment in banking sector
94	[15]	Budgeting: An experimental investigation of the effects of negotiation
91	[16]	Managing budget emphasis through the explicit design of conditional budgetary slack
88	[17]	Why business unit controllers create budget slack: Involvement in management, social pressure, and Machiavellianism
88	[18]	Shared interest and honesty in budget reporting
86	[19]	The effect of information asymmetry on negotiated budgets: An empirical investigation

Source: Scopus, 2025

3.3 Keyword Co-Occurrence Analysis

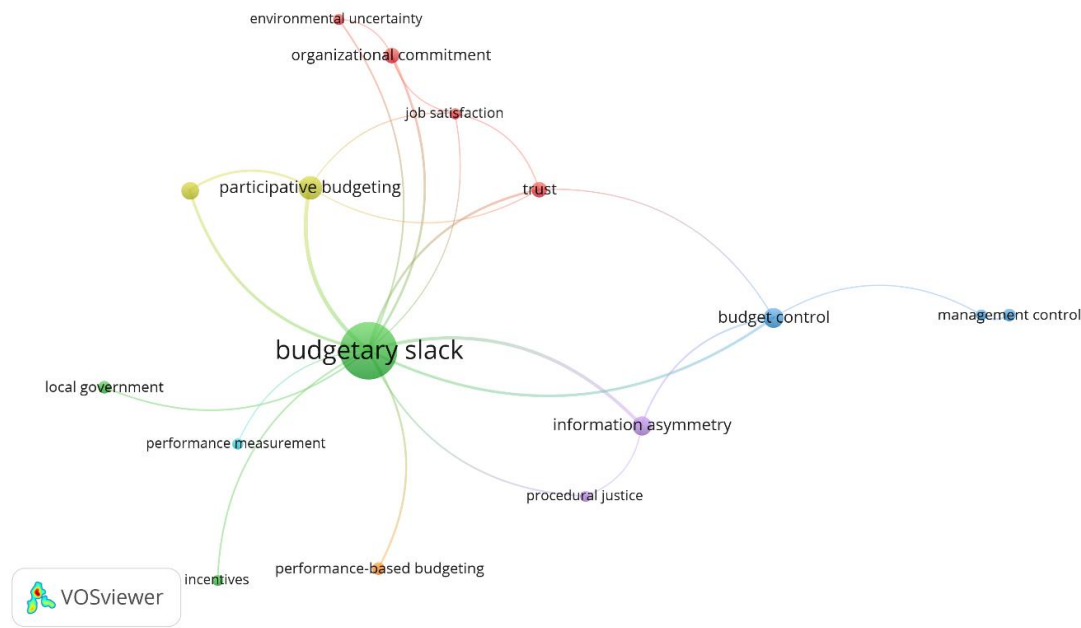


Figure 3. Network Visualization  
Source: Data Analysis

Figure 3 provides a thematic overview of the key concepts associated with *budgetary slack* in the academic literature. At the center of the map is the term “budgetary slack,” which acts as a hub connected to several surrounding concepts, indicating its role as the core theme in this bibliometric analysis. The visual representation suggests that research on budgetary slack is deeply intertwined with multiple domains,

including organizational behavior, budgeting practices, and control systems. The prominence and central position of “budgetary slack” confirm its pivotal function as the main node around which the scholarly discourse revolves. One significant cluster in the map is formed around participative budgeting, which appears prominently and connects to nodes like “organizational commitment,” “job satisfaction,” and

“trust.” This cluster illustrates that scholars have explored how involving employees in the budgeting process may impact their perception of fairness, increase their motivation, and reduce the tendency to create slack. Concepts like “environmental uncertainty” and “local government” further suggest that participative budgeting has been studied in various organizational contexts, including public institutions. The presence of “organizational commitment” and “job satisfaction” reflects the behavioral and psychological aspects influencing budgetary behavior, supporting the argument that slack creation is not merely opportunistic but also contextual.

Another major cluster connects “budgetary slack” with information asymmetry, procedural justice, and budget control. This group aligns with agency theory and examines how imbalances in information access between superiors and subordinates can enable slack behavior. The inclusion of “procedural justice” indicates a growing interest in how perceptions of fairness in the budgeting process influence managerial behavior. The link between “budget control” and “management control” implies that tight monitoring and formal systems can either reduce or inadvertently encourage slack depending on how they are perceived by employees. This branch of research underscores the balance between control mechanisms and employee autonomy in preventing dysfunctional budgetary practices.

In another cluster, performance-based budgeting, incentives, and performance measurement are central themes, emphasizing the role of performance management systems in shaping budgetary behavior. These concepts are closely tied to the design of incentive schemes and how they may motivate individuals to either avoid or engage in slack behavior. For instance, poorly designed incentive systems might unintentionally encourage slack as a risk mitigation strategy. This cluster reflects the practical managerial concerns of aligning budgeting practices with performance outcomes and ensuring that organizational goals are effectively met through strategic budget planning.

The co-occurrence of trust, organizational commitment, and job satisfaction suggests a psychological and ethical dimension in the literature on budgetary slack. These terms indicate that researchers are increasingly exploring the softer side of budgetary behavior—how organizational culture, leadership, and interpersonal relationships influence decisions to pad budgets. The connection between trust and participative budgeting reveals that when employees feel trusted and fairly treated, they may be less inclined to manipulate budgetary estimates. This growing body of literature bridges accounting research with human resource and organizational psychology domains, pointing to an interdisciplinary trend in understanding the mechanisms behind budgetary slack.

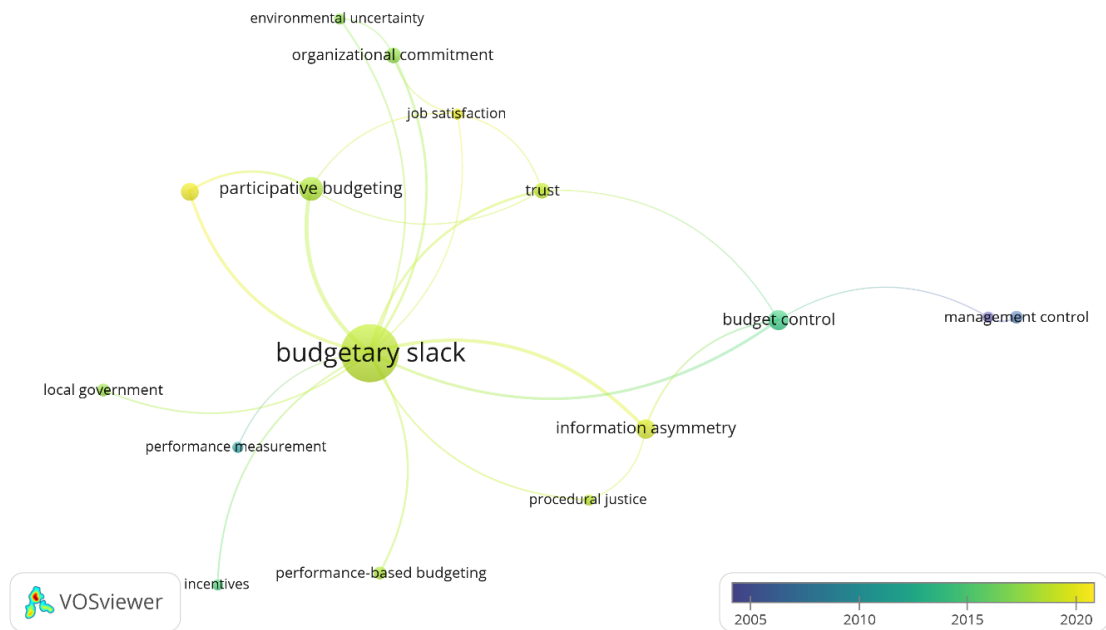


Figure 4. Overlay Visualization  
Source: Data Analysis

Figure 4 displays the temporal evolution of key research themes related to *budgetary slack* based on keyword co-occurrence and average publication year. Colors range from blue (older studies) to yellow (newer studies), offering insight into how thematic focuses have shifted over time. The central node, “budgetary slack,” appears in light yellow-green, suggesting that it has remained a consistently studied topic with sustained scholarly interest up to recent years. Keywords like “participative budgeting,” “performance-based budgeting,” and “information asymmetry” are also in yellow-green hues, indicating their continued relevance and presence in more recent literature.

Notably, the dark blue-to-green transition of terms like “management control” and “budget control” suggests that these concepts were among the earlier focal points in budgetary slack research, especially in the early 2000s. These topics were foundational in

establishing the theoretical underpinnings of slack behavior, particularly through agency theory and control system frameworks. Over time, however, the research emphasis has gradually shifted toward more behaviorally oriented themes, such as “trust,” “organizational commitment,” and “job satisfaction,” which appear in lighter shades of green and yellow. This trend indicates a growing interest in psychological and motivational factors influencing budgetary behavior in organizational contexts. Recent developments in the field are also evidenced by the appearance of newer and brighter yellow nodes like “procedural justice,” “local government,” and “incentives,” which reflect emerging or intensifying areas of inquiry. These shifts highlight a broader trend toward integrating organizational justice and public sector perspectives into the study of budgetary slack.



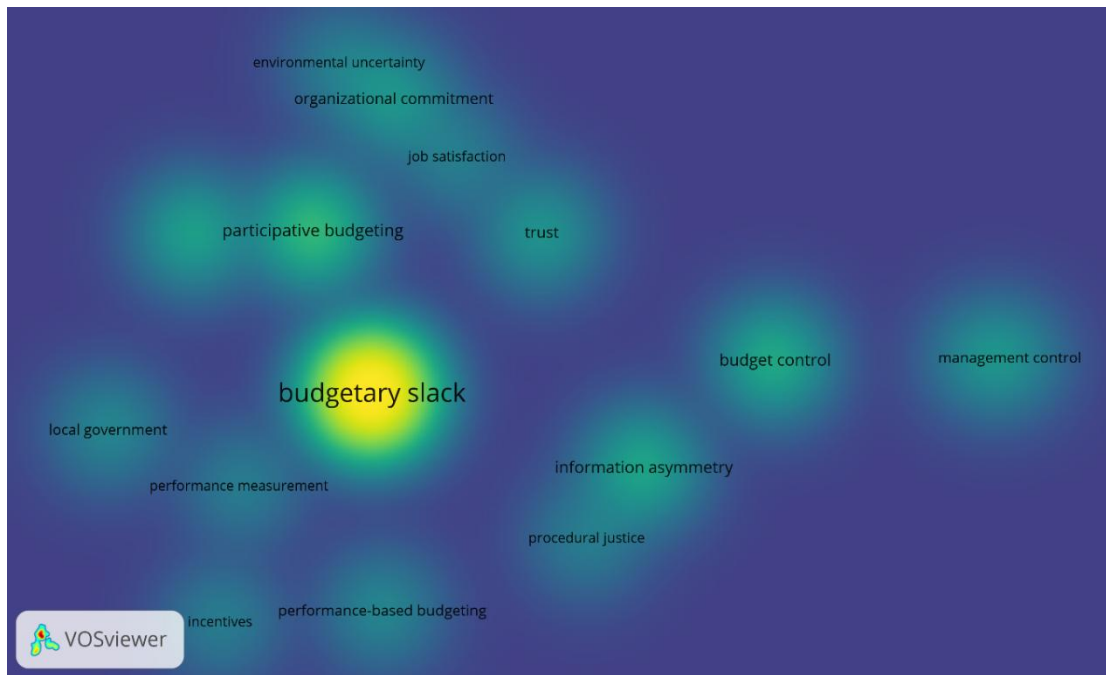


Figure 5. Density Visualization

Source: Data Analysis

Figure 5 highlights the density and frequency of keyword occurrences in the budgetary slack research domain. At the center, *"budgetary slack"* exhibits the brightest yellow glow, indicating it is the most frequently discussed and central topic in the literature. Surrounding this core, keywords like *"participative budgeting," "information asymmetry,"* and *"budget control"* show strong green intensities, suggesting these themes are also widely addressed and form key conceptual pillars in understanding slack-related behavior. The visual clustering around these terms reflects their tight semantic and empirical association with budgetary slack, particularly in exploring its drivers, control mechanisms, and consequences. Moving further from the central node, the heatmap displays moderate activity around terms like *"organizational commitment," "performance-based budgeting,"* and *"procedural justice"*, indicating emerging or moderately explored topics. These areas, while not as dominant, show that scholars are increasingly integrating behavioral and ethical dimensions into the analysis of

budgeting practices. More peripheral terms such as *"local government," "job satisfaction,"* and *"management control"* have lower density and appear in cooler blue regions, suggesting either niche interest or underexplored potential within the broader research landscape.

### 3.4 Discussion

#### a. Foundational Intellectual Structure: Core Contributors and Theories

The co-citation network revealed that the intellectual structure of budgetary slack research is grounded in several key theoretical and methodological traditions. Central figures such as Kenneth A. Merchant, Anthony S. Dunk, and Robert H. Chenhall have played pivotal roles in shaping the discourse around budgetary behavior, control systems, and participative budgeting. These authors, clustered prominently in the red and blue groups of the co-citation map, reflect the field's heavy reliance on management control theory, behavioral accounting, and agency theory. [20], for instance, have emphasized how control systems, when poorly designed, can lead to



opportunistic slack behavior, while Dunk's empirical studies have frequently explored how participation, performance pressure, and risk preferences influence slack creation.

[21] work on agency theory also continues to serve as a theoretical backbone, offering a framework for understanding the principal-agent conflicts inherent in the budgeting process. These conflicts often arise due to information asymmetry, which enables subordinates to distort budget estimates for self-serving purposes. Behavioral perspectives further enrich the literature by integrating psychological variables such as trust, organizational commitment, and fairness, illustrating how slack behavior is shaped not only by rational calculations but also by affective and ethical considerations [22], [23].

**b. Thematic Clusters: Key Concepts and Research Streams**

Keyword co-occurrence analysis identified three dominant clusters in the literature. First is the participative budgeting stream, which links budgetary slack to employee involvement, motivation, trust, and job satisfaction. Studies in this area argue that when employees are allowed to participate in setting budgets, they are more likely to internalize performance goals and reduce opportunistic behavior. However, participative budgeting can also provide opportunities to introduce slack if not coupled with appropriate monitoring mechanisms. This paradox underscores the importance of procedural justice and incentive design, which appear in the same cluster as balancing mechanisms. The second thematic stream centers on control systems and information asymmetry, where budgetary slack is explored in relation to budget control,

management control, and performance-based budgeting. This stream is heavily influenced by classical management accounting theories and often employs experimental and field research to understand how different control environments affect managerial behavior. Recent studies have begun to explore the interactive use of controls rather than relying solely on diagnostic tools, suggesting a shift toward more flexible and trust-based control approaches. The third cluster involves organizational and psychological dimensions, including "organizational commitment," "job satisfaction," and "trust." These variables reflect a more humanistic approach to studying slack, where budgetary behavior is influenced by employees' emotional and cognitive responses to their organizational context. The inclusion of variables like "environmental uncertainty" also signals growing interest in contextual contingencies, suggesting that slack creation may be adaptive or dysfunctional depending on external and internal factors.

**c. Geographic Distribution and Research Collaboration**

The country collaboration map indicates that research on budgetary slack is geographically concentrated in a few leading economies, with the United States occupying a central position. The U.S. not only produces the highest volume of publications but also maintains strong collaborative ties with other research-intensive countries such as Australia, Netherlands, Canada, and Germany. This reflects the country's institutional strength in business education, particularly in accounting and management control systems. Australia's active participation—often associated with authors like Dunk and Brownell, also highlights the regional depth of budgetary slack

studies in the Asia-Pacific context. Interestingly, the growing presence of countries such as Iran, China, and Hong Kong in the co-authorship network suggests a global diffusion of interest in this research area. Scholars from these regions are increasingly engaging with budgetary slack themes, particularly from the perspective of public sector reform, participative governance, and institutional accountability. This diversification of geographic representation not only enriches the literature but also introduces new cultural and institutional variables that can affect budgeting behavior. However, more intercontinental collaborations, especially involving underrepresented regions such as Africa and Latin America, are needed to globalize the discourse.

#### d. Temporal and Thematic Evolution

The overlay visualization map sheds light on the temporal progression of research themes. Early studies, clustered around 2005 to 2010, focused heavily on management control, budget control, and information asymmetry, which provided the theoretical and empirical foundation of the field. As research matured, newer themes began to emerge post-2015, including procedural justice, organizational commitment, and trust, indicating a gradual shift from structural to behavioral and ethical concerns. This evolution suggests that budgetary slack research is increasingly multi-dimensional, blending hard control mechanisms with soft psychological factors. The presence of newer themes like “local government” and “environmental uncertainty” also reflects a shift toward more applied and contextualized studies, particularly in the public sector and volatile economic environments. These developments point to a growing recognition of the

complexity of budgeting behavior, which cannot be fully understood without considering both institutional and human factors.

#### e. Research Density and Knowledge Gaps

The density visualization map confirms that *budgetary slack* is the most heavily researched concept, with strong activity surrounding “participative budgeting,” “budget control,” and “information asymmetry.” However, the map also reveals areas with relatively low density, such as “procedural justice,” “local government,” and “incentives,” suggesting potential knowledge gaps. For example, while many studies acknowledge the role of justice perceptions in budgeting, few have systematically measured its impact on slack behavior across organizational settings. Likewise, the role of public sector dynamics in slack creation is underexplored, despite the increasing adoption of performance-based budgeting in government institutions. This presents an opportunity for future research to investigate how transparency, bureaucratic incentives, and citizen engagement affect slack tendencies in publicly funded organizations. Similarly, the ethical and cultural underpinnings of slack behavior, particularly in non-Western contexts, remain a fertile ground for inquiry, as current literature is largely concentrated in Anglo-American settings.

#### f. Implications for Theory and Practice

The findings of this study carry important implications for both theory development and managerial practice. Theoretically, the integration of behavioral, institutional, and control perspectives calls for more holistic models of budgeting behavior that can account for both individual agency and organizational structure. Future

models should consider the interactive effects of psychological traits (e.g., trust, fairness perception), control system design (e.g., participative vs. top-down), and contextual variables (e.g., environmental uncertainty, public accountability). From a practical standpoint, organizations should recognize that reducing budgetary slack is not solely a matter of tightening controls. Rather, it requires cultivating a culture of trust, transparency, and ethical behavior. This involves aligning incentive systems with organizational values, promoting participative yet accountable budgeting processes, and ensuring procedural fairness in performance evaluations. In the public sector, where stakeholder pressure and political interference can distort budget practices, these considerations are even more critical.

#### 4. CONCLUSION

This study has provided a comprehensive bibliometric analysis of the intellectual structure and evolving research trends on budgetary slack from 1980 to 2024. The findings reveal that the field is anchored in foundational theories such as agency theory and management control systems, with significant contributions from scholars like Merchant, Dunk, and Jensen. Thematic analysis indicates a shift from traditional concerns with control and information asymmetry toward more recent emphases on behavioral, psychological, and contextual factors such as trust, procedural justice, and participative budgeting. Geographically, research remains concentrated in developed countries, particularly the United States and Australia, though emerging participation from Asia and the Middle East is noteworthy. Temporal and density visualizations highlight both well-established themes and underexplored areas, signaling opportunities for future research—especially in public sector contexts, ethical dimensions, and non-Western environments.

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