

Facilitators and leadership styles: theoretical drivers for performance budgeting adoption in Iraq's higher education sector

Ali Hussein Khudhair, Zaidi Mat Daud, Hasri Abdul Razak Mustafa & Ali Naeem Jasim Al-Zubaidi

To cite this article: Ali Hussein Khudhair, Zaidi Mat Daud, Hasri Abdul Razak Mustafa & Ali Naeem Jasim Al-Zubaidi (2025) Facilitators and leadership styles: theoretical drivers for performance budgeting adoption in Iraq's higher education sector, Cogent Business & Management, 12:1, 2437140, DOI: [10.1080/23311975.2024.2437140](https://doi.org/10.1080/23311975.2024.2437140)

To link to this article: <https://doi.org/10.1080/23311975.2024.2437140>



© 2024 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group



View supplementary material [↗](#)



Published online: 12 Dec 2024.



Submit your article to this journal [↗](#)



Article views: 1531



View related articles [↗](#)



View Crossmark data [↗](#)



Citing articles: 1 View citing articles [↗](#)

Facilitators and leadership styles: theoretical drivers for performance budgeting adoption in Iraq's higher education sector

Ali Hussein Khudhair^{a,b} , Zaidi Mat Daud^b, Hasri Abdul Razak Mustafa^b and Ali Naeem Jasim Al-Zubaidi^c

^aMinistry of Higher Education and Scientific Research, Baghdad, Iraq; ^bSchool of Business and Economics, Universiti Putra Malaysia, Serdang, Malaysia; ^cManager of Budget Department and Universities Affairs, Ministry of Higher Education and Scientific Research, Baghdad, Iraq

ABSTRACT

This study investigates the adoption of performance-based budgeting (PBB) in Iraq's Ministry of Higher Education and Scientific Research (MOHE), addressing challenges in aligning budgeting practices with performance outcomes. Motivated by gaps in the literature on public sector budget reforms, particularly in Iraq and other developing countries, the study surveys 317 MOHE employees. It employs partial least squares structural equation modelling to analyze internal and external factors and the moderating roles of transactional and servant leadership styles. The findings reveal that transactional leadership significantly enhances PBB facilitation, while servant leadership has an indirect effect, emphasizing the need for a balanced leadership approach. By contributing to contingency theory, the study highlights the critical role of facilitators in PBB implementation and aligns with global public sector budgeting reforms. These results provide strategic insights for higher education administrators and policymakers, particularly in contexts with centralized governance and limited financial autonomy. Despite focusing on Iraq's higher education sector, the insights may have implications for other developing nations facing similar challenges and suggest avenues for future research, including qualitative studies to explore these dynamics further.

ARTICLE HISTORY

Received 7 May 2024
Revised 25 November 2024
Accepted 27 November 2024

KEYWORDS

Higher Education;
Performance Budgeting;
Leadership Styles;
Transactional Leadership;
Servant Leadership;
Facilitators; Contingency Theory

SUBJECTS

Finance; Business;
Management and
Accounting; Civil Service
& Public Sector

Introduction

Recent research in developing nations has increasingly focused on enhancing government accounting and budgeting systems, driven by strong commitments from governments and support from international organizations such as the International Monetary Fund and the World Bank (Adhikari et al., 2013; Allen, 2009). These efforts have led to significant reforms and restructuring aimed at improving financial performance and management. Notably, in the Arab region, the adoption of performance budgeting (PB) has emerged as a crucial reform (Ji-Yu, 2008; Ouda, 2013). This momentum for reform is propelled by a growing demand for the efficient use of public funds and the realization of policy objectives (Erkutlu et al., 2017; Niu et al., 2005).

Globally, PB has become a widely adopted technique to enhance public sector performance management. By shifting the focus from inputs to outcomes, PB aims to provide stakeholders with clear information about the objectives, operating costs, and results of public organizations (Fitz Verploegh et al., 2023; Pollitt, 2018). In Iraq, traditional budgeting techniques are still prevalent (Al-Ameri et al., 2018). The country's budget structure has faced significant structural imbalances since the late twentieth century, primarily due to large fluctuations in public revenues and a sharp increase in operational expenses at the cost of investment expenditures (Al-Khawlani, 2019; Hamid, 2019; Saleh et al., 2019). These imbalances have persisted through two distinct periods: the first marked by an economic embargo from 1990

CONTACT Ali Hussein Khudhair  Gs60092@student.upm.edu.my  Ministry of Higher Education and Scientific Research, Baghdad 10001, Iraq.

© 2024 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group

This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0/>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited. The terms on which this article has been published allow the posting of the Accepted Manuscript in a repository by the author(s) or with their consent.

to 2002, and the second characterized by ongoing deficits and budgetary challenges from 2003 to the present (Chohan, 2022; Khairullah, 2023).

Consequently, public budget reform has become a crucial aspect of Iraq's economic reform agenda (Al-Ghelaiah et al., 2014; IBRD, 2021). The Iraqi government has expressed a commitment to advancing these reforms, with PB proposed as an essential technique to advance the economy and safeguard public funds (Al-Jubouri & Hussein, 2019; Al-Mahaini & Karim, 2007; MOP, 2018). To achieve this goal in Iraq, performance budgeting was partially implemented in three ministries—Higher Education, Health, and Planning—in 2020 (Abu Meisam, 2019; MOP, 2018).

In the context of higher education, performance is reportedly a key element of quality (Das & Mukherjee, 2017), and the adoption of PB is expected to enhance this quality. According to Pratolo et al. (2020), higher education institutions (HEIs) face various pressures that necessitate revisiting their organizational structures and internal management approaches to deliver better quality education. These pressures stem from the competition in both labor and education markets, driving HEIs to sustain their positions in national and global markets (Gulden et al., 2020; Mwiya et al., 2019). Presently, the competitive advantage of an HEI, both globally and nationally, is assessed based on its quality and is indicated by its accreditation status awarded by the Accreditation Assessment Institution (Chu & Westerheijden, 2018).

To encourage quality improvement in HEIs, many countries have issued regulations relating to new public management practices. One of the focuses of these regulations is to encourage HEIs to apply good university governance practices, of which, PB is an important element (Jongbloed, 2011). Therefore, adopting new accounting practices in the higher education sector is crucial not only for advancing national development but also for showcasing its relevance and potential impact to a global audience, particularly in developing countries.

Supporting this initiative, recent Iraqi studies have evaluated the benefits of performance budgeting (PB) within governmental frameworks, highlighting its potential to enhance planning, resource control, and execution flexibility. Studies by Almustawf (2022) and Muhammad et al. (2019) have highlighted PB's potential to enhance planning and resource control demonstrating its flexibility and focused execution. Khalil (2019) discusses the possibility of developing program budgets and performance in government administrative units, while Daeem and Khalif (2023) propose a model for transitioning to program and performance budgeting at localized governmental units such as Sumer University. Additionally, Muteb et al. (2018) explore the application of program and performance budgeting as tools for planning and control in government units. Adopting such an approach can help public organizations achieve better performance (Crain & O'Roark, 2004; Jongbloed & Vossensteyn, 2001; Lorenz, 2012).

Despite the empirical research in Iraq emphasizing the positive impacts of PB and strong recommendations to support its implementation to improve financial management, it has not been adopted. Jasim et al. (2024) attribute this failure to insufficient research on the drivers and barriers to adopting PB in Iraq.

Efforts to adopt PB in Iraq reflect broader challenges faced by developing nations, where global reform pressures often conflict with local institutional, cultural, and governance dynamics. Research indicates that reform strategies designed for developed nations frequently overlook these local realities, resulting in reform failures (Ehsein, 2014; Okoroafor, 2021; Surianti & Dalimunthe, 2015). Studies from Libya, Indonesia, and Nigeria reveal how centralized governance structures, resource constraints, and resistance to change complicate PB implementation in developing countries (Boolaky Doorgakunt et al., 2022). Similarly, in Iraq, centralized decision-making and a lack of organizational readiness hinder the successful adoption of PB reforms. While existing research has highlighted PB's benefits, the focus has largely been theoretical or confined to specific sectors, leaving a critical gap in understanding the practical and contextual factors necessary for its successful implementation.

The role of leadership is increasingly recognized as essential in navigating the complexities of PB adoption. Leadership, defined as the process of influencing individuals to achieve shared goals (Ag Budin & Wafa, 2015), plays a pivotal role in aligning resources, fostering organizational readiness, and overcoming resistance to change. However, while the literature emphasizes the importance of leadership in driving accounting innovations, few studies have explored how specific leadership styles, such as transactional and servant leadership, moderate the relationship between facilitators and PB adoption. This gap is particularly relevant in Iraq, where leadership challenges often dictate the success or failure of reform

initiatives. Leadership styles not only impact managerial performance but also shape organizational culture and readiness for change, making their examination critical in understanding PB adoption (Alsharari & Daniels, 2024; Elqadri et al., 2015; Sabastian, 2021).

Another limitation in the existing literature is the focus on post-implementation outcomes, which often overlooks the critical pre-implementation stage where facilitators, barriers, and leadership dynamics play a decisive role. Studies in developed countries, such as the United States, the United Kingdom, and Australia, have provided valuable insights into PB's effectiveness, but these findings cannot be directly applied to contexts like Iraq without accounting for its unique institutional and cultural dynamics. Research on PB in the higher education sector, particularly in non-profit institutions, is also limited. Higher education institutions (HEIs) face unique challenges, including balancing academic goals with financial efficiency, centralized governance, and increasing demands for accountability. This makes them an ideal context for examining PB adoption, particularly in a developing country like Iraq, where reforms often face systemic resistance (Aletaiby, 2018; Das & Mukherjee, 2017; Pratolo et al., 2020; Rahi et al., 2024).

This study addresses these gaps by investigating how Iraq's Ministry of Higher Education and Scientific Research (MOHE) can successfully adopt PB. Specifically, it seeks to understand the role of facilitators in driving PB adoption and how leadership styles moderate this relationship. These considerations raise important questions: What factors act as facilitators in the successful adoption of PB in Iraq's higher education sector? How does transactional leadership influence the relationship between facilitators and PB adoption? How does servant leadership affect this dynamic? By addressing these questions, this study bridges critical gaps in literature and offers a nuanced understanding of how contextual and organizational factors, combined with leadership styles, influence PB adoption by developing an integrated framework that examines the role of facilitators in driving PB adoption and explores how transactional and servant leadership styles moderate this relationship. The findings contribute to the body of knowledge, particularly in empirical studies of PB within the higher education sector and provide actionable recommendations for policymakers and administrators in Iraq, with potential applicability to other developing nations facing similar challenges.

Literature review and hypotheses formulation

Evolution and challenges of budgeting practices in Iraq

Drive for performance budgeting

Since its inception in 1921, Iraq's budgeting practices have evolved significantly. Initially reliant on agriculture, customs, and taxes, the economic landscape shifted dramatically with the rising impact of oil revenues from the 1930s, which now constitute over 87% of the national income (Chohan, 2016; Savage, 2013). Historical reforms, including the General Accounts Procedure Law of 1940 and the 1985 restructuring of the budget into current, investment, and self-financed sectors, reflect efforts to modernize Iraq's fiscal framework (Mohsin, 2017).

However, Iraq continues to struggle with inefficiencies and structural imbalances in its budgeting system, exacerbated by prolonged conflicts and economic sanctions. These challenges have severely impacted critical sectors such as higher education, underlining the inadequacy of traditional budgeting systems and prompting calls for reform (Al-Khawlani, 2019; Hamid, 2019).

In response, the government is increasingly committed to adopting PB to enhance transparency, accountability, and efficiency in resource allocation. Although recent studies recognize PB's potential benefits for strategic planning, a significant research gap persists in understanding its implementation capacity within Iraq's governmental frameworks (Al-Jubouri & Hussein, 2019; MOP, 2018). Therefore, this study focuses on the core developments and challenges, clarifying why PB could be a crucial reformative step for Iraq's fiscal management.

Cost allocation methodology in Iraq's Ministry of Higher Education and Scientific Research (MOHE)

Iraq's MOHE utilizes a historical budgeting approach, where data from previous fiscal years guide the projection of future revenues and expenditures. This method is detailed in Figure 1 of the Ministry's

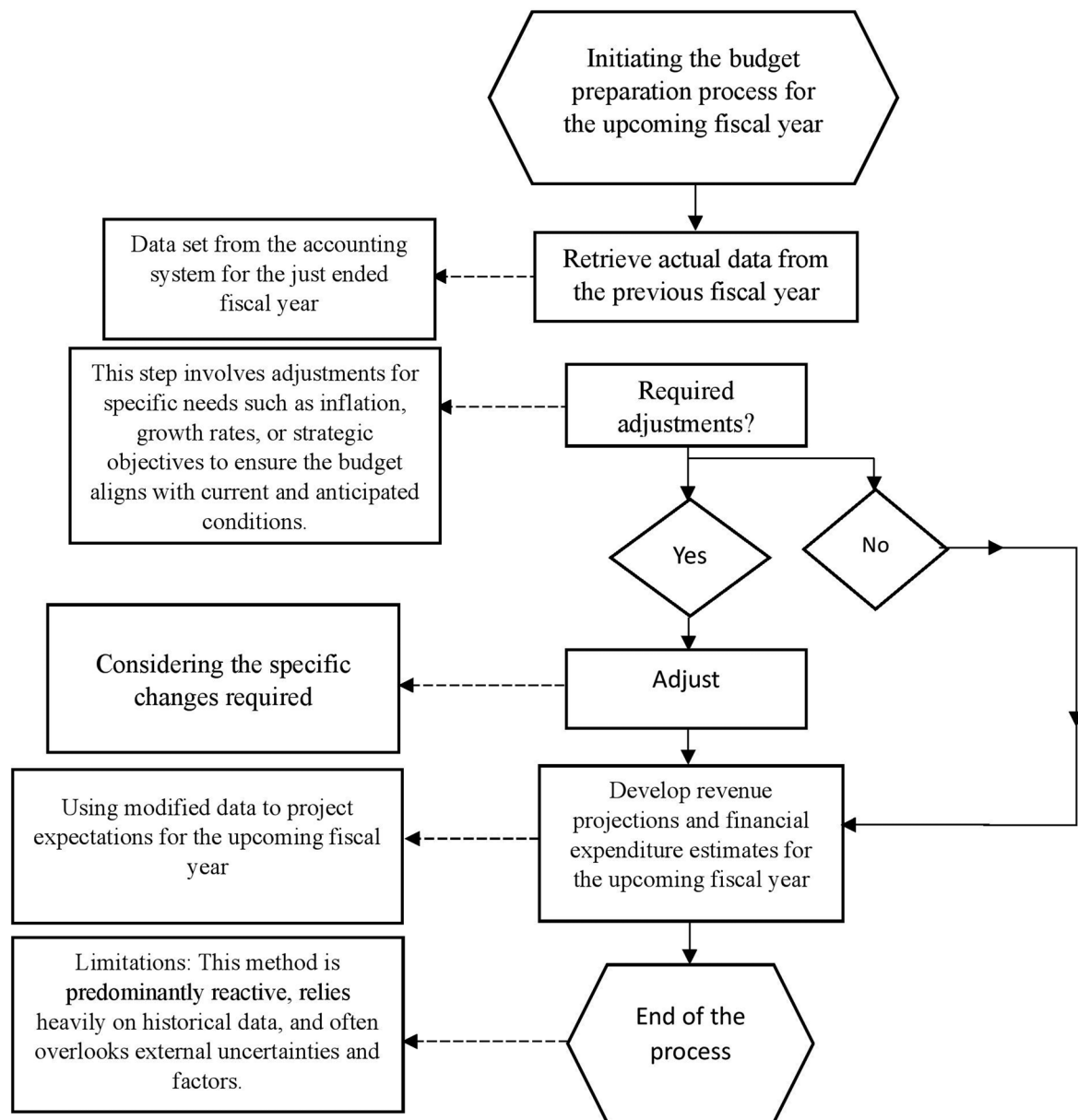


Figure 1. Flowchart of the Cost Allocation Methodology at the Iraqi Ministry of Higher Education. Source: Jasim et al. (2024).

documentation, which outlines the steps starting from data retrieval to final budget forecasts after adjusting for inflation, growth, and strategic changes (Al-Mahaini & Karim, 2007; Jasim et al., 2024).

Despite being based on actual fiscal performance, this approach is inherently reactive and does not adequately account for external uncertainties such as economic fluctuations or political instability. The challenges are exacerbated by a lack of integration with the Budget Department, leading to misalignments in budget allocations that often prioritize operational costs over scientific initiatives (Khaghaany, 2022; Mah'd, 2014).

The higher education sector faces additional challenges, including infrastructural deficits and a shortage of qualified faculty, emphasizing the importance of strategic planning and the adoption of technologies to enhance information sharing and decision-making (Mahmud, 2013; Mohammed et al., 2015). Experts advocate for a transition to contractual budgeting to improve responsiveness and alignment with long-term strategic goals (Khaghaany, 2022).

This overview incorporates the critical steps from Figure 1 of the Ministry's documentation, addresses the methodology's limitations, and proposes improvements, thereby demonstrating the need for reforming budgeting practices within the Ministry (see Figure 1).

Performance budgeting: Investigating the dynamics of change

Numerous models have been developed to facilitate the analysis of accounting change across public and private sectors. Among these, Lüder's governmental accounting innovation model, known as the 'contingency model', is notably significant in helping understand changes in public sector accounting (Christensen, 2002). Originally formulated by Lüder in 1992, this model addresses the external and internal factors driving the reform process and helps elucidate the stimuli behind government accounting reform adoption. The model categorizes these factors into three groups: (1) stimuli, which are events triggering the need for better information; (2) structural variables, encompassing the social and political-administrative systems that shape the attitudes of information users and producers; and (3) adoption barriers, comprising environmental conditions that impede the change process.

This contingency model has been adapted and applied in various settings (Christensen, 2002; Godfrey et al., 1996, 2001; Yamamoto, 1999). It has been tailored particularly for developing countries by Godfrey et al. (1996, 2001), who introduced the role of international funding and donor agencies as additional contingent variables to drive government accounting reforms. These agencies often make their funding conditional on the adoption of such reforms.

Christensen (2002) expanded the model to include the roles of key actors in the change process—identifying them as promoters of change, information producers, and information users. He articulated that change could be driven by stakeholders with a vested interest in change, or by information producers such as public servants in central agencies and managers in government agencies. Users of the information, including politicians and oversight bodies such as auditors-general and public accounts committees, also stimulate change. Despite the willingness to change, various barriers, such as the public sector's intrinsic characteristics and its accounting system limitations, can constrain the adoption options. For instance, Christensen pointed out the poor accounting skills of public servants and inadequate asset records as significant hurdles in shifting to accrual accounting.

Yamamoto (1999) applied this model in the Japanese local government context, demonstrating how internal and external pressures interact with specific accounting changes needed to meet the demands of both information preparers and users. He identified three critical external pressures—performance, accountability, and market pressures—each necessitating specific information for assessment, transparency, and comparison, respectively.

From their study of private sector entities, Innes and Mitchell (1990) identified three primary types of contingent variables driving accounting changes: motivators, catalysts, and facilitators. Motivators are associated more generally with change, such as market competitiveness, organizational structure, or production technology. Catalysts directly trigger change due to specific events, such as poor financial performance or new competitive threats. Facilitators encompass factors that aid the successful adoption of change, including available resources or organizational autonomy.

Further adaptations by Cobb et al. (1995) and Kasurinen (2002) refined these models to emphasize factors that facilitate or hinder the change process. Kasurinen's model particularly identified barriers such as confusers, frustraters, and delayers, each representing challenges that create uncertainty, suppress change processes, or curtail the adoption, respectively.

Building on these arguments, we develop a model to investigate the situational facilitators influencing the adoption of PB in the Iraqi MOHE (see Figure 2).

Theoretical framework

Contingency theory in accounting change

Contingency theory provides a robust framework for understanding organizational behavior and its application to accounting changes within institutions. Originating from seminal works by scholars such as Otley (1980), Tarter and Hoy (1998), and Thomas (1991), this theory posits that the effectiveness of accounting practices is heavily influenced by situational factors, both internal and external. Key tenets of contingency theory in accounting suggest that no single management practice is universally effective. Instead, the suitability of accounting systems and practices is contingent upon various factors that vary across different organizational contexts (Otley, 1980; Woods, 2009).

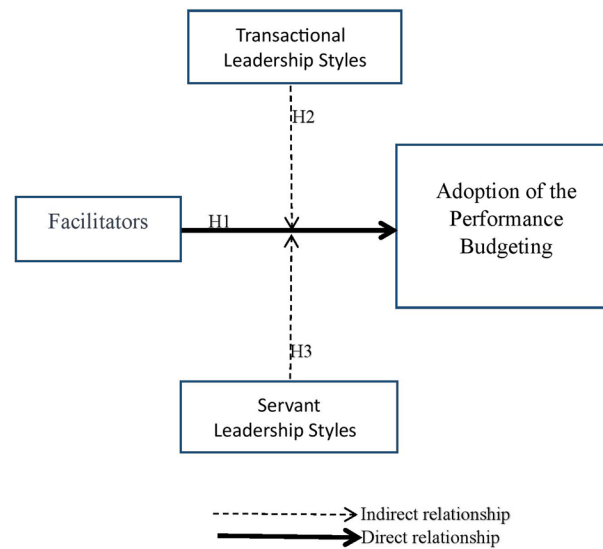


Figure 2. Research model.

Contingency theory has been instrumental in explaining the dynamics of accounting changes in the public sector. Lüder (1992) developed a contingency model focusing on governmental accounting, incorporating both contextual and behavioral factors affecting stakeholders. This model has been applied widely to analyze accounting innovations in public sectors of both developed and developing nations (Chenhall, 2003; Christensen & Yoshimi, 2003).

Contingency theory asserts that effective leadership depends on the alignment of a leader's style with situational factors. It emphasizes that a universally optimal leadership style does not exist; instead, effectiveness is contingent on matching leadership behavior with specific environmental conditions (Fiedler, 1964).

Key components of contingency theory include the leader-member relationship, task structure, and position power. Leader-member relationship refers to the level of trust and respect between the leader and the group, which influences the group's willingness to follow directions. Task structure involves the clarity and organization of job assignments, while position power denotes the leader's authority to control resources and make decisions.

Fiedler introduced the Least Preferred Coworker (LPC) scale to identify whether a leader is task-oriented or relationship-oriented. Task-oriented leaders generally score low on the LPC scale, indicating a focus on task completion. By contrast, high LPC scores suggest a relationship-oriented approach, characterized by democratic and inclusive leadership styles.

Lastly, the performance level of a group or organization is influenced by the leader and the extent to which the leader can affect and control a situation. Therefore, a school leader must apply contingency leadership in their leadership to ensure continuous improvement, especially in addressing responses from teachers and students (DuFour & Marzano, 2009; Lambert, 2002).

Research framework

Research on budgetary reform often lacks a unified theoretical framework, highlighting the need for an approach that adapts to both internal and external environmental changes (Kenno et al., 2018; Neuby, 1997). To address this, we utilize contingency theory to understand the facilitators influencing the adoption of performance budgeting and examine how leadership style moderates the relationship between these facilitators and the adoption of performance budgeting in Iraq's MOHE. Contingency theory posits that the success of financial and management accounting reforms depends on the authority's ability to adapt to influencing factors (Otley, 1980). In this framework, the facilitators derived from the studies by Upping and Oliver (2011, 2012) serve as independent variables, encompassing all contingent factors identified for the public sector by Lüder (1992) and Christensen (2002), and for the private sector by Kasurinen (2002).

The dependent variable in this framework is the adoption of PB, considered a progressive alternative to traditional budgeting approaches. Additionally, the role of leadership style is examined as a moderating factor influencing the relationship between these facilitators and PB adoption.

Hypotheses development

Facilitators of performance budgeting and their impact on its adoption

The facilitation of new accounting practices such as PB is critical in organizations undergoing reform. In this study, we leverage contingency theory to explore how various facilitators impact PB adoption within Iraq's MOHE.

Facilitators play a pivotal role in enhancing the adoption process by providing goal setting, monitoring progress, and allocating resources. Key facilitators include leadership commitment, readiness for change among employees, robust information management systems, adequate funding, and effective training programs (Liberato et al., 2024; Upping & Oliver, 2012).

Leadership commitment is crucial, as strong leadership enhances organizational commitment and drives employee participation, thereby facilitating PB adoption (Birken et al., 2015; Kohlmeyer et al., 2014). Additionally, the readiness of employees for change, characterized by their engagement and satisfaction with current systems, significantly impacts their willingness to adopt new practices (Abdulkarim et al., 2020; Matthysen & Harris, 2018).

Information management capabilities, particularly through a well-functioning Financial Management Information System, are essential for effective budget management and successful PB implementation (Hashim & Piatti, 2016; Mithas et al., 2011). Challenges such as integration issues and the need for tailored policies often hinder the adoption process. Addressing these challenges requires focused attention on improving staff competencies and systems (Pauluzzo et al., 2024; Suparman et al., 2015).

External consultants also play a vital role by offering expertise and facilitating knowledge transfer during the adoption of new accounting systems (Dutta & Kumar, 2022). Their unbiased insights and guidance are crucial in addressing specific challenges and enhancing managerial capabilities.

Adequate funding ensures that necessary resources are available for the successful execution of PB policies. It supports the development and prioritization of fiscal policies and programs necessary for sustainable reforms (Kuntadi & Livrianti, 2022).

In this study, we hypothesize that these facilitators positively affect PB adoption, significantly impacting the reform process within Iraq's higher education sector. By examining the interplay between these facilitators and the adoption of PB, we aim to provide insights into effectively managing accounting changes in a developing country context. Accordingly, we propose the following hypothesis:

H1: Facilitators positively affect the adoption of performance budgeting.

Leadership styles as moderators in performance budgeting adoption

Leadership theory has evolved to emphasize the importance of context and behaviors in influencing organizational outcomes. Research shows that no single leadership style is universally effective, with the suitability of styles such as transactional and servant leadership varying based on organizational dynamics and employee characteristics (Or & Tziner, 2020; Tyssen et al., 2014). This section explores the moderating role of leadership styles in the adoption of performance budgeting within organizations.

Transactional leadership and organizational change

Transactional leadership, characterized by a focus on supervision, rewards, and penalties, is particularly relevant in structured settings such as government institutions where clear procedures and short-term goals dominate (Trottier et al., 2008). While transactional leadership can enhance immediate performance, studies suggest that an overemphasis on this style may stifle long-term innovation (Dong, 2023). Despite this limitation, transactional leadership significantly influences employee attitudes toward organizational changes, including accounting reforms, by enhancing normative commitment to change (Butt et al., 2023; Holten & Brenner, 2015).

Given these dynamics, we hypothesize that transactional leadership moderates how facilitators affect the adoption of performance budgeting, leading to the following hypothesis:

H2: Transactional leadership moderates the relationship between facilitator factors and the adoption of performance budgeting at Iraq's MOHE.

Servant leadership and organizational effectiveness

Conversely, servant leadership, which prioritizes the needs of others and fosters a community within the organization, is highly effective in environments requiring sustainable growth and deep-seated cultural changes, such as educational institutions (Spears, 1996; van Dierendonck, 2011). This leadership style has been linked to increased job satisfaction, organizational citizenship behaviors, and innovative work behavior (Donia et al., 2016; Saleem et al., 2020). Servant leadership is particularly potent in driving commitment to organizational changes, mediating effects through factors such as interactional justice and public service motivation (Kool & van Dierendonck, 2012). Given the distinct impacts of servant leadership, we propose the following hypothesis:

H3: Servant leadership moderates the relationship between facilitator factors and the adoption of performance budgeting at Iraq's MOHE.

Research methodology

Population, unit of analysis, and sample

The study grounded a positivist paradigm that emphasizes objective measurement, hypothesis testing, and generalizable findings to examine causal relationships (Park et al., 2020). and was conducted with the survey method approach. It used an explanatory research model that proposed an investigation of how one variable influences the other variables (Cooper & Schindler, 2013; Creswell, 2013; Hartono, 2013). Primary data were collected using a questionnaire based on a five-point Likert scale, enriched with open-ended questions for more nuanced insights (Bryman, 2016; Creswell & Creswell, 2017). The questionnaire was specifically designed after an extensive literature review and tailored to the cultural context of the MOHE, with a paper-based format deemed more appropriate than electronic means. All participants provided informed consent in written form, fully understanding the study's purpose and their rights. The study was approved by the ethics committee of University Putra Malaysia (UPM) and reg. no. JKEUPM-2023-617.

The survey targeted the entire population of MOHE employees with academic or professional qualifications specifically in finance and accounting, or business administration. This group was defined as employees whose educational backgrounds equip them with the knowledge necessary to understand, implement, or manage performance-based budgeting systems. Examples of such qualifications include bachelor's or higher degrees in accounting or finance and relevant professional certifications such as CPA, or equivalent. The target group also included those holding relevant administrative or management roles directly involved in financial planning, budgeting, or policy implementation.

This population, totaling 664 individuals, was identified based on the most recent MOHE records, specifically compiled for this study. To ensure inclusivity and accuracy, the study adopted a census approach, distributing questionnaires to all eligible respondents. These respondents held diverse positions, including rectors, vice-rectors, department heads, and financial staff across all public universities in Iraq (excluding the Kurdistan region). This comprehensive methodology eliminated potential sampling errors and enhanced the representativeness of the findings.

The study achieved a response rate of 47%, with 317 valid responses, significantly surpassing typical response rates in organizational survey research, which often range from 10–20% (Fowler, 2013) and average around 35.7% (Baruch & Holtom, 2008). This high response rate, combined with the comprehensive coverage of the target population, substantiates the reliability of our results. It reflects a strong engagement from the participants and suggests that the data collected provides a robust basis for analyzing the proposed research hypotheses.

Data analysis method

We employed the variance-based partial least squares structural equation modeling (PLS-SEM) to analyze data and test the hypotheses. PLS-SEM is particularly advantageous due to its ability to perform measurement model tests while simultaneously testing structural models, as noted by Chin et al. (2012) and Hair et al. (2014). This method is preferable, especially when handling small sample sizes, complex models, and formative constructs, where traditional Covariance-Based SEM (CB-SEM) might fall short due to its strict assumptions on data distribution and sample size requirements (J. F. Hair et al., 2022; Lowry & Gaskin, 2014).

PLS-SEM is increasingly favored in exploratory research in management and social sciences due to its flexibility in managing unbalanced datasets and latent variables (Fong & Law, 2013; Henseler et al., 2014). It often results in higher composite reliability and convergent validity compared to CB-SEM and maintains robust discriminant validity and beta coefficients (J. F. Jr. Hair et al., 2017a). Furthermore, unlike CB-SEM, which is designed primarily for theory confirmation through a covariance approach, PLS-SEM supports a causal-predictive analysis, rendering it ideal for constructing and testing theoretical frameworks aimed at prediction and explanation (J. F. Hair et al., 2021).

According to Hair et al. (2022), PLS-SEM requires a minimum sample size governed by the '10 times rule', which stipulates that the sample size should be at least ten times the maximum number of path links directed at any latent variable in the model. In this study, the latent variable 'facilitators' has the highest number of indicators (11), requiring a minimum sample size of 110. Our study significantly exceeds this with a sample size of 317, ensuring the robustness and validity of the PLS-SEM results.

Results

Data normality and common method bias in SEM

For this study, employing SEM with maximum likelihood estimates, normality testing of the dataset was crucial. Skewness and kurtosis values, ranging from -1.155 to -0.261 and -0.451 to 2.269 , respectively, fell well within the acceptable limits of -2 to $+2$ for skewness and -7 to $+7$ for kurtosis, indicating a normal distribution of data (J. F. Hair et al., 2017a; Schumacker & Lomax, 2015). These results confirm the dataset's appropriateness for further analysis, supported by PLS-SEM's robust handling of both normal and non-normal distributions (J. F. Hair et al., 2022).

Additionally, we addressed potential common method bias by conducting Harman's one-factor test, a method to check if a single factor explains a substantial portion of the variance in the data. The analysis revealed that the highest variance explained by a single factor was only 27.321%, substantially below the 50% threshold, indicating no significant common method bias (Podsakoff & Todor, 1985). This confirms the data's reliability for subsequent analyses.

Construct validity test results

In this study, the reliability and convergent validity of constructs were assessed using several metrics. Composite reliability values for all constructs ranged from 0.813 to 0.913, indicating acceptable internal consistency. The average variance extracted, which measures convergent validity by the squared loadings of items, displayed values between 0.500 and 0.725 for all variables, exceeding the threshold of 0.5 and confirming sufficient explanatory power of the constructs (J. F. Hair et al., 2022).

The measurement model involved 26 reflective indicators. Based on factor loadings, several items were pruned to enhance model robustness: one item from the facilitators, and one item from the performance budgeting variable. This refinement process, which followed guidelines by Wei and Nguyen (2020) and Hair et al. (2022), sought to ensure that each item's loading exceeded the commonly accepted threshold of 0.5, thereby contributing positively to the construct's validity (see Table 1).

The iterative process of refining the SEM models led to improved construct validity and model robustness, as items with weaker loadings were eliminated. This approach aligns with practices noted in the

literature, where item reduction is often necessary to achieve a more valid and reliable measurement model (Hair et al., 2017b; Pereira et al., 2024; Sadidi et al., 2018).

Figure 3 illustrates the measurement model post-refinement, displaying the constructs after adjustments based on the PLS-SEM analysis. This visual representation confirms the structural integrity and validity of the refined model, ensuring that all remaining indicators robustly represent their respective constructs (see Figure 3).

The internal consistency of a group of items is measured by Cronbach's alpha, which indicates how closely related they are to one another. The Cronbach's alpha value range between 0.685 to 0.890 is considered valid to ensure internal consistency (Drolet & Morrison, 2001; J. F. Hair et al., 2022; Hayduk & Littvay, 2012). Figure 3 shows the modified model after removing the indicators that were below the minimum accepted threshold (see Table 2).

Furthermore, items exhibiting Variance Inflation Factor (VIF) scores greater than 0.10, indicating potential multi-collinearity concerns, were removed from the analysis (Davino et al., 2022). However, as detailed in Table 3, the VIF scores for all constructs remained below the threshold of concern. Specifically, the VIF scores were 1.091 for Facilitators, 2.027 for Transactional Leadership Style, and 2.016 for Servant Leadership Style, all of which are comfortably within the acceptable range, suggesting no significant multi-collinearity issues (J. F. Hair et al., 2022; Pereira et al., 2024; Sarstedt et al., 2017) (see Table 3).

Discriminant validity test results

Discriminant validity measures the extent to which a given construct is distinct from other constructs within the model, supported by empirical evidence. Ensuring that a construct uniquely represents specific phenomena not covered by other constructs in the study is vital (Tilahun et al., 2023). The Heterotrait-Monotrait (HTMT) ratio of correlations is a modern method for evaluating discriminant validity. It compares the correlations between measures of theoretically different constructs (heterotrait) with the correlations of measures within the same construct (monotrait) (Hair et al., 2022). An HTMT value below 0.90 is typically recognized as evidence of discriminant validity (Henseler, 2018; Roemer et al., 2021).

Table 4 outlines the HTMT ratios, which act as indicators of discriminant validity between constructs. The highest HTMT value was found to be 0.890, remaining below the widely accepted cutoff point of 0.90. This result supports the constructs' uniqueness within the model, confirming their discriminant

Table 1. Analysis of outer loadings and identification of deleted items.

The construct	Items	Outer loadings
Facilitators	F1	0.736
	F2	0.765
	F4	0.637
	F5	0.653
	F6	0.754
	F7	0.692
	F8	0.781
	F9	0.7
	F10	0.638
	F11	0.7
Performance budgeting	PB1	0.767
	PB2	0.816
	PB3	0.785
	PB4	0.743
	PB5	0.767
	PB7	0.700
	PB8	0.664
Transactional leadership style	M1	0.814
	M2	0.782
	M3	0.455
	M4	0.802
Servant leadership style	S1	0.814
	S2	0.872
	S3	0.831
	S4	0.887

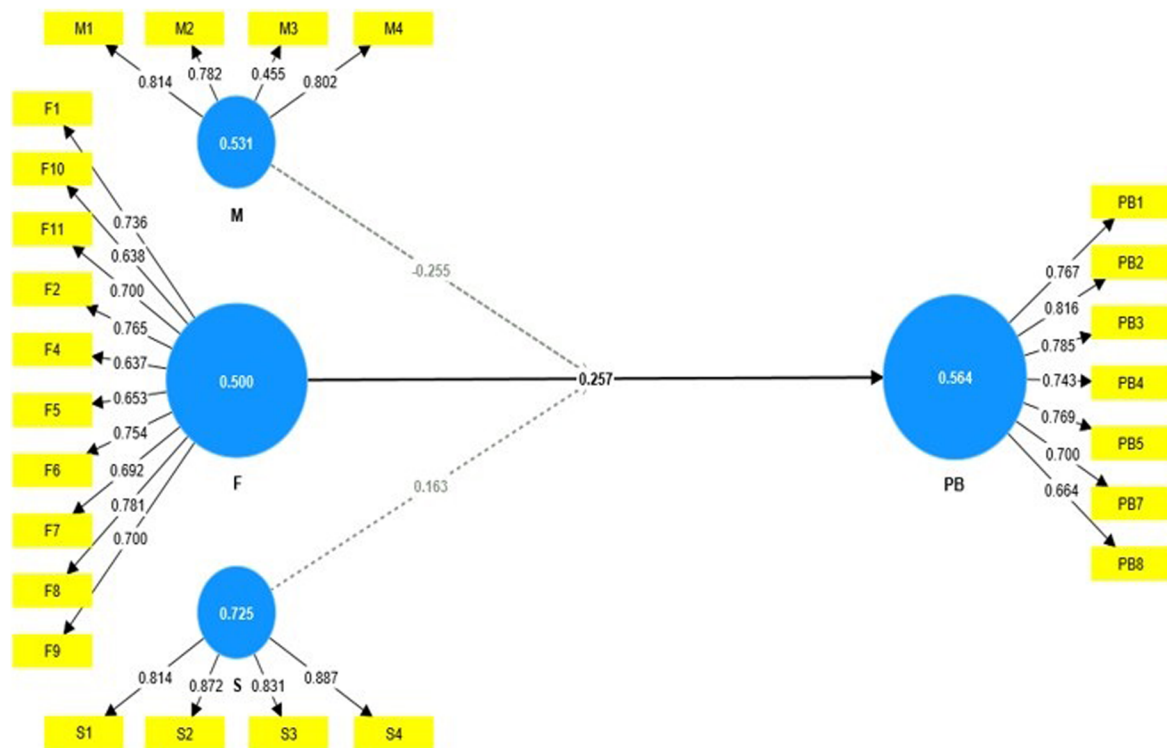


Figure 3. Measurement Model After the Second PLS-SEM Algorithm Run.

Table 2. Reliability and convergent validity.

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
Facilitators	0.890	0.904	0.909	0.500
Transaction leadership style	0.685	0.721	0.813	0.531
Performance budgeting	0.872	0.886	0.900	0.564
Servant leadership style	0.874	0.885	0.913	0.725

Table 3. Multi-collinearity test (Inner VIF).

	Performance budgeting
Facilitators	1.091
Transaction leadership style	2.027
Performance budgeting	
Servant leadership style	2.016

Table 4. Discriminant validity via Heterotrait-Monotrait (HTMT).

	F	M	PB	S
Facilitators				
Transaction leadership style	0.318			
Performance budgeting	0.320	0.428		
Servant leadership style	0.300	0.890	0.230	

validity according to the heuristic benchmarks and reinforcing the constructs' definitional clarity in the research design (see Table 4).

Interpretation of hypothesis testing outcomes

The hypothesis testing results, illustrated in Figure 3 and detailed in Table 6, conform to the standard that a hypothesis is supported when the t -value surpasses 1.65 or when the p -value falls below the 0.10

Table 5. Summary of direct effects on performance budgeting adoption.

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P-values
F → PB	0.257	0.273	0.059	4.347	0.000
S × F → PB	0.163	0.159	0.061	2.690	0.007
M × F → PB	−0.255	−0.261	0.062	4.094	0.000

Table 6. *R*-squared, *f*-squared, and *Q*-squared values.

	<i>R</i> ²	<i>R</i> ² adjusted	F	M	S	PBB	SSO	SSE	<i>Q</i> ²
PBB	0.225	0.213							
Effect size (<i>f</i> ²)			0.078	0.063	0.004				
PBB							2219.000	1293.764	0.417

threshold, indicating significance (Hair et al., 2022). The path analysis indicated confirmation for all proposed hypotheses, each achieving a significance level of 0.00 (see Table 5).

Accompanying measures such as *R*², *f*², and *Q*² values are reported in Table 6, providing further insight into the model's explanatory power and predictive relevance. The *R*² value quantifies the variance in dependent variables explained by independent variables, with a value of 0 (Hair et al., 2022). Aguinis et al. (2005) have demonstrated that the average effect size in tests of moderation is only 0.009. Against this background, Kenny (2018) proposed that 0.005, 0.01, and 0.025 constitute more realistic standards for small, medium, and large effect sizes, respectively (J. F. Hair et al., 2022). The *Q*² values, surpassing zero, denote satisfactory predictive relevance, aligning with the assertions of Chin (1998), Hair et al. (2012), and Henseler et al. (2015).

The statistical analysis detailed in Table 6 offers insight into the model's explanatory power and predictive relevance concerning PB. The *R*-squared value of 0.225 signifies that 22.5% of the variance in the dependent variable is explained by the model, suggesting a moderate explanatory capacity. This figure is slightly adjusted to 0.213 in the adjusted *R*-squared value, which compensates for the number of predictors in the model while confirming its relevance, albeit with a minor reduction (see Table 6).

Effect sizes, as measured by *f*-squared, reveal varying impacts of different factors within the model: 0.078 for facilitators, indicating a significant and robust impact on performance budgeting; 0.063 for transactional leadership, demonstrating a significant and robust influence on the relationship between facilitators and performance budgeting adoption; and a minimal 0.004 for servant leadership, suggesting no significant effect on the relationship between facilitators and performance budgeting adoption. These variations highlight the differing roles these elements play within the broader PB model.

Moreover, a *Q*-squared value of 0.417, exceeding the zero threshold, underscores the satisfactory predictive relevance of the model. This indicates that the model has strong predictive capabilities, crucial for its practical application. The differentiation in effect sizes among the variables studied underscores the need to consider the specific contributions and limitations of various leadership styles and facilitating factors in the effective implementation of performance budgeting.

Conclusions

In this study, we substantiated the contingency theory, evidenced by the empirical validation of H1, which posited a significant positive effect of facilitators on PB adoption in Iraq's MOHE. We demonstrated that the facilitators are instrumental in PB deployment, with a notable increase in the sample mean (*M*=0.273) from the original sample (*O*=0.257) and a substantial *T*-statistic (4.347), accompanied by a *p*-value of 0.000, suggesting a highly significant impact of facilitators on PB adoption. The acceptance of H1 is consistent with the findings of Jongbloed and Vossensteyn (2001) and highlights PB as a strategic tool beyond a mere budgeting mechanism, aligning individual and organizational objectives (Jones, 2010; Jones et al., 2013), thus fostering goal congruence within HEIs (Cugueró-Escofet & Rosanas, 2013). The quantitative findings lend credence to the role of identified facilitators, such as management commitment and readiness for change, as critical in encouraging PB adoption and enhancing the strategic application of modern budgeting methods.

The investigation into the facilitators influencing potential PB adoption in Iraq's MOHE underscored the significance of internal and external facilitators, akin to elements identified in public universities across varied contexts, such as the commitment of top management and the financial management staff, readiness for change, and adequate resource allocation. This aligns with the assertion of Andrews (2004) that, to be effective, PB reforms necessitate attention to authority acceptance and ability beyond technical aspects. Moreover, the results echo the findings of Pratolo et al. (2020) on the strategic role of PB in aligning organizational goals, corroborated by Upping and Oliver (2012) emphasis on management support and technological resources in facilitating accounting change. He and Ismail (2023) further corroborate these findings, highlighting the necessity of staff capacity for the acceptance and execution of PB. Collectively, these studies provide a multi-faceted view of the dynamics essential for PB adoption, reinforcing the hypothesis that facilitators significantly impact PB adoption in Iraq's MOHE (Andrews, 2004; He & Ismail, 2023; Pratolo et al., 2020; Upping & Oliver, 2011).

The examination of the moderating roles of transactional and servant leadership styles in the relationship between facilitators and PB adoption in Iraq's MOHE revealed a complex interplay that significantly impacts the process of adopting PB systems. Empirical evidence demonstrated that while transactional leadership significantly moderates the facilitation of PB adoption ($M \rightarrow PB$) with a robust T -statistic and a p -value of 0.000, indicating a strong and direct influence, servant leadership does not show a statistically significant moderating effect on its own ($S \rightarrow PB$). However, when the interaction of servant leadership with facilitators ($S \times F \rightarrow PB$) is considered, a significant effect emerges, as evidenced by a p -value of 0.007, suggesting that the servant leadership approach can enhance the influence of facilitators on PB when they operate in tandem.

This intricate relationship between leadership styles and PB adoption is echoed in scholarly literature. Andrian and Kuntadi (2022) found that leadership style generally has a lower influence on performance-based budgets than administrative improvements and sanctions, while Kuntadi and Velayati (2022) and Yuhertiana and Fatun (2020) reported that sanctions positively and significantly affect the preparation of performance-based budgets, and leadership style does not moderate the effect of PB on the performance of government officials.

The conceptualization of leadership styles and their impact on organizational culture and practices is further elaborated by Gandolfi and Stone (2018), who offered insights into the strengths and challenges of servant leadership, emphasizing its focus on the growth and success of followers to accomplish the organizational mission. Eva et al. (2019) provided a comprehensive review of servant leadership literature, highlighting its positive relationships with various valued outcomes at the individual, team, and organizational levels, thereby suggesting its suitability for organizations aiming for long-term growth and stakeholder benefit. Finally, Omar and Mahmud (2015) underscored the importance of transactional leadership as a moderator in the relationship between self-leadership strategies and innovative behavior, indicating that the presence of transactional leadership amplifies the positive effects of self-leadership strategies on innovation.

In summary, while transactional leadership has a direct and significant moderating effect on the facilitation of PB adoption, servant leadership, with its emphasis on the growth and empowerment of individuals, can play an influential role when combined with facilitators. These insights from this study provide a valuable perspective for policymakers and educational administrators in Iraq's higher education sector, indicating the need for a balanced leadership approach that integrates the strengths of both transactional and servant leaderships to enhance the adoption of PB systems.

This study has robustly supported the contingency theory through the validation of H1, which predicted that facilitators would have a significant positive impact on PB adoption in Iraq's MOHE. The facilitators, including internal and external pressures, were indeed found to be pivotal in PB adoption, as evidenced by substantial T statistics and p -values, particularly for internal facilitators. This affirms the notion that leadership, especially transactional leadership, plays a direct and significant role in moderating PB facilitation, as highlighted by the data and supported by the findings of Andrian and Kuntadi (2022) and Yuhertiana and Fatun (2020).

Servant leadership, while not directly influential on its own, showed a significant moderating effect when interacting with facilitators, which points to the value of integrating this leadership style into the overall strategic approach for implementing PB systems. This resonates with the findings of Gandolfi and

Stone (2018), who emphasized servant leadership's focus on the growth and success of followers, and Eva et al. (2019), who documented its positive organizational outcomes.

This study, while comprehensive, does acknowledge certain limitations. The scope was confined to Iraq's higher education sector, limiting the generalizability of the findings. Additionally, while the quantitative approach provided robust data, a mixed-method approach could offer deeper insights into the nuanced relationships between leadership styles and PB adoption. Future research should aim to explore the long-term effects of leadership styles on PB adoption and examine these relationships in different cultural and organizational contexts. Including qualitative data to capture the lived experiences of individuals involved in PB processes would also be beneficial. Additionally, expanding the study to include other facets of public sector management could yield more comprehensive insights.

Given the identified significance of facilitators and the moderating role of leadership styles, our recommendations for MOHE are as follows:

1. Invest in leadership development programs that emphasize both transactional and servant leadership qualities.
2. Establish clear incentives and sanctions to leverage transactional leadership effectively.
3. Foster a servant leadership culture that prioritizes employee development and engagement.
4. Conduct periodic assessments of PB adoption to refine strategies based on evolving internal and external pressures.

By acknowledging and implementing these recommendations, policymakers and administrators in Iraq's higher education sector can significantly enhance the strategic application of PB and improve organizational performance.

Acknowledgment

This manuscript has not been published or presented elsewhere in part or entirety and is not under consideration by another journal. All study participants provided informed consent, and the study design was approved by the appropriate ethics review board. We have read and understood your journal's policies, and we believe that neither the manuscript nor the study violates any of these.

Authors contributions

Ali Hussein Khudhair: Conceptualization, Data curation, Formal analysis, Methodology, and Writing – original draft.
 DR. Zaidi Mat Daud: Supervision, Conceptualization, Project administration, and Writing – review & editing.
 DR. Hasri Abdul Razak Mustafa: Formal analysis, Data curation, Methodology, and Validation.
 DR. Ali Naeem Jasim Al-Zubaidi: Project administration, Validation, and Supervision.
 All authors have approved the final manuscript.

Disclosure statement

No potential competing interest was reported by the authors.

Funding

The authors received no direct funding for this research.

About the authors

Ali Hussein Khudhair is a PhD candidate at the School of Business and Economics, University Putra Malaysia, and an administrative and academic staff member at the Ministry of Higher Education and Scientific Research, Iraq. His research focuses on performance-based budgeting, accounting reforms, and financial management. Ali has published extensively on taxation frameworks and strategic financial decision-making.

Zaidi Mat Daud is a Senior Lecturer and the Head of the Bachelor of Accounting Program at the School of Business and Economics, University Putra Malaysia. He holds a PhD from the University of Stirling, UK, and his research

interests include public sector auditing, financial performance, and accounting education. He has numerous publications in leading academic journals and serves as an editor for several reputable journals.

Associate Professor Dr. Hasri Abdul Razak Mustafa is affiliated with the School of Business and Economics, University Putra Malaysia. With experience as a Senior Halal Auditor and industry expertise in banking and finance, his research interests include Islamic finance, financial auditing, and business ethics. He has contributed to executive programs and graduate education at UPM since 2006.

Prof. Dr. Ali Naeem Jasim Al-Zubaidi is the Director of Budgets and University Affairs at the Ministry of Higher Education and Scientific Research, Iraq. He holds a PhD in Accounting and has extensive experience in academic and administrative roles. His research interests include accrual accounting, financial reporting, and public sector reforms. He has supervised numerous postgraduate theses and authored several significant publications.

ORCID

Ali Hussein Khudhair  <http://orcid.org/0009-0002-8928-8719>

Data availability statement

Data not available – participant consent: Due to the nature of the research, due to legal, ethical, and commercial, supporting data is not available.

References

- A., Hamid, K. (2019). The development of the general expenses and their structure in Iraq. *Ahl Al-Bayt Journal*, 15(15), 7–26.
- Abdulkarim, M. E., Umlai, M. I., & Al-Saudi, L. F. (2020). Exploring the role of innovation in the level of readiness to adopt IPSAS. *Journal of Accounting & Organizational Change*, 16(3), 469–495. <https://doi.org/10.1108/JAOC-12-2019-0119>
- Abu Meisam, M. S. (2019). *Performance and program budgeting*. Assabah News Paper.
- Adhikari, P., Kuruppu, C., & Matilal, S. (2013). Dissemination and institutionalization of public sector accounting reforms in less developed countries: A comparative study of the Nepalese and Sri Lankan central governments. *Accounting Forum*, 37(3), 213–230. <https://doi.org/10.1016/j.accfor.2013.01.001>
- Ag Budin, D. K., & Wafa, S. A. (2015). The relationship between culture and leadership style preference among Malay-Brunei, Bajau and Kadazan-Dusun community in Sabah, Malaysia. *Journal of Management Development*, 34(10), 1202–1210. <https://doi.org/10.1108/JMD-02-2015-0019>
- Aguinis, H., Beaty, J. C., Boik, R. J., & Pierce, C. A. (2005). Effect size and power in assessing moderating effects of categorical variables using multiple regression: A 30-year review. *The Journal of Applied Psychology*, 90(1), 94–107. <https://doi.org/10.1037/0021-9010.90.1.94>
- Al-Ameri, S. J. M., Al-Attar, H. A. E., & Al-Khazali, H. L. M. (2018). The use of program and performance budgeting as a tool for planning and control in government units Applied research at the University of Al-Muthanna—Iraq. *The Muthanna Journal of Administrative and Economics Sciences*, 8, 171–203. <https://doi.org/10.52113/6/2018-8-3/171-203>
- Aletaiby, A. A. A. (2018). *A framework to facilitate total quality management implementation in the upstream oil industry: An Iraqi case study*. University of Salford.
- Al-Ghelaiah, I., Ekman, B. O., Esen, F., Kulaksiz, S., Laing, A. M. J., & Stolp, S. J. (2014). *Republic of Iraq-public expenditure review: Toward more efficient spending for better service delivery*. The World Bank.
- Al-Jubouri, H., & Hussein, F. (2019). *Iraq Public Budget 2020*. Media Department of the Iraqi Council of Representatives. https://m.facebook.com/parliament.iq/photos/2536952769699084/?locale=it_IT&_rdr
- Al-Khawlani, S. A. Y. (2019). *The impact of public spending financing in determining the money supply in Iraq*. University of Baghdad.
- Allen, R. (2009). *The challenge of reforming budgetary institutions in developing countries (Issues 9–96)*. International Monetary Fund Washington.
- Al-Mahaini, M. K., & Karim, H. A. (2007). The general budget of the state between preparation, implementation, control, and oversight (A field study of the budget for the Iraqi). *Journal of Economic Management*, 64, 92–119.
- Almustawf, H. (2022). Reflection of programs and performance budgeting on the integrated financial information management system in Iraq. *Tobna Journal for Academic Scientific Studies*, 5(1), 391–417.
- Alsharari, N. M., & Daniels, B. (2024). Management accounting practices and organizational change aspects in the public sector: contextual/processual approach. *Journal of Accounting & Organizational Change*, 20(1), 177–204. <https://doi.org/10.1108/JAOC-10-2021-0143>

- Andrews, M. (2004). Authority, acceptance, ability and performance-based budgeting reforms. *International Journal of Public Sector Management*, 17(4), 332–344. <https://doi.org/10.1108/09513550410539811>
- Andrian, E., & Kuntadi, C. (2022). Factors influencing performance-based budgeting: leadership style, administrative improvement and sanctions. *Dinasti International Journal of Economics, Finance & Accounting*, 3(5), 504–513. <https://dinastipub.org/DIJEFA>
- Baruch, Y., & Holtom, B. C. (2008). Survey response rate levels and trends in organizational research. *Human Relations*, 61(8), 1139–1160. <https://doi.org/10.1177/0018726708094863>
- Birken, S. A., Lee, S.-Y. D., Weiner, B. J., Chin, M. H., Chiu, M., & Schaefer, C. T. (2015). From strategy to action. *Health Care Management Review*, 40(2), 159–168. <https://doi.org/10.1097/HMR.0000000000000018>
- Boolaky Doorgakunt, L. D., Omoteso, K., Mirosea, N., & Boolaky, P. K. (2022). Revisiting international public sector accounting standards adoption in developing countries. *International Journal of Public Administration*, 45(13), 948–963. <https://doi.org/10.1080/01900692.2021.1925692>
- Bryman, A. (2016). *Social research method* (5th ed.). Oxford University Press.
- Butt, N., Afzal, S. M. N., Aslam, R. A., & Ali, S. (2023). Impact of transformational leadership and transactional leadership on commitment to change: Moderating role of organizational culture. *Pakistan Journal of Humanities and Social Sciences*, 11(2), 2015–2025. <https://doi.org/10.52131/pjhss.2023.1102.0497>
- Chenhall, R. H. (2003). Management control systems design within its organizational context: Findings from contingency-based research and directions for the future. *Accounting, Organizations and Society*, 28(2-3), 127–168. [https://doi.org/10.1016/S0361-3682\(01\)00027-7](https://doi.org/10.1016/S0361-3682(01)00027-7)
- Chin, W. W. (1998). The partial least squares approach to structural equation modeling. In G. A. Marcoulides (Ed.), *Modern methods for business research* (pp. 295–336). Psychology Press.
- Chin, W. W., Thatcher, J. B., & Wright, R. T. (2012). Assessing common method bias: Problems with the ULMC technique. *MIS Quarterly: Management Information Systems*, 36(3), 1003–1019. <https://doi.org/10.2307/41703491>
- Chohan, U. W. (2016). The idea of legislative budgeting in Iraq. *International Journal of Contemporary Iraqi Studies*, 10(1), 89–103. https://doi.org/10.1386/ijcis.10.1-2.89_1
- Chohan, U. W. (2022). Budget Policy and Reconstruction in Iraq. In *Global Encyclopedia of public administration, public policy, and governance* (pp. 875–879). Springer International Publishing. https://doi.org/10.1007/978-3-030-66252-3_3462
- Christensen, M. (2002). Accrual accounting in the public sector: the case of the New South Wales government. *Accounting History*, 7(2), 93–124. <https://doi.org/10.1177/103237320200700205>
- Christensen, M., & Yoshimi, H. (2003). Public sector performance reporting: new public management and contingency theory insights. *Government Auditing Review*, 10(3), 71–83.
- Chu, A., & Westerheijden, D. F. (2018). Between quality and control: what can we learn from higher education quality assurance policy in the Netherlands. *Quality in Higher Education*, 24(3), 260–270. <https://doi.org/10.1080/13538322.2018.1559513>
- Cobb, I., Helliard, C., & Innes, J. (1995). Management accounting change in a bank. *Management Accounting Research*, 6(2), 155–175. <https://doi.org/10.1006/mare.1995.1009>
- Cooper, D., & Schindler, P. (2013). *Business research methods* (12th ed.). McGraw Hill International Edition.
- Crain, W. M., & O’Roark, J. B. (2004). The impact of performance-based budgeting on state fiscal performance. *Economics of Governance*, 5(2), 167–186. <https://doi.org/10.1007/s10101-003-0062-6>
- Creswell, J. W. (2013). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). SAGE Publications, Inc.
- Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches*. (5th ed.). Sage.
- Cugueró-Escofet, N., & Rosanas, J. M. (2013). The just design and use of management control systems as requirements for goal congruence. *Management Accounting Research*, 24(1), 23–40. <https://doi.org/10.1016/j.mar.2012.11.001>
- Daeem, S. S., & Khalif, M. A.-H. (2023). Mechanism for Transitioning from line-item budgeting to program and performance budgeting: A proposed model for Sumer University. *Al Kut Journal of Economics and Administrative Sciences (KJEAS)*, 15(49), 1–10.
- Das, P., & Mukherjee, S. (2017). Improvement in higher education quality of the North-East University of India. *Total Quality Management & Business Excellence*, 28(7-8), 765–781. <https://doi.org/10.1080/14783363.2015.1123614>
- Davino, C., Romano, R., & Vistocco, D. (2022). Handling multicollinearity in quantile regression through the use of principal component regression. *METRON*, 80(2), 153–174. <https://doi.org/10.1007/s40300-022-00230-3>
- Dong, B. (2023). A systematic review of the transactional leadership literature and future outlook. *Academic Journal of Management and Social Sciences*, 2(3), 21–25. <https://doi.org/10.54097/ajmss.v2i3.7972>
- Donia, M. B. L., Raja, U., Panaccio, A., & Wang, Z. (2016). Servant leadership and employee outcomes: the moderating role of subordinates’ motives. *European Journal of Work and Organizational Psychology*, 25(5), 722–734. <https://doi.org/10.1080/1359432X.2016.1149471>
- Drolet, A. L., & Morrison, D. G. (2001). Do we really need multiple-item measures in service research? *Journal of Service Research*, 3(3), 196–204. <https://doi.org/10.1177/109467050133001>
- DuFour, R., & Marzano, R. J. (2009). High-leverage strategies for principal leadership. *Educational Leadership*, 66(5), 62–68.

- Dutta, S., & Kumar, J. A. (2022). Knowledge creation and external consultants during ERP implementation: an interpretive study. *Business Process Management Journal*, 28(1), 113–130. <https://doi.org/10.1108/BPMJ-01-2021-0055>
- Ehsein, A. J. (2014). *Factors influencing the readiness to adopt performance based budgeting system (PBBS) among Libyan institutions of higher learning*. University of Malaya.
- Elqadri, Z. M., Priyono, P., Suci, R. P., & Chandra, T. (2015). Effect of leadership style, motivation, and giving incentives on the performance of employees—PT. Kurnia Wijaya Various Industries. *International Education Studies*, 8(10), 183–192. <https://doi.org/10.5539/ies.v8n10p183>
- Erkutlu, H. V., Tanç, Ş. G., & Koçyiğit, S. Ç. (2017). The factors used to create performance-based budgeting: A research on Turkey. In *Accounting and corporate reporting – Today and tomorrow* (pp. 297–314). InTech. <https://doi.org/10.5772/intechopen.68920>
- Eva, N., Robin, M., Sendjaya, S., van Dierendonck, D., & Liden, R. C. (2019). Servant Leadership: A systematic review and call for future research. *The Leadership Quarterly*, 30(1), 111–132. <https://doi.org/10.1016/j.leaqua.2018.07.004>
- Fiedler, F. E. (1964). A contingency model of leadership effectiveness. In *Advances in experimental social psychology* (pp. 149–190). Academic Press. [https://doi.org/10.1016/S0065-2601\(08\)60051-9](https://doi.org/10.1016/S0065-2601(08)60051-9)
- Fitz Verploegh, R., Budding, T., & Wassenaar, M. (2023). Policy control as an alternative approach to performance-based budgeting (PBB) to strengthen the link between policy and financial means. *Public Money & Management*, 43(8), 816–824. <https://doi.org/10.1080/09540962.2022.2062162>
- Fowler, F. J. Jr. (2013). *Survey research methods*. Sage Publications.
- Gandolfi, F., & Stone, S. (2018). Leadership, leadership styles, and servant leadership. *Journal of Management Research*, 18(4), 261–269.
- Godfrey, A. D., Devlin, P. J., & Merrouche, C. (1996). Governmental accounting in Kenya, Tanzania, and Uganda. In *Research in governmental and nonprofit accounting* (pp. 193–208). Springer.
- Godfrey, A. D., Devlin, P. J., & Merrouche, M. C. (2001). A diffusion-contingency model for government accounting innovations. In *International comparative issues in government accounting* (pp. 279–296). Springer US. https://doi.org/10.1007/978-1-4757-5563-3_17
- Gulden, M., Saltanat, K., Raigul, D., Dauren, T., & Assel, A. (2020). Quality management of higher education: Innovation approach from perspectives of institutionalism. An exploratory literature review. *Cogent Business & Management*, 7(1), 1749217. <https://doi.org/10.1080/23311975.2020.1749217>
- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2017a). *A primer on partial least squares structural equation modeling (PLS-SEM)*. SAGE Publications.
- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2022). *A primer on partial least squares structural equation modeling (PLS-SEM)* (3rd ed.). SAGE Publications.
- Hair, J. F., Hult, G. T. M., Ringle, C. M., Sarstedt, M., Danks, N. P., & Ray, S. (2021). An introduction to structural equation modeling. In *Partial least squares structural equation modeling (PLS-SEM) using R* (pp. 1–29). Springer. https://doi.org/10.1007/978-3-030-80519-7_1
- Hair, J. F., Jr, Matthews, L. M., Matthews, R. L., & Sarstedt, M. (2017b). PLS-SEM or CB-SEM: updated guidelines on which method to use. *International Journal of Multivariate Data Analysis*, 1(2), 107–123. <https://doi.org/10.1504/IJMDA.2017.087624>
- Hair, J. F., Sarstedt, M., Hopkins, L., & Kuppelwieser, V. G. (2014). Partial least squares structural equation modeling (PLS-SEM): An emerging tool in business research. *European Business Review*, 26(2), 106–121. <https://doi.org/10.1108/EBR-10-2013-0128>
- Hair, J. F., Sarstedt, M., Ringle, C. M., & Mena, J. A. (2012). An assessment of the use of partial least squares structural equation modeling in marketing research. *Journal of the Academy of Marketing Science*, 40(3), 414–433. <https://doi.org/10.1007/s11747-011-0261-6>
- Hartono, J. (2013). *Guidance for survey study with questionnaire*. BPFE Yogyakarta.
- Hashim, A., & Piatti, M. (2016). *A diagnostic framework to assess the capacity of a government's financial management information system as a budget management tool*. World Bank.
- Hayduk, L. A., & Littvay, L. (2012). Should researchers use single indicators, best indicators, or multiple indicators in structural equation models? *BMC Medical Research Methodology*, 12(1), 159. <https://doi.org/10.1186/1471-2288-12-159>
- He, L., & Ismail, K. (2023). Do staff capacity and performance-based budgeting improve organisational performance? Empirical evidence from Chinese public universities. *Humanities & Social Sciences Communications*, 10(1), 29. <https://doi.org/10.1057/s41599-023-01523-2>
- Henseler, J. (2018). Partial least squares path modeling: Quo vadis? *Quality & Quantity*, 52(1), 1–8. <https://doi.org/10.1007/s11135-018-0689-6>
- Henseler, J., Dijkstra, T. K., Sarstedt, M., Ringle, C. M., Diamantopoulos, A., Straub, D. W., Ketchen, D. J., Hair, J. F., Hult, G. T. M., & Calantone, R. J. (2014). Common beliefs and reality about PLS. *Organizational Research Methods*, 17(2), 182–209. <https://doi.org/10.1177/1094428114526928>
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43(1), 115–135. <https://doi.org/10.1007/s11747-014-0403-8>

- Holten, A.-L., & Brenner, S. O. (2015). Leadership style and the process of organizational change. *Leadership & Organization Development Journal*, 36(1), 2–16. <https://doi.org/10.1108/LODJ-11-2012-0155>
- IBRD. (2021). Iraq economic monitor: The slippery road to economic recovery (English). Washington, DC: World Bank Group. <http://documents.worldbank.org/curated/en/981071637593726857/Iraq-Economic-Monitor-The-Slippery-Road-to-Economic-Recovery>
- Innes, J., & Mitchell, F. (1990). The process of change in management accounting: some field study evidence. *Management Accounting Research*, 1(1), 3–19. [https://doi.org/10.1016/S1044-5005\(90\)70042-X](https://doi.org/10.1016/S1044-5005(90)70042-X)
- Jansen, E. P. (2008, July 30). Changes in leadership style, management control and management accounting. AAA 2009 Management Accounting Section (MAS) Meeting Paper. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.1187573>
- Jasim, A. N., Khudhair, A. H., & Kadhim, H. H. (2024). The Imperative of Modern Budgeting Trends Restructuring Iraq's Public Finances. *Accounting and Financial Sciences Journal*, 14, 221–244.
- Ji-Yu, C. (2008). *Reform practice of performance budgeting management-Based on an analysis frame of international comparison*. Journal of Shanxi Finance and Economics University.
- Jones, R. (2010). *Public sector accounting*. Pearson Education.
- Jones, R., Lande, E., Lüder, K., & Portal, M. (2013). A Comparison of Budgeting and Accounting Reforms in the National Governments of France, Germany, the UK and the US. *Financial Accountability & Management*, 29(4), 419–441. <https://doi.org/10.1111/faam.12022>
- Jongbloed, B. (2011). Funding through contracts: European and institutional perspectives. In *Reform of higher education in Europe* (pp. 173–191). Brill Sense.
- Jongbloed, B., & Vossensteyn, H. (2001). Keeping up performances: An international survey of performance-based funding in higher education. *Journal of Higher Education Policy and Management*, 23(2), 127–145. <https://doi.org/10.1080/13600800120088625>
- Kasurinen, T. (2002). Exploring management accounting change: the case of balanced scorecard implementation. *Management Accounting Research*, 13(3), 323–343. <https://doi.org/10.1006/mare.2002.0191>
- Kenno, S., Lau, M., & Sainty, B. (2018). In search of a theory of budgeting: a literature review. *SSRN Electronic Journal*, 17(4), 507–533. <https://doi.org/10.2139/ssrn.3104315>
- Kenny, D. A. (2018). *Moderation*. David Kenny's Website.
- Khaghaany, L. M. (2022). Role of public budgeting approaches in improving the effectiveness of public sector units in Iraq. *Akkad Journal Of Contemporary Accounting Studies*, 1(2), 94–111. <https://doi.org/10.55202/ajcas.v1i2.11>
- Khairullah, B. N. (2023). Measuring the impact of structural imbalances on managing government spending in Iraq during the period (2005–2020). *International Academic Journal of Accounting and Financial Management*, 10(1), 128–136. <https://doi.org/10.9756/IAJAFM/V10I1/IAJAFM1014>
- Khalil, H. E. (2019). The possibility of developing program budgets and performance in government administrative units according to a proposed framework. *Journal of Kufa Studies Center*, 1(54), 667–692. <https://doi.org/10.36322/jksc.v1i54.5011>
- Kohlmeyer, J. M., Mahenthiran, S., Parker, R. J., & Sincich, T. (2014). Leadership, budget participation, budgetary fairness, and organizational commitment. *Advances in Accounting Behavioral Research*, 17, 95–118. (<https://doi.org/10.1108/S1475-148820140000017003>)
- Kool, M., & van Dierendonck, D. (2012). Servant leadership and commitment to change, the mediating role of justice and optimism. *Journal of Organizational Change Management*, 25(3), 422–433. <https://doi.org/10.1108/09534811211228139>
- Kuntadi, C., & Livrianti, N. (2022). Factors affecting the implementation of performance-based budgeting policies: Communication, resources, and bureaucratic structure. *Journal Research of Social Science, Economics, and Management*, 2(4), 466–484. <https://doi.org/10.59141/jrssem.v2i04.279>
- Kuntadi, C., & Velayati, E. (2022). Factors affecting the implementation of performance-based budget. *Eduvest – Journal of Universal Studies*, 2(9), 1931–1942. <https://doi.org/10.59188/eduvest.v2i9.607>
- Lambert, L. (2002). A framework for shared leadership. *Educational Leadership*, 59(8), 37–40.
- Liberato, M. I., Choban de Sousa Paiva, I., & Serrasqueiro, R. (2024). Constraints and stimuli in the implementation of public accounting reform: systematic literature review and future research agenda. *Journal of Accounting & Organizational Change*, 20(3), 560–592. <https://doi.org/10.1108/JAOC-01-2022-0018>
- Lorenz, C. (2012). Impact of performance budgeting on public spending in the German Laender. In *The impact of performance budgeting on public spending in Germany's laender* (pp. 75–122). Springer.
- Lowry, P. B., & Gaskin, J. (2014). Partial least squares (PLS) structural equation modeling (SEM) for building and testing behavioral causal theory: When to choose it and how to use it. *IEEE Transactions on Professional Communication*, 57(2), 123–146. <https://doi.org/10.1109/TPC.2014.2312452>
- Lüder, K. G. (1992). A contingency model of governmental accounting innovations in the political-administrative environment. *Research in Governmental and Nonprofit Accounting*, 7(1), 99–127.
- Mah'd, O. A. (2014). Allocating resources in higher education: Evidence from private Jordanian universities. *International Journal of Business and Management*, 9(5), 169–183. <https://doi.org/10.5539/ijbm.v9n5p169>
- Mahmud, S. F. (2013). The higher education in Iraq challenges and recommendations. *Journal of Advanced Social Research*, 3(9), 255–264.

- Matthysen, M., & Harris, C. (2018). The relationship between readiness to change and work engagement: A case study in an accounting firm undergoing change. *SA Journal of Human Resource Management*, 16(1), 1–11. <https://doi.org/10.4102/sajhrm.v16i0.855>
- Mithas, S., Ramasubbu, N., & Sambamurthy, V. (2011). How information management capability influences firm performance. *MIS Quarterly*, 35(1), 237–256. <https://doi.org/10.2307/23043496>
- Mohammed, M., Ibrahim, H., & Mohd Nadzir, M. (2015). Electronic information sharing between public universities and ministry of higher education and scientific research: A pilot study. *Journal of Theoretical and Applied Information Technology*, 77(2), 1–13.
- Mohsin, T. (2017). *The role of monitoring the stages of the budget and its impact in enhancing accountability procedures according to performance indicators*. University of Baghdad.
- MOP. (2018). *National development plan republic of Iraq 2018-2022*. Ministry of Planning, Republic of Iraq.
- Muhammad, M. T., Juma, A. R. O., & Samim, K. K. (2019). The importance of transformation from budgeting items to programs and performance budgeting to treat the public budgeting deficit in Iraq. *Anbar University Journal of Economic and Administrative Sciences*, 11(24), 1–24.
- Muteb, H. L., Abd, H. A., & Mashkoo, S. J. (2018). The use of program and performance budgeting as a tool for planning and control in government units applied research at the University of Al-Muthanna – Iraq. *The Muthanna Journal of Administrative and Economics Sciences*, 8(2), 103–272. <https://doi.org/10.52113/6/2018-8-3/171-203>
- Mwiya, B., Siachinji, B., Bwalya, J., Sikombe, S., Chawala, M., Chanda, H., Kayekesi, M., Sakala, E., Muyenga, A., & Kaulungombe, B. (2019). Are there study mode differences in perceptions of university education service quality? Evidence from Zambia. *Cogent Business & Management*, 6(1), 1–19. <https://doi.org/10.1080/23311975.2019.1579414>
- Neuby, B. L. (1997). On the lack of a budget theory. *Public Administration Quarterly*, 21(2), 131–142.
- Niu, M., Ho, A., & Ma, J. (2005). Performance-based budgeting in China: A case study of Guangdong. *Network of Asia-Pacific Schools and Institutes of Public Administration and Governance (NAPSIPAG) Annual Conference* (pp. 5–7).
- Okoroafor, E. N. (2021). Study of challenges ahead for institutional implementation of performance-based budgeting in the Nigerian Public Sector. In *New innovations in economics, business and management* (Vol. 2, pp. 98–109). Book Publisher International (a part of SCIENCEDOMAIN International). <https://doi.org/10.9734/bpi/niebm/v2/14184D>
- Omar, I. M., & Mahmud, N. (2015). Transactional leadership as a moderator between self-leadership strategies and innovative behavior. *International Conference on Human Resource Development*, 482, 472–482.
- Or, S., & Tziner, A. (2020). Transactional leadership as a moderator between self-leadership strategies and innovative behavior. *International Conference on Human Resource Development*, 22(53), 164–178. <https://doi.org/10.24818/EA/2020/53/164>
- Otley, D. T. (1980). The contingency theory of management accounting: achievement and prognosis. *Accounting, Organizations and Society*, 5(4), 413–428. [https://doi.org/10.1016/0361-3682\(80\)90040-9](https://doi.org/10.1016/0361-3682(80)90040-9)
- Ouda, H. A. G. (2013). Suggested framework for implementation of performance budgeting in the public sector of developing countries with special focus on Egypt. *International Journal of Governmental Financial Management*, 13(1), 50–67.
- Park, Y. S., Konge, L., Artino, A. R. Jr. (2020). The positivism paradigm of research. *Academic Medicine*, 95(5), 690–694. <https://doi.org/10.1097/ACM.0000000000003093>
- Pauluzzo, R., Fedele, P., Pericolo, E., & Dokalskaya, I. (2024). The future of public sector accounting education: A structured literature review. *Journal of Public Affairs Education*, 30(2), 274–314. <https://doi.org/10.1080/15236803.2024.2312760>
- Pereira, L. M., Sanchez Rodrigues, V., & Freires, F. G. M. (2024). Use of partial least squares structural equation modeling (PLS-SEM) to improve plastic waste management. *Applied Sciences*, 14(2), 628. <https://doi.org/10.3390/app14020628>
- Podsakoff, P. M., & Todor, W. D. (1985). Relationships between leader reward and punishment behavior and group processes and productivity. *Journal of Management*, 11(1), 55–73. <https://doi.org/10.1177/014920638501100106>
- Pollitt, C. (2018). Performance management 40 years on: A review. Some key decisions and consequences. *Public Money & Management*, 38(3), 167–174. <https://doi.org/10.1080/09540962.2017.1407129>
- Pratolo, S., Sofyani, H., & Anwar, M. (2020). Performance-based budgeting implementation in higher education institutions: Determinants and impact on quality. *Cogent Business & Management*, 7(1), 1786315. <https://doi.org/10.1080/23311975.2020.1786315>
- Rahi, M. A., Maelah, R., Hamzah, N., & Kasim, K. N. (2024). Unveiling the challenges and processes of implementing program and performance budget for government universities in Iraq. *International Journal of Religion*, 5(8), 942–954. <https://doi.org/10.61707/dvsm8e94>
- Roemer, E., Schuberth, F., & Henseler, J. (2021). HTMT2—an improved criterion for assessing discriminant validity in structural equation modeling. *Industrial Management & Data Systems*, 121(12), 2637–2650. <https://doi.org/10.1108/IMDS-02-2021-0082>
- Sabastian, R. A. (2021). The influence of leadership style and motivation on employee performance. *Almana: Jurnal Manajemen Dan Bisnis*, 5(1), 116–125. <https://doi.org/10.36555/almana.v5i1.1587>
- Sadidi, M., Khalilifar, O., Amiri, M., & Moradi, R. (2018). Use of partial least squares – Structural equation modeling for identifying the most important variables via application of data envelopment analysis. *Journal of Archives in Military Medicine*, 6(1), 1–9. <https://doi.org/10.5812/jamm.67114>

- Saleem, F., Zhang, Y. Z., Gopinath, C., & Adeel, A. (2020). Impact of servant leadership on performance: the mediating role of affective and cognitive trust. *Sage Open*, 10(1), 1–16. <https://doi.org/10.1177/2158244019900562>
- Saleh, E. S., Azeez, K. I., & Muneer, A. S. (2019). The impact of budget in the public dept in iraq for the period 1990-2016. *Journal of AUS Revista*, 263(1), 20–28. <https://doi.org/10.33329/jaus.19.263.3>
- Sarstedt, M., Ringle, C. M., & Hair, J. F. (2017). Partial least squares structural equation modeling. In *Handbook of market research* (pp. 1–40). Springer International Publishing. https://doi.org/10.1007/978-3-319-05542-8_15-1
- Savage, J. D. (2013). *Reconstructing Iraq's budgetary institutions: Coalition state building after Saddam*. Cambridge University Press.
- Schumacker, R. E., & Lomax, R. G. (2015). *A beginner's guide to structural equation modeling*. Routledge.
- Spears, L. (1996). Reflections on Robert K. Greenleaf and servant-leadership. *Leadership & Organization Development Journal*, 17(7), 33–35. <https://doi.org/10.1108/01437739610148367>
- Suparman, M., Siti-Nabiha, A. K., & Phua, L. K. (2015). Public sector accounting reforms: Assessing Indonesia's readiness towards implementing accrual accounting. *Problems and Perspectives in Management*, 13, 296–303.
- Surianti, M., & Dalimunthe, A. R. (2015). The implementation of performance based budgeting in public sector (Indonesia case: A literature review). *Research Journal of Finance and Accounting*, 6(12), 198–210.
- Tarter, C. J., & Hoy, W. K. (1998). Toward a contingency theory of decision making. *Journal of Educational Administration*, 36(3), 212–228. <https://doi.org/10.1108/09578239810214687>
- Thomas, A. P. (1991). Towards a contingency theory of corporate financial reporting systems. *Accounting, Auditing & Accountability Journal*, 4(4), 40–57. <https://doi.org/10.1108/EUM0000000001933>
- Tilahun, M., Berhan, E., & Tesfaye, G. (2023). Determinants of consumers' purchase intention on digital business model platform: evidence from Ethiopia using partial least square structural equation model (PLS-SEM) technique. *Journal of Innovation and Entrepreneurship*, 12(1), 1–28. <https://doi.org/10.1186/s13731-023-00323-x>
- Trottier, T., Van Wart, M., & Wang, X. (2008). Examining the nature and significance of leadership in government organizations. *Public Administration Review*, 68(2), 319–333. <https://doi.org/10.1111/j.1540-6210.2007.00865.x>
- Tyssen, A. K., Wald, A., & Heidenreich, S. (2014). Leadership in the context of temporary organizations. *Journal of Leadership & Organizational Studies*, 21(4), 376–393. <https://doi.org/10.1177/1548051813502086>
- Upping, P., & Oliver, J. (2011). Accounting change model for the public sector: adapting Luder's model for developing countries. *International Review of Business Research Papers*, 7(1), 364–380.
- Upping, P., & Oliver, J. (2012). Thai public universities: Modernisation of accounting practices. *Journal of Accounting & Organizational Change*, 8(3), 403–430. <https://doi.org/10.1108/18325911211258362>
- van Dierendonck, D. (2011). Servant leadership: A review and synthesis. *Journal of Management*, 37(4), 1228–1261. <https://doi.org/10.1177/0149206310380462>
- Wei, Z., & Nguyen, Q. T. K. (2020). Local responsiveness strategy of foreign subsidiaries of Chinese multinationals: The impacts of relational-assets, market-seeking FDI, and host country institutional environments. *Asia Pacific Journal of Management*, 37(3), 661–692. <https://doi.org/10.1007/s10490-019-09655-3>
- Woods, M. (2009). A contingency theory perspective on the risk management control system within Birmingham City Council. *Management Accounting Research*, 20(1), 69–81. <https://doi.org/10.1016/j.mar.2008.10.003>
- Yamamoto, K. (1999). Accounting system reform in Japanese local governments. *Financial Accountability & Management*, 15(3-4), 291–307. <https://doi.org/10.1111/1468-0408.00086>
- Yuhertiana, I., & Fatun, F. (2020). Performance-based budgeting in public sector and managerial performance with leadership as moderating variable. *International Journal of Service Management and Sustainability*, 5(1), 177–204.