



The Impact of Applying Zero-Based Budgeting on the Quality of Internal Control in Economic Units: An Applied Study on Iraqi Banks

Fadhel Allah Ahmed Abed*, Shehlaa Neamah Annon, Laith Malik Radhi Khaghaany

Al-Furat Al-Awsat Technical University

*Correspondence: Fadhel Allah Ahmed Abed

Email: fadhel_allah@atu.edu.iq

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Abstract: This study examines the impact of applying Zero-Based Budgeting on the quality of internal control in economic units, with an applied focus on Iraqi banks. The research aims to determine whether adopting Zero-Based Budgeting contributes to enhancing efficiency, transparency, and accountability within internal control systems. The study is based on the premise that traditional budgeting methods often rely on incremental adjustments which may overlook inefficiencies, whereas Zero-Based Budgeting requires justification of all expenses from a zero base, thereby strengthening oversight and resource allocation. To achieve the objectives of the study, a descriptive analytical approach was adopted, supported by an applied field study conducted on a sample of employees working in Iraqi banks. Data were collected using a structured questionnaire designed to measure the degree of Zero-Based Budgeting implementation and its influence on internal control components including control environment, risk assessment, control activities, information and communication, and monitoring. Statistical tools were employed to analyze the data and test the study hypotheses. The results indicated a statistically significant positive relationship between the application of Zero-Based Budgeting and the improvement of internal control quality. The findings showed that Zero-Based Budgeting enhances financial discipline, reduces unnecessary expenditures, supports better decision making, and improves monitoring procedures. Additionally, the application of ZBB was found to strengthen risk assessment practices and increase the effectiveness of control activities within Iraqi banks. The study concludes that adopting Zero-Based Budgeting plays an important role in improving internal control quality in economic units. It recommends that Iraqi banks expand the use of Zero-Based Budgeting, provide training programs for employees, and integrate modern technological tools to support budgeting and control processes. These steps are expected to enhance financial performance and strengthen governance frameworks within the banking sector.

Keywords: Zero-Based Budgeting, Quality of Internal Control, Economic Units.

Introduction

The economic units, especially the Iraqi banks, are faced with challenges in the domains of efficient resource utilization, expenditure control, and the improvement of the efficiency of the internal control systems in the face of economic fluctuations, augmenting financial and operational risks, and the evolution of accounting and auditing practices.

In addition to the aforementioned, experiences have demonstrated the continuation of weaknesses in the domain of the budget and unjustified expenditure through the adoption of conventional budgeting procedures, depending on increases and decreases in the budgets of the previous period.

In the context of the above, a new approach of planning and control in organizations has been developed, referred to as Zero-Based Budgeting (ZBB). This new methodology is founded on the reconsideration of all activities as well as programs through a complete process of evaluation at the beginning of each fiscal period, as well as the association of the fiscal allocations to the actual levels of performance as well as the fulfillment of the goals, without the adoption of unjustified historical data. This new methodology is expected to be a contributor to the enhancement of the quality of internal control in organizations.

The significance of research into the implications of practicing zero-based budgeting on the quality of internal control in Iraqi banks stems from the high sensitivity of banks as economic entities to financial and regulatory risks, and this may be done by examining its relation to internal control, as well as the various dimensions thereof.

1. Research Problem

Despite the vital role of the internal control in banks, a lot of Iraqi banks still suffer from:

1. Weak efficiency of internal control systems.
2. Reliance on traditional budgets that do not reflect actual performance.
3. Financial resource waste.
4. Weak linkage between expenditures and objectives/results.
5. Increased likelihood of accounting errors and manipulation.

The research problem is represented in the following main question:

What is the impact of applying zero-based budgeting on the quality of internal control in Iraqi banks?

From this main question, several sub-questions arise, including:

1. To what extent is zero-based budgeting applied in Iraqi banks?
2. What is the level of internal control quality in Iraqi banks?
3. Does the application of zero-based budgeting contribute to improving the efficiency of internal control?
4. What is the nature of the relationship between zero-based budgeting and the dimensions of internal control (accounting control, administrative control, operational control)?

2. Significance of the Study

1) Theoretical Significance

- This study contributes to enriching accounting and financial literature related to zero-based budgeting and internal control.
- The study links a modern budgeting approach with the quality of internal control systems.
- The study provides a theoretical framework that may be utilized in subsequent studies in the banking sector.

2) Practical Significance

- This study provides Iraqi bank managements with practical indicators regarding the feasibility of applying zero-based budgeting.
- It helps in improving the efficiency of internal control systems and reduce financial waste.
- It supports decision-makers in adopting more effective planning and control methods.
- It contributes to enhancing transparency and accountability within banks.

3. Objectives of the Study

- 1) To identify the concept of zero-based budgeting and its main characteristics.
- 2) To explain the concept of internal control and its dimensions in banks.
- 3) To measure the level of zero-based budgeting application in Iraqi banks.
- 4) To evaluate the level of internal control quality in Iraqi banks.
- 5) To analyze the impact of applying zero-based budgeting on improving the quality of internal control.
- 6) To reach conclusive conclusions and recommendations that contribute to developing planning and control systems in Iraqi banks.

4. Research Hypotheses

Main Hypothesis:

H1: There is a statistically significant impact of applying zero-based budgeting on improving the quality of internal control in Iraqi banks.

Sub-Hypotheses:

H1: There is a statistically significant impact of applying zero-based budgeting on improving the efficiency of accounting control in Iraqi banks.

H1: There is a statistically significant impact of applying zero-based budgeting on administrative control in Iraqi banks.

H1: There is a statistically significant impact for the application of zero-based budgeting in improving operational control in Iraqi banks.

H1: There is a significant relationship between the level of zero-based budgeting application and the level of internal control effectiveness in Iraqi banks.

5. Study Variables

The focus of the study will be two major variables, i.e.:

Independent Variable: Zero-Based Budgeting.

Dependent Variable: Internal Control Quality.

The conceptual framework that explains the inter-relationship between the variables depicts the effect of the independent variable, together with its different dimensions, on the dependent variable, with its chosen dimension.

Independent Variable: Zero-Based Budgeting (ZBB)

The dimensions of the Independent Variable

1. **Re-evaluation of Activities and Programs:** This would include re-evaluation of all bank activities by considering their necessity and efficiency before spending the financial resources on these activities.
2. **Justification of Costs and Expenditures:** This refers to the dedication of various departments in providing precise justifications for the incurred costs and the association of these costs in relation to the envisioned returns.
3. **Linking Expenditure with Objectives and Performance:** Under this approach, financial resources are distributed based on the extent to which each activity leads towards the achievement of the strategic objectives of the bank.
4. **Rationalization of Resource Utilization:** This refers to minimizing waste in terms of financial resources and improved efficiency in utilizing human, financial, and technological resources.

Dependent Variable: Internal Control Quality

The dimensions of the Dependent Variable:

1. **Control Environment:** This includes integrity and ethical values, organizational structure, human resource policies, and the definition of authority and responsibility.
2. **Risk Assessment:** The process of identifying the financial or business risks which the bank might undergo in the future, along with designing the necessary procedures for tackling them.
3. **Control Activities:** These include the policies that are designed to ensure that management directives are implemented, for example, segregation of duties.
4. **Information and Communication:** This term entails the dissemination of reliable and precise information concerning finance in a timely fashion, in addition to the efficiency of communication channels in the bank.
5. **Monitoring and Evaluation:** This consists of the continuous evaluation of internal control systems and addressing deficiencies.

Table 1.
Dependent Variable

Type of Variable	Variable	Dimensions
Independent	Zero-Based Budgeting	Re-evaluation of activities- Cost justification- Linking expenditure to performance- Resource rationalization
Dependent	Internal Control Quality	Control environment- Risk assessment- Control activities- Information and communication- Monitoring

6. Operational Definitions

First: Operational Definitions of the Study Variables

1. Independent Variable: Zero-Based Budgeting: Zero-based budgeting is operationally measured in this study through the extent to which Iraqi banks apply budgeting practices starting from a zero base. This is assessed through a set of questionnaire items reflecting:

- Annual re-evaluation of all banking activities and programs.
- Justification of each cost item without relying on previous years' budgets.
- Linking financial resource allocation to strategic objectives and performance levels.
- Rationalizing resource use and reducing financial waste.

This variable is measured using a five-point Likert scale, where higher values indicate a higher level of zero-based budgeting application within the bank.

2. Re-evaluation of Activities and Programs: Operationally defined as the degree to which the bank subjects all its banking activities to periodic examination and analysis in terms of necessity and efficiency before including them in the budget.

3. Justification of Costs and Expenditures: Operationally refers to the extent to which banking departments commit to providing detailed justifications for each expenditure item and linking costs to expected returns or benefits.

4. Linking Expenditure to Objectives and Performance: Operationally defined as the extent to which the bank relies on performance indicators in allocating financial resources and linking financial appropriations to the achievement of strategic objectives.

5. Rationalization of Resource Utilization: Operationally refers to the bank's ability to reduce financial waste and improve the efficiency of resource utilization as a result of applying zero-based budgeting.

Second: Operational Definitions of the Dependent Variable

1. Internal Control Quality: Internal control quality is operationally measured in this study through the efficiency and effectiveness of the control policies and procedures adopted in Iraqi banks, as perceived by the study sample. This is based on the five dimensions of the COSO framework and measured using a five-point Likert scale, where higher values reflect a higher level of internal control quality.

2. Control Environment: Operationally defined as the extent to which integrity and ethical values are upheld, the organizational structure is clear, and authority and responsibilities are properly defined within the bank.

3. Risk Assessment: Operationally, it implies the ability of the bank to assess, analyze, and develop proper procedures to address existing risks, both financial and operational in nature.

4. Control Activities: Operationally refers to the degree to which control policies and procedures that provide for the soundness of banking operations, such as segregation of duties, approval, and periodical reviews, are implemented.

5. Information and Communication: Defined in an operational manner as the bank's ability to obtain accurate and reliable financial information in a timely manner, and the internal communication channels used in the bank.

6. Monitoring and Evaluation: Operationally, it refers to the degree to which bank internal control systems are continually monitored and evaluated, and weaknesses identified, are corrected.

Methodology

Previous Studies

First Study: Alsharari (2022)

Title:The Role of Zero-Based Budgeting in Enhancing the Financial Control in Banks

Objective of the Study: The goal of the study was to arouse comprehendings regarding the significance of zero budgeting in the promotion of better financial control with improved efficiency in commercial banks.

Methodology: In addition, the study adopted the descriptive-analytical approach in which the questionnaire was the primary data collection instrument from (120) employees from the banking sector.

Main Findings:

- The statistically significant relationship exists between the application of zero-based budgeting and the enhancement of financial control.
- Zero-based budgeting helps in reducing financial waste.

Aspects of Benefit: The research study supported the independent research variable (zero-based budgeting) in that it was made relevant in financial control.

Second Study: Al-Dhubaibi& Al-Zubaidi (2021)

Title: The Impact of Modern Budgeting Techniques on the Internal Control Quality

Objective of the Study: To assess the consequences of the application of modern budgeting techniques on the quality of internal control in financial institutions.

Methodology: The methodology employed by the researchers was quantitative with linear regression analysis, and the statistical package used was SPSS.

Findings:

- There is a considerable impact of modern budget techniques on the quality of internal control.
- Weak control systems were identified in places that utilized traditional budgeting systems.

Points of Difference: The research topic focused on contemporary methods of budgeting in general, while your research specifically deals with zero-based budgeting.

Third Study: Hansen &Mowen (2019)

Title:Cost Management and Budgetary Control Systems

Objective of the Study:To examine the relationship between cost management systems, budgeting, and administrative control.

Methodology:A theoretical analytical study supported by applied case studies.

Findings:

- Zero-based budgeting contributes to improving administrative control.
- It is necessary to link budgeting to performance.

Aspects of Benefit: This study was adopted as a theoretical foundation for building the conceptual framework.

Fourth Study: Drury (2021)

Title: Management Accounting for Business Decisions

Objective of the Study: To clarify the role of management accounting and budgeting in supporting control systems.

Findings:

- Zero-based budgeting enhances accountability and transparency.
- Internal control becomes more effective when modern budgeting methods are used.

Fifth Study: Al-Jubouri (2020)

Title: The Impact of Applying Modern Budgets on Improving Internal Control in Iraqi Banks

Methodology: A descriptive-analytical approach with a sample of (90) banking employees.

Findings:

- Weak reliance on zero-based budgeting.
- A positive relationship exists between modern budgeting methods and internal control quality.

Aspects of Benefit: Supports the applied dimension of the current study within the Iraqi environment.

The Theoretical Framework of Zero-Based Budgeting (ZBB)

First: Concept of Zero-Based Budgeting

ZBB is considered one of the modern budgeting approaches. Preparing the budget from scratch, without depending on the data from previous years, is what characterized it. All items of expenditure are justified and analyzed independently in every fiscal period, which is linked to the objectives and strategic plans of the economic unit. This method is more suitable for units desiring to rationalize expenditures and improve resource use efficiency, especially in financial institutions such as banks.

Definitions of Zero-Based Budgeting

Zero-based budgeting is defined as:

1. A planning and control approach in which all financial activities and programs must be re-evaluated each year without assuming the continuity of previous expenditures - Horngren et al, 2020.
2. Hansen & Mowen refer to it as an approach targeted at an accurate allocation of financial inputs according to the exact cost and benefit analysis of a certain activity (Hansen & Mowen, 2019).
3. For accounting, it is defined as a management accounting technique whereby costs are justified and related to the expected performance instead of relying on their historic repetition (Drury, 2021).

Second: Importance of Zero-Based Budgeting

The importance of zero-based budgeting in economic units, especially in banks, can be defined in the following terms:

1. Achieving financial discipline and avoiding wastage of resources.
2. Increasing transparency and accountability in budget preparation and implementation.
3. Enhancing the efficiency of resource allocation in conformity with the actual priorities.
4. Identification and elimination of non-value-adding activities.
5. Assisting top management in a sound decision-making process.

Third: Objectives of Zero-Based Budgeting

Zero-based budgeting aims to fulfill several needs, first and foremost:

1. Linking financial expenditure to bank's strategic objectives.
2. Reducing Unnecessary Costs.
3. Enhancing the efficiency of finance and administration.
4. The strengthening of control over resources.
5. Improving the quality of financial planning.

Fourth: Advantages of Applying Zero-Based Budgeting

Some of the most noticeable advantages of zero-based budgeting include:

1. Eliminating the unjustified accumulation of expenses.
2. Raising the level of financial and control analysis.
3. Improving resource utilization efficiency.
4. Enhancing managerial participation in budget preparation.
5. Supporting Financial Governance in Banks.

Fifth: Disadvantages of Zero-Based Budgeting

Despite its significance, zero-based budgeting is not without its challenges, these include:

1. The requirement of a large amount of preparation time and effort.
2. High implementation costs in large institutions.
3. Employees' resistance to change.
4. The demand for trained manpower and sophisticated information systems.
5. Difficulty associated with implementation in unstable environments.

The Theoretical Framework of Internal Control in Banks

First: Concept of Internal Control

Internal control is viewed as one of the major pillars that guarantee the strength of financial and administrative performance. It is defined as the policies and procedures that the organization's management has undertaken to guarantee the protection of the organization's assets, as well as ensuring the correctness of financial information and observing laws and regulations (Arens et al, 2020).

Another definition by COSO is that the process is an integrated process affected to provide reasonable assurance for the achievement of operational, financial, and compliance objectives.

Second: Importance of Internal Control in Banks

The importance of internal control in banks is underlined by the following:

1. Deposit protection.
2. Bringing down the rate of financial manipulation and fraud.
3. Assuring that the financial reports are reliable.
4. Compliance with banking legislation and regulations.
5. Supporting the financial stability of the bank itself.

Third: Objectives of Internal Control

1. Ensuring the efficiency of all the operations in the bank.
2. Improved credibility and transparency.
3. Protecting assets.
4. Preventing a lot of errors and deviations.
5. Support the decision-making of managerial personnel.

Fourth: Advantages of Effective Internal Control

1. Reduced financial risks.
2. Improvement of quality of accounting information.
3. Building confidence in banking institutions.
4. Increasing performance efficiency.
5. Supporting corporate governance.

Fifth: Disadvantages of Internal Control

1. High costs of implementation.
2. Overdependence on the human factor.
3. The possibility of internal collusion cannot be ruled out.
4. Relatively useless without the support of modern technological systems.
5. Influence of the regulatory and economic environment.

The Relationship Between Zero-Based Budgeting and Internal Control Quality

The application of zero-based budgeting contributes to the enhancement of the quality of internal control by:

1. Reducing financial deviations:
2. Improving planning and control.
3. Supporting transparency and accountability.
4. Enhancing the efficiency of monitoring and evaluation.
1. Strengthening compliance with financial policies.

The Practical Aspect

First: Methodology of the Practical Aspect

1. Research Method

The researcher used the descriptive-analytical approach owing to its suitability for the nature of the study. This approach was used as a means of describing the reality of applying

zero-based budgeting and analyzing the effect of zero-based budgeting on the quality of internal control in Iraqi banks.

2. Study Population and Sample

Study Population: public and private Iraqi banks.

Study Sample:

- Financial managers.
- Heads of accounting departments.
- Internal auditors.
- Financial control officers.

Table 2.
Distribution of Sample Members According to the Job Title

Job Title	Number	Percentage %
Financial Manager	10	20
Accountant	15	30
Internal Auditor	15	30
Financial Control Officer	10	20
Total	50	100

Second: Data Collection Tool

A questionnaire was adopted as the primary data collection tool. It consisted of two sections:

- **First Section:** Application of Zero-Based Budgeting.
- **Second Section:** Internal Control Quality.

A five-point Likert scale (1–5) was used.

Third: Validity and Reliability Testing

1. Apparent Validity: The questionnaire was presented to a group of specialists in accounting and financial control to ensure the clarity of the items and their suitability for the study objectives.

2. Reliability: (Cronbach’s Alpha Coefficient)

Table 3.
Reliability Test Results

Dimension	Number of Items	Cronbach’s Alpha
Zero-Based Budgeting	10	0.87
Internal Control Quality	12	0.89
Overall Questionnaire	22	0.91

The results indicate that the questionnaire demonstrates a high degree of reliability.

Fourth: Descriptive Analysis of the Study Variables

1. Analysis of the Zero-Based Budgeting Dimension

Table 4.
Descriptive Analysis of the Zero-Based Budgeting Dimension

Item	Mean	Standard Deviation	Level of Application
Reliance on a zero base	4.10	0.65	High
Justification of expenditure items	4.25	0.58	High
Reduction of financial waste	4.05	0.72	High
Enhancement of resource efficiency	4.18	0.60	High
Overall Mean	4.14	0.64	High

2. Analysis of the Internal Control Quality Dimension

Internal control quality was measured according to the dimensions of the COSO framework.

Table 5.
Descriptive Analysis of Internal Control Quality

Dimension	Mean	Standard Deviation	Level of Application
Control Environment	4.20	0.55	High
Risk Assessment	4.05	0.70	High
Control Activities	4.15	0.62	High
Information and Communication	4.10	0.68	High
Monitoring and Evaluation	4.22	0.57	High
Overall Mean	4.14	0.62	High

Fifth: Testing the Study Hypotheses

Main Hypothesis

There is a statistically significant relationship between the application of zero-based budgeting and the quality of internal control in Iraqi banks.

Table 6.
Pearson Correlation Coefficient Test Results

Independent Variable	Dependent Variable	Correlation Coefficient R	Significance Level
Zero-Based Budgeting	Internal Control Quality	0.78	0.000

The results indicate a strong positive and statistically significant correlation.

Table 7.
Simple Linear Regression Analysis

Variable	Beta	T	Sig
Zero-Based Budgeting	0.78	9.12	0.000

This indicates that the application of zero-based budgeting has a statistically significant effect on improving internal control quality.

Sixth: Discussion of Results

The results showed that the Iraqi banks apply zero-based budgeting at a relatively high level.

There is a strong positive indication that Zero-based budgeting especially influences the following aspects positively:

1. Smoothing of financial discipline.
2. Improvement of the efficiency of the control activities.
3. Reduced financial manipulation

These findings corroborate the result of many studies conducted in recent times on financial control and management accounting.

Conclusions

Based on the research findings, the research reached several conclusions:-4

1. Application of zero-based budgeting enhances internal control quality in banks through periodic evaluation and review of all activities and programs without relying on previous years' allocations.
2. Results indicated that zero-based budgeting decreases financial waste and reduces unauthorized spending, reflecting positively on the efficiency of using financial resources.
3. Zero-based budgeting enhances adherence to control procedures since financial allocations are attached to clearly stated and measurable objectives.
4. Zero-based budgeting facilitates the early identification of internal control system weaknesses, mainly regarding aspects of operational expenses and administrative spending.
5. The research found that there was a statistically significant relationship between applying zero-based budgeting and enhancing the components of internal control: control environment, risk assessment, and control activities.
6. The results revealed that the most significant obstacle for the implementation of zero-based budgeting in the banks of Iraq would be related to the lack of technical knowledge and training.
7. The research verified the notion that the zero-based budgeting approach indeed increases accountability and transparency in that every departmental expenditure must be justified in the budget.

Based on the research findings, the research concluded with several recommendations:

1. The introduction of zero-based budgeting in all Iraqi banks, starting with the departments that have high levels of expenditure, should take place gradually.
2. Qualify the financial and accounting staff through specialized training programs to prepare and implement zero-based budgeting.
3. Strengthen and clearly define the role of internal control units and establish their direct relation to the highest level of management.
4. Employ the use of electronic accounting systems to facilitate the application of zero-based budgeting.

5. Link zero-based budgeting to an evaluation system to establish alignment in financial and control objectives.
6. Encourage banks to carry out periodic budget reviews to identify any deviations, hence taking corrective action in a timely manner.
7. However, the study suggests that further research was necessary on how zero-based budgeting could effectively be integrated with modern techniques such as artificial intelligence.

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