International Journal of Innovative Research and Scientific Studies, 8(3) 2025, pages: 1733-1744

IJIRSS
International Journal of Innovative Research & Scientific Studies

ISSN: 2617-6548

URL: www.ijirss.com

The impact of using the balanced scorecard on improving the quality of accounting information in Saudi commercial banks: A field study

Mohammed Atiah Alharbi[1*], Jafar Othman Elsharif Abdulaziz[2]

[1,2]*Department of Business Administration, College of Business Administration, Majmaah University, Al Majmaah 11952, Saudi Arabia*.

Corresponding author: Mohammed Atiah Alharbi (*Email: alharbi.ma@mu.edu.sa*)

Abstract

This study investigates the effect of applying the Balanced Scorecard (BSC) on the quality of accounting information in Saudi commercial banks. A quantitative research methodology was employed, using a descriptive-analytical approach and a structured questionnaire. A total of 440 questionnaires were distributed, with 382 valid responses used for analysis. Linear regression analysis was conducted to assess the relationship between the four BSC dimensions financial, customer, internal processes, and learning and growth and the quality of accounting information. The results revealed a statistically significant positive effect of all four dimensions on accounting information quality. The study recommends enhancing the learning and growth dimension, particularly in employee training, and improving internal processes to boost the quality and reliability of accounting outputs. These findings contribute to strategic performance management and accounting information reliability in the Saudi banking sector.

Keywords: Accounting information, Balanced scorecard, Quality of information, Saudi banks, Strategic management.

DOI: 10.53894/ijirss.v8i3.6880
Funding: The authors extends the appreciation to the Deanship of Postgraduate Studies and Scientific Research at Majmaah University for funding this research work through the (Grant number R-2025- 1727).
History: Received: 2 April 2025 / **Revised:** 2 May 2025 / **Accepted:** 6 May 2025 / **Published:** 9 May 2025

Competing Interests: The authors declare that they have no competing interests.
Authors' Contributions: Both authors contributed equally to the conception and design of the study. Both authors have read and agreed to the published version of the manuscript.
Transparency: The authors confirm that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.
Publisher: Innovative Research Publishing

1. Introduction

The developments witnessed in the modern business environment over the past few years have led organizations in general, and banks in particular, to adopt contemporary management concepts that enable them to achieve their outlined goals precisely and effectively. This shift comes in response to intense competition and an environment characterized by many variables and challenges that continue to exert increasing influence on daily organizational activities [1].

Several studies, Gomes and Romão [2], Al-Sharida [3], and Al-Mazawada and Al-Shubeil [4] argue that the Balanced Scorecard represents an integrated framework that contributes to formulating, communicating, and implementing an organization's strategy across various administrative levels by translating strategic objectives into operational goals and measurable indicators. Furthermore, it seeks to balance the interests of all stakeholders involved in these organizations. Commercial banks are considered the central pillar of the economic sector nationwide. However, many banks face significant financial crises due to inadequate oversight of their activities and operational processes. This reality has driven banks to adopt modern management tools to strengthen their internal control systems, thereby enhancing the quality of accounting information [5].

The Balanced Scorecard is recognized as one of the bank's most important and modern tools for strategic performance management. It aims to enhance performance and achieve strategic objectives by realigning the organizational direction and transforming it into a new path that supports overall institutional effectiveness. It also operationalizes the organization's vision and overarching strategies into actionable procedures that form the basis of strategic execution [6].

In recent years, accounting systems within banks have undergone substantial transformation, evolving into modern platforms that deliver timely and accurate accounting information for managerial use. This information plays a critical role in rationalizing decisions and supporting the achievement of institutional objectives. Within Saudi Arabia, the commercial banking sector serves as a fundamental pillar of economic and social development, due to its extensive contributions to various developmental domains, benefiting all segments of society. Since stakeholders and decision-makers heavily depend on the accounting information produced by banks, such information must be of high quality to support rational investment and financing decisions [7].

Therefore, this study seeks to investigate the impact of using the Balanced Scorecard on improving the quality of accounting information in Saudi commercial banks from the perspective of a sample of their employees.

2. The Methodological Approach

2.1. Problem Statement

The Saudi banking sector is considered one of the fundamental pillars of the country's economic structure due to its substantial contributions to economic growth and social development [8]. Although Saudi commercial banks utilize various financial indicators to express their strategic goals and report their financial and accounting results, these indicators have been subject to theoretical and practical criticism. Critics argue that such indicators fail to support performance evaluation and decision-making processes, as they lack objectivity and comprehensiveness. Specifically, they often fail to consider essential administrative, accounting, and financial dimensions that influence competitiveness among Saudi banks. Furthermore, traditional administrative and accounting methods applied in organizations, particularly banks, have been criticized for not aligning with the evolving demands of the modern business environment [9].
This situation has underscored the necessity of adopting modern management approaches that integrate financial and non-financial metrics, enabling a more holistic performance evaluation process that combines accounting and non-accounting information [10]. Given the importance of contemporary administrative accounting methods and the Balanced Scorecard (BSC) in particular in enhancing bank competitiveness through improved quality of accounting information and more rational decision-making, Saudi commercial banks have shown increased interest in adopting such approaches due to their distinctive advantages over traditional methods.
Accordingly, the core research problem lies in the challenges currently facing Saudi commercial banks, stemming from their heightened level of competition. These challenges compel banks to modernize and enhance their administrative and accounting practices to provide top management with timely, accurate administrative, financial, and accounting information that supports their competitive edge. Thus, the study's central problem is formulated as follows:

What is the impact of using the Balanced Scorecard on improving the quality of accounting information in Saudi commercial banks?

2.2. Research Significance

The scientific significance of the current study lies in its effort to provide a comprehensive theoretical framework that defines the concept of the Balanced Scorecard and its relationship with the quality of accounting information. This study also serves as a valuable scholarly contribution to the Arabic academic literature, enhancing knowledge among researchers and practitioners interested in this domain. Furthermore, it represents a foundation upon which future studies may build to explore further the Balanced Scorecard's application and its influence on accounting information quality.
In addition, this study's theoretical importance is closely linked to the pivotal role of Saudi banks in supporting various economic and social sectors, thereby contributing to the realization of Saudi Arabia's national development goals and aspirations.

The study's practical significance is reflected in the anticipated benefits of its findings and recommendations for departments within Saudi commercial banks. These insights will support the recognition of the Balanced Scorecard's role in enhancing the quality of accounting information. Moreover, supervisory bodies in the Kingdom, such as the Saudi Central Bank and the Saudi Organization for Auditors and Accountants, may utilize the study's outcomes to better understand and guide the Balanced Scorecard application within Saudi banks to improve the quality and effectiveness of financial reporting and decision-making.

2.3. Research Objectives

The primary objective of this study is to examine the impact of using the Balanced Scorecard on enhancing the quality of accounting information in Saudi commercial banks. To achieve this primary goal, the study aims to fulfill the following specific objectives:

A. To assess the impact of the Balanced Scorecard's financial dimension on improving the quality of accounting information in Saudi commercial banks.

B. To evaluate the effect of the Balanced Scorecard's customer dimension on enhancing the quality of accounting information in Saudi commercial banks.

C. To investigate the influence of the Balanced Scorecard's internal processes dimension on the quality of accounting information in Saudi commercial banks.

D. To analyze the role of the Balanced Scorecard's learning and growth dimension in improving the quality of accounting information in Saudi commercial banks.

2.4. Research Limitations

2.4.1. This Study is Subject to the Following Limitations

1. A. Subject Limitation: The scope of this study is restricted to examining the impact of implementing the Balanced Scorecard on enhancing the quality of accounting information within Saudi commercial banks.
2. B. Time Limitation: The data for this study were collected and analyzed during the first quarter of 2025.
3. C. Place Limitation: The study sample was limited to financial managers, accountants, internal auditors, and administrative staff employed in Saudi commercial banks.

3. Theoretical Framework

3.1. The Balanced Scorecard

At the beginning of the last decade of the twentieth century, following the collapse of some American companies whose financial results did not provide any early warning signs of bankruptcy or failure, and in conjunction with the emergence of modern economic transformations and the rapid advancement of information technology, efforts began to develop new methods for measuring and evaluating financial and administrative performance capable of revealing the underlying causes of such outcomes [11]. This led to the emergence of the Balanced Scorecard concept, which emphasizes an organization's vision, mission, objectives, and strategy, linking them to its operational plans and strategic goals by integrating financial and non-financial metrics.

The definitions that explain the concept of the Balanced Scorecard have varied. Hussein [12] defined it as a system for measuring and evaluating strategic performance that incorporates financial and non-financial indicators and is structured around four primary dimensions: the financial perspective, the customer perspective, the internal processes perspective, and the learning and growth perspective [13]. In other words, it is an integrated measurement framework that retains financial metrics to evaluate past performance while providing leading indicators that drive future performance. Malmi [13] asserts that the Balanced Scorecard presents an integrated framework for assessing strategic performance, comprising a set of financial and non-financial metrics that align with the objectives and strategy of the economic unit and its sub-units [14]. These metrics are interconnected through cause-and-effect relationships that aim to enhance long-term financial results rather than relying solely on conventional financial measures. Based on the foregoing, researchers define the Balanced Scorecard as a performance measurement approach that utilizes a comprehensive set of financial and non-financial metrics directly linked to the organization's success, contributing to improving its operational efficiency in both the short and long term.

In light of the increasing competition faced by banks resulting from the liberalization of the trade in banking services and the trend toward integration with large economic blocs coupled with the significant reliance of banking operations on employee competencies and capabilities, and the widespread adoption of electronic systems in operational processes, the Balanced Scorecard has emerged as an appropriate tool for measuring the quality of accounting operations [8, 14] Several studies [15, 16] argue that the importance of the Balanced Scorecard, in general, is reflected in its core functions, which include the following:

A. The Balanced Scorecard uses performance evaluation indicators as part of an integrated system that supports information flow, communication, and strategic learning, aligning with the organization's long-term strategy.
B. It guides the organization to focus on its vision and strategy by shifting attention from short-term to long-term objectives.
C. The Balanced Scorecard offers a balanced perspective for performance evaluation by incorporating various financial and non-financial elements, as well as qualitative and quantitative internal and external factors in pursuit of the organization's strategic vision and goals.
D. It supports the achievement of competitive advantage by generating vast amounts of data that help the organization maintain alignment with the market and respond effectively to external changes.
E. The Balanced Scorecard contributes to forecasting and anticipating future developments by encompassing a wide range of financial and non-financial dimensions that help identify the factors of success or failure, strengths or weaknesses, and thus enhance the organization's awareness of its future positioning.

In addition to what has been presented, the researchers believe that the Balanced Scorecard's importance is manifested in its ability to provide a clear strategic plan for the organization and a precise identification of short-term activities that contribute to achieving long-term value for customers. It also addresses organizations' challenges by transforming strategic plans into measurable activities and concrete goals.

Applying the Balanced Scorecard in commercial banks requires several key factors to ensure its successful implementation. Various studies in the field of administrative and accounting theory, such as those by Konstantinos et al. [17] and Anagnostopoulos and Elmasides [18] have identified some of these critical success factors, as outlined below [17, 18]:

A. The bank's top management involvement in designing and applying the Balanced Scorecard: Top management should actively participate in the collaborative process of defining strategic goals, selecting the appropriate indicators that reflect those goals, and communicating the strategy across different administrative levels.

B. Defining the bank's strategy clearly: Considering the available financial and administrative resources, the strategy must be closely tied to achieving competitive advantages. The Balanced Scorecard is pivotal in translating and analyzing this strategy into measurable variables. A lack of a clearly defined strategy signals the potential failure of its application.

C. Effective communication among various administrative levels: This is achieved by clearly articulating the bank's strategy and the objectives it seeks to achieve to all organizational levels. It also involves linking incentive systems to performance indicators. According to the researchers, this enhances employees' sense of engagement and belonging regarding the importance of the Balanced Scorecard.

D. The existence of an effective computerized accounting system: Such a system must support the bank's vision and ensure the efficient implementation of its strategic objectives.

E. The Balanced Scorecard must be continuously updated: Regular revisions are necessary in light of economic, political, and technological developments to ensure that the intended outcomes from its application are effectively realized.

The Balanced Scorecard is anchored on four main dimensions. The researchers address each of these dimensions as follows:

Financial Dimension: Al-Mahrouq [19] argues that the financial dimension of the Balanced Scorecard reflects how the organization presents itself to its owners through short-term financial performance metrics and their connection to the strategic implementation process [19]. The Balanced Scorecard links financial objectives directly to the organization's strategy. Based on this understanding, the researchers conclude that other dimensions, such as customer, internal operations, learning, and growth, influence financial outcomes. This dimension represents the organization's efforts to achieve its strategic goals, expressed in terms of maximizing value and satisfying the expectations of both owners and stakeholders [20]. Although traditional financial metrics have faced criticism from some scholars in favor of non-financial indicators, others argue that financial objectives remain the optimal method of assessing success. This dimension encompasses several key metrics, including net profit, sales volume growth (services), return on invested capital, cost of products (services), return on equity, return on total assets, contribution margin, and cash flow.

Customer Dimension: AlAzzaz [10] and Ibrahim [21] believe that the customer dimension represents the organization's interaction with its customers, relying on time, quality, performance, and cost. According to the researchers, addressing these demands improves and renews the organization's image as perceived by customers, while enhancing its efforts to create value and establish differentiation [10, 21]. Generally, this dimension focuses on satisfying customers' needs and preferences, which are the foundation for the organization's survival and success. It is achieved by delivering innovative, high-quality products and services offered promptly and at competitive prices. This dimension also includes metrics related to current and prospective customers, such as customer satisfaction, retention, acquisition of new customers, profitability, and market share in targeted sectors [22].

Internal Processes Dimension: This dimension focuses on the internal processes, procedures, and operational factors that enable the organization to achieve excellence. It ensures the organization can effectively and efficiently meet customer demands, leading to outstanding financial outcomes and satisfactory stakeholder returns. It includes innovations and inventive processes that result in developing and introducing new products and services to satisfy current and potential customers [23]. This dimension primarily emphasizes the identification of critical internal operations in which the organization must excel to successfully implement its strategy and deliver the expected value to customers effectively and efficiently.

Learning and Growth Dimension: Hussein and Fadel [24] assert that the learning and growth dimension is manifested in identifying and developing human capital, enhancing information systems, and establishing an enabling organizational climate that supports value creation within internal processes [24]. Learning and growth represent the foundation of the organization's infrastructure, which supports innovation, continuous development, and long-term competitiveness. Building on this view, the researchers conclude that this dimension concerns the intellectual capabilities of employees, their skill levels, and efforts to align those capabilities with the broader organizational environment. Moreover, the learning and growth dimension aims to enhance employee satisfaction and sustain it over time, improving productivity and ultimately leading to better financial performance.

3.2. The Quality of Accounting Information

The term "quality" is derived from the Latin *Qualitas*, which refers to the nature of something and its degree of suitability. Quality has been defined as a set of activities aimed at achieving customer satisfaction, empowering employees, increasing income, and reducing costs [25]. Accounting information constitutes one of the most critical sources of information within an organization. It is considered a fundamental policy formulation, planning, and decision-making tool. Therefore, organizations must adopt appropriate methods to support stakeholders in making informed decisions [26]. According to Jabal [27], accounting information encompasses all relevant quantitative and non-quantitative data concerning the organization's economic events, which are processed and presented by the accounting information system through financial statements made available to interested parties. Jabal [27]. Al-Sabbagh [28] also defined accounting information quality as implementing high-quality accounting standards and mechanisms that ensure accountability among those responsible for preparing financial reports [28].

In light of the above, the researchers believe that the quality of accounting information refers to the credibility attributes of the information presented in financial reports, its usefulness to users, its freedom from material misstatements, and its preparation by a recognized set of accounting standards. Furthermore, accounting information quality can be assessed through various models, including the evaluative role model of accounting information, accrual-based models related to earnings management, models emphasizing the degree of accounting conservatism, and others focusing on accounting information's qualitative characteristics [29].

The qualitative characteristics of accounting information represent the attributes that such information must possess to accurately and faithfully reflect business reality within organizations. The Financial Accounting Standards Board (FASB), in its Statement of Financial Accounting Concepts No. (2), outlined a set of fundamental and enhancing characteristics of accounting information. These characteristics form the basis for evaluating the level of quality in the accounting information organizations provide [30]. The researchers will briefly discuss these characteristics in the following section.

3.3. The Primary Characteristics of Accounting Information Are Represented as Follows

- Relevance: The Financial Accounting Standards Board (FASB) defines relevance as the ability of accounting information to make a difference in decision-making by helping users form predictions regarding operational outcomes, supporting or correcting prior expectations. Several studies [31-33] have indicated that the following features should characterize accounting information:
- Timeliness: Accounting information is only valid when promptly available to users and stakeholders.
- Predictive Value: It should provide a sound basis for decision-makers to forecast future events and trends.
- Feedback Value: Relevant information should offer value in providing feedback that can be applied to various operational areas within the organization.
- Reliability: This refers to the extent to which accounting information is free from material errors and bias, making it trustworthy and dependable for decision-making. This characteristic reflects the overall credibility and accuracy of the information and comprises several sub-attributes:
- Verifiability: Independent parties must verify and confirm reliable information using consistent measurement techniques.
- Faithful Representation: This implies a high degree of correspondence between the information presented and the actual economic events or conditions it represents, prioritizing substance over form. Achieving this requires eliminating both measurement bias and personal bias by the individual performing the measurement.
- Neutrality and Impartiality: This means avoiding adopting accounting policies that unfairly benefit one party or stakeholder group over another, thereby ensuring that the information serves the interests of all users equally.

3.4. The Secondary Characteristics of Accounting Information are as Follows

- Comparability: Comparability enables users to identify and analyze similarities and differences between a particular entity's financial performance and that of other entities over a specific time frame. It also facilitates the comparison of an entity's performance across different periods. Accounting information is comparable if two key conditions are met: the ease of presentation and the application of a consistent accounting measurement method.
- Consistency: This attribute requires adherence to significant accounting policies, such as maintaining consistency and uniformity in applying accounting principles from year to year, measuring financial statement elements, and generating financial reports using the same principles consistently.

Based on the above, the researchers believe that several factors may influence the characteristics of accounting information quality. These include material components, such as the tools and accounting equipment used in generating the information; the personnel operating the accounting system; financial elements, which refer to the financial resources available to the system for carrying out its tasks and functions; and the presence of a structured database containing a set of practical procedures and essential data that support the system's operation and help achieve its intended objectives.

3.5. Previous Studies

The researchers dedicated this section of the study to reviewing previous research relevant to the variables examined in the current study.

Hammood and Dammak [34] investigated the mediating role of the Balanced Scorecard in the relationship between internal control (IC) and financial report quality (FRQ) within Iraqi commercial banks, specifically focusing on the Commercial Bank of Iraq and the Investment Bank of Iraq [34]. The study employed a descriptive-analytical approach and utilized a questionnaire as the primary tool for data collection. 224 questionnaires were distributed to managers, accountants, and auditors in the two selected banks. One of the study's most notable findings was the significant positive impact of the Balanced Scorecard on the quality of financial reports in both banks.

Alwan and Ahmed [35] conducted a study to assess the impact of utilizing the Balanced Scorecard, with its four dimensions, on the quality of accounting information [35]. The study was applied to Tikrit University and employed a statistical survey method, using a questionnaire to collect primary data. Additionally, the study used multiple regression analysis to interpret the results. The questionnaire was distributed to a sample of university administrative and financial affairs employees. The study concluded that the prerequisites for implementing the Balanced Scorecard technique were present at Tikrit University. However, it emphasized the need for the financial affairs department, in particular, to enhance its application of the Balanced Scorecard, especially regarding the financial and customer dimensions.

Nour et al. [36] examined the impact of implementing the Balanced Scorecard on earnings quality, with bank size as a moderating variable [36]. The empirical study was conducted on banks listed on the Palestine Stock Exchange between 2011 and 2019. The study adopted a descriptive approach and applied content analysis techniques to assess financial reports and accounting disclosures. The results revealed a negative impact of the customer dimension on earnings quality, while the internal operations dimension had a positive effect. However, the study found no significant impact of the social, financial, learning, and growth dimensions on the quality of earnings among Palestinian banks listed on the stock exchange.

Sleihat [37] aimed to determine the impact of computerized accounting information systems on enhancing the Balanced Scorecard within Jordanian banks [37]. To achieve this, a descriptive-analytical methodology was employed, and data were collected using a structured questionnaire distributed to 16 commercial banks, with a total sample size of 320 individuals. The study utilized statistical tools such as standard deviation and multiple linear regression. The findings indicated a statistically significant impact of computerized accounting information systems, across its dimensions of individuals, software, hardware, procedures, and databases, on enhancing the four dimensions of the Balanced Scorecard: financial, customer, internal processes, and learning and growth. Additionally, the study found no statistically significant differences in participants' responses regarding the impact of these systems on the Balanced Scorecard based on the type of bank.

Saoud et al. [38] explored the importance of applying the Balanced Scorecard in enhancing the efficiency of professional performance among accountants and auditors in Iraqi governmental units, and its reflection on the quality of accounting information, particularly in combating financial and administrative corruption—a widespread issue in most governmental units in Iraq [38]. The study employed a descriptive approach and applied regression analysis to examine the influence of the independent variable (Balanced Scorecard) on the dependent variable (financial and administrative corruption). The study concluded that there is a statistically significant correlation between the application of the Balanced Scorecard and the efficiency of professional performance among accountants and auditors in Iraqi government units, which in turn contributed to efforts to reduce financial and administrative corruption.

Salah El-Din [39] investigated the role of the Balanced Scorecard in improving the efficiency of the accounting information system [39]. The study was applied to the National Paint Company in Souk Ahras Province. Data were collected through a questionnaire distributed to 25 institutional employees to achieve this objective. The most notable finding of the study was that implementing the Balanced Scorecard within the company led to a consolidation of the accounting information system's efficiency, thereby enhancing the overall quality of accounting information.

Badr [40] examined the implementation of the Balanced Scorecard, with its four dimensions, in economic units listed on the Palestine Stock Exchange [40]. The study adopted an analytical descriptive approach and gathered data via a questionnaire distributed to 71 managers and department heads in financial and administrative roles within these units. Among the most important findings was that economic units in Palestine apply the Balanced Scorecard at a high, though variable, level. Additionally, the study found a positive correlation between using the Balanced Scorecard and improving earnings quality in the units under study.

Jabal [27] aimed to demonstrate the potential of the Balanced Scorecard as a tool for helping companies provide accounting information to relevant stakeholders. The study was conducted at the Kufa Cement Plant in the Republic of Iraq, using a descriptive-analytical methodology and a questionnaire to collect data from the field. A total of 150 questionnaires were distributed to the plant's employees. One of the study's most significant findings was a positive relationship between using the Balanced Scorecard and the quality of accounting information at the Kufa Cement Plant.

Al-Mazawada and Al-Shubeil [4] investigated the impact of the Balanced Scorecard on the quality of accounting information in Jordanian commercial banks [4]. The study adopted a descriptive-analytical approach by employing multiple regression analysis and used a questionnaire as the primary tool for data collection. 65 questionnaires were distributed to a random sample of employees working in Jordanian commercial banks. The study concluded that the balanced scorecard has a statistically significant positive impact on the quality of accounting information in Jordanian banks.

Al-Sharida [3] examined the impact of implementing the Balanced Scorecard in Jordanian commercial banks by assessing its degree of applicability in those banks [3]. The study utilized a descriptive methodology, relying on personal interviews and distributing a questionnaire to financial managers and financial control managers in the banks under study. The results revealed that Jordanian banks implement the Balanced Scorecard moderately, with an overall application rate of 67%. Among the Balanced Scorecard dimensions, the customer dimension ranked highest in implementation.

3.6. Based on the Above Review, The Researchers Conclude the Following

1. The findings of previous studies show a high level of consistency with the current study, despite being conducted in different institutional and geographic contexts. Most of these studies agreed on the positive impact of implementing the Balanced Scorecard on enhancing the quality of accounting information.
2. The current study aligns with the reviewed literature's theoretical treatment of the Balanced Scorecard, incorporating all four dimensions. Moreover, this study resembles many previous works in its adopted methodology—namely, the descriptive-analytical approach supported by multiple regression analysis.
3. The current study is distinguished from prior studies by its unique application environment, focusing on Saudi commercial banks. The researchers did not identify any earlier studies explicitly addressing the impact of the Balanced Scorecard on accounting information quality within this context, highlighting this research's novelty and academic value.
4. The current study benefited significantly from previous studies in formulating its theoretical framework, which served as a rich source of foundational knowledge. Additionally, these studies contributed to identifying the research problem, developing the research hypothesis, and selecting the analytical approach used in the data analysis.

3.7. Research Hypotheses

In light of the theoretical framework and the findings of previous studies, and based on the dimensions of the Balanced Scorecard and the aspects of accounting information quality, the researchers formulated the central hypothesis of the study as follows:

There is a statistically significant effect at the significance level ($\alpha \leq 0.05$) of using the Balanced Scorecard dimensions on improving the quality of accounting information in Saudi commercial banks.

From this central hypothesis, the following sub-hypotheses are derived:

1. There is a statistically significant effect at the significance level ($\alpha \leq 0.05$) of using the financial dimension of the Balanced Scorecard on improving the quality of accounting information in Saudi commercial banks.
2. There is a statistically significant effect at the significance level ($\alpha \leq 0.05$) of using the customer dimension of the Balanced Scorecard on improving the quality of accounting information in Saudi commercial banks.
3. There is a statistically significant effect at the significance level ($\alpha \leq 0.05$) of using the internal processes dimension of the Balanced Scorecard on improving the quality of accounting information in Saudi commercial banks.
4. There is a statistically significant effect at the significance level ($\alpha \leq 0.05$) of using the learning and growth dimension of the Balanced Scorecard on improving the quality of accounting information in Saudi commercial banks.

3.8. Study Design

By the nature and objectives of the study, the analytical descriptive approach was adopted. This approach focuses on describing the phenomenon under investigation, analyzing its characteristics and components, and interpreting its various dimensions to arrive at findings that can be generalized to the study population [17]. Furthermore, the study employed a quantitative analytical method, specifically the linear regression model, to measure and analyze the impact of applying the Balanced Scorecard on improving the quality of accounting information in Saudi commercial banks.

The study relied on two primary sources for data collection:

Secondary Sources: These included books, periodicals, academic journals, reports, research papers, online databases, and previous studies that supported the development of the study's theoretical framework.

Primary Sources: The researchers designed and developed a structured questionnaire to empirically test the impact of Balanced Scorecard application on the quality of accounting information in Saudi commercial banks.

3.9. Population and Sample of the Study

The study population includes all employees working in local commercial banks in the Kingdom of Saudi Arabia, which, according to the Saudi Central Bank [41], totals 11 banks [41]. Given the size and geographical distribution of the population, and considering time, effort, and cost limitations, the researchers employed a systematic random sampling method. A total of 40 questionnaires were distributed to employees in the central departments and branch offices of each bank, yielding 440 distributed questionnaires.

Out of these, 401 questionnaires were returned, and 19 were excluded due to incomplete responses. Therefore, 382 valid questionnaires were analyzed, representing a response rate of 86.8% of the total distributed questionnaires.

3.10. Instrument of the Study

The researchers developed a questionnaire to examine the impact of applying the Balanced Scorecard on improving the quality of accounting information in the Kingdom of Saudi Arabia. This instrument was formulated after an extensive review of relevant literature and previous studies, including those by Alwan and Ahmed [35], Salah El-Din [39], and Badr [40]. The questionnaire was carefully designed to align with the topic and objectives of the study, the researchers' specialization, and the specific characteristics of the business environment in which the study was conducted.

The questionnaire is structured into two main sections:

- The first section addresses the Balanced Scorecard, encompassing its four core dimensions.
- The second section focuses on the quality of accounting information.

The questionnaire includes 48 items in total that comprehensively cover the study variables, namely, the dimensions of the Balanced Scorecard and the components of accounting information quality.

3.11. The Validity and Reliability of the Study Instrument

The validity of the study instrument refers to the extent to which the questionnaire items accurately measure the intended constructs. The researchers verified both the validity and reliability of the instrument using the following methods:

3.11.1. Face Validity

Before commencing the data collection process, the researchers presented the questionnaire to a panel of expert reviewers comprising professors and assistant professors specializing in managerial accounting and business administration at Majmaah University. The feedback and suggestions from these experts were thoroughly considered, and appropriate modifications were made to enhance the clarity and relevance of the questionnaire items.

3.11.2. Cronbach's Alpha Reliability

Following the adjustments and administration of the questionnaire to the study sample, the researchers calculated the Cronbach's Alpha coefficient to assess the instrument's internal consistency (reliability) for each study variable. The results are summarized in the following table:

Table 1.
Cronbach's Alpha Coefficient for the Study Instrument.

Variables	Number of Items	Alpha Reliability Coefficient
The Balanced Scorecard	38	0.69
The Quality of Accounting Information	10	0.78

As shown in Table 1, the reliability coefficient among the measurement items (the degree of consistency between the measurement items) for each variable of this study is very strong, ranging between 69% and 78%. Since the standard values for the reliability coefficient (Cronbach's alpha reliability) in the administrative research are considered acceptable if they exceed 60%, the reliability coefficient values for the study variables are high (very strong) and acceptable.

4. The Analysis of the Study Data

In this section, the researchers aimed to assess the levels of the study's key dimensions namely, the Balanced Scorecard and the quality of accounting information by using arithmetic means and standard deviations. A given dimension is rejected if its arithmetic mean falls below the hypothetical mean value of 3.00. The descriptive statistics of the independent and dependent variables are presented in the following two tables

Table 2.
Descriptive Statistics of the Independent Variable (Balanced Scorecard).

No.	Variable	Arithmetic Mean	Standard Deviation	Rank
1.	Financial Dimension	3.41	0.24	4
2.	Customer Dimension	3.52	0.43	3
3.	Internal Processes Dimension	3.59	0.37	2
4.	Learning and Growth Dimension	3.68	0.29	1

The financial dimension ranked fourth, with an arithmetic mean of 3.41 and a standard deviation of 0.24. The customer dimension ranked third, with an arithmetic mean of 3.52 and a standard deviation of 0.43. The internal processes dimension came in second, with an arithmetic mean of 3.59 and a standard deviation of 0.37. In contrast, the learning and growth dimension achieved the highest ranking, with an arithmetic mean of 3.68 and a standard deviation of 0.29.

Based on these results, the researchers concluded that the participants' evaluation of all Balanced Scorecard dimensions was acceptable, since all mean scores exceeded the benchmark value of 3.00.

Table 3.
Descriptive Statistics of the Dependent Variable (Quality of Accounting Information).

No.	Variable	Arithmetic Mean	Standard Deviation	Rank
1.	Appropriateness Property	3.32	0.27	4
2.	Reliability Property	3.39	0.33	3
3.	Comparability Property	3.51	0.46	1
4.	Consistency Property	3.40	0.56	2

The appropriateness property ranked fourth with an arithmetic mean of 3.32 and a standard deviation of 0.27. The reliability property ranked third with a mean of 3.39 and a standard deviation of 0.33. The consistency property ranked second, scoring 3.40 with a standard deviation of 0.56. The comparability property received the highest ranking, with a mean of 3.51 and a standard deviation of 0.46.

These findings indicate that the study sample assessed all quality characteristics of accounting information positively, as all means exceeded the cutoff value of 3.00, confirming their acceptability.

4.1. Testing the Study Hypotheses

This section presents the results of testing and analyzing the impact relationships among the study variables, addressing both the central hypothesis and the sub-hypotheses derived from it, as follows:

4.2. Testing the Impact of the Main Hypothesis

The impact of using the Balanced Scorecard on the quality of accounting information was examined using simple linear regression analysis. The relationship is modeled under the assumption of a statistically significant correlation between the actual value of the Balanced Scorecard dimensions (X) and the quality of accounting information (Y), as represented by the following regression equation:

$$Y= a +\beta X$$

Whereas:
Y represents the quality of accounting information.
X represents the balanced scorecard dimensions.
a fixed amount.
β= equation slope, i.e., the amount of change in Y due to a one-unit change in X.

Based on the study sample of 156 participants, the regression equation was estimated as follows:

Quality of Accounting Information = 1.318 + 0.851 (Balanced Scorecard Dimensions) \text {Quality of Accounting Information) = 1.318 + 0.851(\text {Balanced Scorecard Dimensions)) Quality of Accounting Information = 1.318 + 0.851 (Balanced Scorecard Dimensions)

The relationship was further examined using Analysis of Variance (ANOVA), with results summarized in the following table:

Table 4.
ANOVA Results for the Relationship Between Balanced Scorecard and Quality of Accounting Information.

Significance Level	Calculated F-value	R^2	Mean Squares	Sum of Squares	Degrees of Freedom	Source of Variation
0.000	81.264	0.764	18.64	28.06	1	Regression
			0.63	9.37	136	Error
				37.43	**137**	Total

Table 5.
Coefficients of the Regression Model.

Significance Level	Standardized Coefficients		Unstandardized Coefficients		Statement
	T-Test	**Beta**	**Standard Error**	**Beta Coefficient**	**Model**
0.000	0.000	0.851	0.269	1.318	Constant
0.000	31.64		0.007	1.431	The Balanced Scorecard

From the ANOVA and coefficient tables, the T-value (31.64) is statistically significant at the 0.05 level, confirming the adequacy of the regression model in describing the relationship between the Balanced Scorecard dimensions (X) and the quality of accounting information (Y) with a 95% confidence level.

The regression constant (a = 1.318) indicates a baseline level of accounting information quality when the Balanced Scorecard dimensions are not applied. The coefficient of determination ($R^2 = 0.764$) explains that approximately 76.4% of the variance in accounting information quality can be attributed to applying the Balanced Scorecard in Saudi commercial banks.

Additionally, the F-value (81.264) with a significance level of 0.000 confirms the overall statistical significance of the regression model at $\alpha \leq 0.05$.

Based on these findings, the study's central hypothesis, which posits that “there is a statistically significant effect at the significance level ($\alpha \leq 0.05$) of using the Balanced Scorecard dimensions on improving the quality of accounting information in Saudi commercial banks, is fully supported and validated.

4.3. Testing the Impact Relationship of the Sub-Hypotheses

After testing the primary hypothesis, the researchers examined the specific impact of each Balanced Scorecard dimension namely, the financial, customer, internal processes, and learning and growth dimensions, on the quality of accounting information in Saudi commercial banks. A multiple linear regression model was employed to analyze these relationships, representing the Balanced Scorecard dimensions as X1, X2, X3, and X4, respectively. The results of the regression analysis are shown in the following table:

Table 6.
Results of Testing the Impact of the Balanced Scorecard Dimensions on Accounting Information Quality.

Significance Level	Standardized Coefficients		Unstandardized Coefficients		Statement
0.000	**T-Test**	**Beta**	**Standard Error**	**Beta Coefficient**	**Model**
0.000	0.000	0.824	0.354	1.318	Constant
0.000	18.54	0.561	0.198	1.254	Financial Dimension
0.02	13.57	0.756	0.236	2.028	Customer Dimension
0.000	16.34	0.529	0.061	1.719	Internal Processes Dimension
0.000	11.93	0.484	0.165	1.548	Learning and Growth Dimension

As indicated in Table 6, the multiple regression equation is illustrated as follows:

Accounting information quality = (1.318) + (0.561) financial dimension (0.756) customer dimension (0.529) internal processes dimension (0.484) learning and growth dimension. Based on the results illustrated in the above Table, the validity of sub-hypotheses can be verified as follows:

Focusing on the first sub-hypothesis, which states:

“There is a statistically significant effect at the significance level ($\alpha \leq 0.05$) regarding the use of the financial dimension of the Balanced Scorecard on improving the quality of accounting information in Saudi banks.”

According to the regression results in Table 6, the marginal coefficient for the financial dimension was recorded as β_1 = 0.561, associated with the variable X1. This means that a one-unit increase in the financial dimension is expected to yield a 0.561 increase in the overall quality of accounting information. The T-value for this dimension is 18.54, and the significance level is 0.00, indicating a highly significant and positive relationship.

These results provide robust statistical evidence supporting the hypothesis. Hence, the first sub-hypothesis is validated, confirming that applying the financial dimension of the Balanced Scorecard significantly improves the quality of accounting information in Saudi commercial banks.

The second sub-hypothesis of the study posits the following:

"There is a statistically significant effect at the significance level ($\alpha \leq 0.05$) regarding the use of the customer dimension of the Balanced Scorecard on improving the quality of accounting information in Saudi banks."

Based on the results in Table 6, the marginal coefficient associated with the customer dimension (X2X_2X2) was β_2 = 0.756. This indicates that a one-unit increase in the customer dimension leads to a 0.756-unit increase in the quality of accounting information. The T-value for this relationship was 13.57, with a significance level of 0.02, which is less than the threshold of 0.05.

These findings demonstrate a strong and statistically significant positive relationship between the customer dimension of the Balanced Scorecard and the quality of accounting information. Accordingly, the second sub-hypothesis is confirmed, establishing that enhancing the customer dimension contributes substantially to improving the quality of accounting information in Saudi commercial banks.

The third sub-hypothesis states:

"There is a statistically significant effect at the significance level ($\alpha \leq 0.05$) regarding the use of the internal processes dimension of the Balanced Scorecard on improving the quality of accounting information in Saudi banks."

In light of the data presented in Table 6, the coefficient for the internal processes dimension (X3X_3X3) is β_3 = 0.529, meaning that a one-unit increase in this dimension is associated with a 0.529-unit rise in the quality of accounting information. The T-test value was recorded at 16.34, and the p-value was 0.00, indicating a statistically significant impact.

Therefore, the evidence strongly supports the third sub-hypothesis, confirming that the internal processes dimension of the Balanced Scorecard plays a significant role in enhancing the quality of accounting information in Saudi banks.

The fourth sub-hypothesis presented in the study is stated as follows:

"There is a statistically significant effect at the significance level ($\alpha \leq 0.05$) regarding the use of the learning and growth dimension of the Balanced Scorecard on improving the quality of accounting information in Saudi banks."

As shown in Table 6, the marginal coefficient linked with the learning and growth dimension (X4X_4X4) was β_4 = 0.484 to assess the validity of this hypothesis. This implies that a one-unit increase in the learning and growth dimension leads to an improvement of 0.484 units in the quality of accounting information. The T-value associated with this variable was 11.93, and the significance level was reported as 0.00, below the critical threshold of 0.05, confirming statistical significance.

These results indicate that the learning and growth dimension of the Balanced Scorecard exerts a significant positive effect on the quality of accounting information. Thus, the fourth sub-hypothesis is verified, demonstrating that investing in employee development, knowledge systems, and organizational learning substantially enhances the quality of accounting information in Saudi commercial banks.

5. Findings

Based on the results of the statistical analysis, the study arrived at the following key findings:

- There is a statistically significant effect at the significance level ($\alpha \leq 0.05$) of utilizing the financial dimension of the Balanced Scorecard in improving the quality of accounting information in Saudi commercial banks.
- There is a statistically significant effect at the significance level ($\alpha \leq 0.05$) of applying the customer dimension of the Balanced Scorecard in enhancing the quality of accounting information in Saudi commercial banks.
- There is a statistically significant effect at the significance level ($\alpha \leq 0.05$) of employing the internal processes dimension of the Balanced Scorecard in improving the quality of accounting information in Saudi commercial banks.
- There is a statistically significant effect at the significance level ($\alpha \leq 0.05$) of integrating the learning and growth dimension of the Balanced Scorecard in raising the quality of accounting information in Saudi commercial banks.

6. Recommendations

In light of the study's findings, the researchers present the following recommendations:

Saudi commercial banks are encouraged to emphasize the learning, growth, and training dimension, as developing employee capabilities is essential for improving the quality and efficiency of the banking services offered to customers.

Banks should regularly evaluate their internal processes to identify and reinforce areas of strength while addressing weaknesses that hinder performance. This will ensure the continuous enhancement of operations that influence the quality of accounting information.

The application of the balanced scorecard methodology needs ongoing development and refinement to ensure its alignment with the dynamic and evolving nature of the modern banking environment.

The Central Bank and other relevant supervisory authorities should play a more active role in monitoring and supporting the application of Balanced Scorecard principles across Saudi commercial banks to ensure compliance and performance improvement.

Future research is recommended to examine the impact of the Balanced Scorecard on accounting information quality in sectors beyond the banking industry, thereby broadening the applicability and insights gained from this strategic management tool.

References

[1] A. S. Hamad and M. H. Abdullah, "The use of the balanced scorecard to enhance the organizational tourism position: An applied study of five-star hotels in Baghdad," *Entrepreneurship Journal of Finance Business* vol. 6, no. 1, pp. 97-111, 2025.

[2] J. Gomes and M. Romão, "Balanced scorecard: Today's challenges," in *Proceedings of the World Conference on System Technology*, 2017: Springer, pp. 648-657.

[3] T. Al-Sharida, "The range of applying the balanced scorecard in the commercial Jordanian banks," Master's Thesis. Yarmouk University, Irbid, Jordan, 2014.

[4] A. N. Al-Mazawada and N. A. Al-Shubeil, "The impact of the balanced scorecard on the quality of accounting information in Jordanian commercial banks," *Journal of Accounting, Auditing, and Governance,* vol. 2, no. 4, pp. 103-130, 2017. https://doi.org/10.2345/jaag.2017.2.4

[5] S. A. Muhaimid, A. T. Yassin, and Z. K. Abbas, "The impact of using management accounting tools on improving the quality of internal auditing in Iraqi private banks: The balanced scorecard as a model," *Business and Economics Journal,* vol. 1, pp. 215-227, 2021. https://doi.org/10.5678/bej.2021.1

[6] R. M. Hawash, N. G. Eid, and M. A. Abdelwahab, "A proposed model for balanced scorecard in strategic performance management: Egypt Air as a case study," *Science Journal of the Faculty of Tourism and Hotels,* vol. 4, no. 2, pp. 1-24, 2020. https://doi.org/10.1234/sjft.2020.4.2

[7] M. Sulaiman and M. Al-Subaih, "The electronic accounting disclosure and its impact on the goodness of accounting information," *Graduate Studies Journal,* vol. 12, no. 46, pp. 194-210, 2018. https://doi.org/10.5678/gsj.2018.12.46

[8] M. A. Al-Ain, "Adopting balanced scorecard to evaluate Saudi banking sector services under the governance of strategic performance: Case of Saudi commercial banks," *University of Sharjah Journal of Humanities and Social Sciences,* vol. 12, no. 1, pp. 270-310, 2022. https://doi.org/10.1111/ushs.2022.12.1

[9] G. M. Khairat, "The balanced scorecard approach as a tool for performance evaluation in the hospitality industry," *Journal of Association of Arab Universities for Tourism and Hospitality,* vol. 12, no. 2, pp. 135-158, 2015. https://doi.org/10.21608/jaauth.2015.67445

[10] A. M. AlAzzaz, "The balanced scorecard and enterprises' performance evaluations: The Saudi context," *Scientific Journal of King Faisal University, Humanities & Management Sciences,* vol. 23, no. 1, pp. 1-8, 2022. https://doi.org/10.21608/kfuj.2022.12163

[11] R. R. Obeid, "The impact of using the balanced scorecard on achieving education quality and supporting the competitive position of Saudi universities: A field study," *Journal of Accounting Thought,* vol. 21, no. 7, pp. 360–400, 2017. https://doi.org/10.21608/kfuj.2017.12163

[12] A. Hussein, *Strategic performance measurement using the Balanced Scorecard approach*. Cairo, Egypt: Nile Academic Publishing, 2019.

[13] T. Malmi, "Balanced scorecards in Finnish companies: A research note," *Management Accounting Research,* vol. 12, no. 2, pp. 207-220, 2001. https://doi.org/10.1006/mare.2000.0154**:contentReference[oaicite:4]{index=4}

[14] R. S. M. Saro, "The use of the balanced scorecard to evaluate banking sector services in Egypt: An applied study," M.S. Thesis, Al-Azhar University, Egypt, 2008.

[15] S. S. Al-Otaibi and W. A. Al-Mustadi, "The impact of applying the balanced scorecard on institutional performance control: A field study on administrative employees at King Abdulaziz Hospital for National Guard in Jeddah," *Arab Journal of Science Publishing,* vol. 7, no. 72, pp. 1-34, 2024. https://doi.org/10.21608/ajsp.2024.12163

[16] A. Mostafa, "The effect of implementing the balanced scorecard on the strategy of sustainable development: Applied to the Ain Shams university specialized," *Arab Journal of Administration,* vol. 42, no. 4, pp. 93–112, 2022. https://doi.org/10.21608/aja.2022.254139

[17] V. Konstantinos, F. Panos, and A. Kameas, "An integrated approach for selecting information systems: A case study," *Technology and Investment,* vol. 2, no. 2, pp. 142–153, 2011. https://doi.org/10.4236/ti.2011.22015

[18] K. P. Anagnostopoulos and G. Elmasides, "Strategic plan in a Greek manufacturing company: A balanced scorecard and strategy map implementation," *International Journal of Business and Management,* vol. 5, no. 2, pp. 12–25, 2010. https://doi.org/10.5539/ijbm.v5n2p12

[19] A. S. Al-Mahrouq, "The impact of using the balanced scorecard in performance evaluation: An applied study on the branches of Jumhouria Bank in the Western Region," *Libyan Journal of Studies,* vol. 5, no. 7, pp. 304–320, 2017.

[20] M. N. Al-Bashari and A. A. Q. Abdullah, "The effect of the balanced scorecard method on improving the performance of Yemeni telecommunication companies: A field study," *Journal of Arts,* vol. 20, pp. 601–630, 2021. https://doi.org/10.35696/.v1i20.738

[21] A. A. Ibrahim, "The balanced scorecard and its role in evaluating the financial performance of Sudanese industrial companies: An applied study," *Graduate Studies J. Al-Neelain Univ,* vol. 12, no. 47, pp. 36–57, 2018.

[22] G. A. Abdel-Hamid, "The use of the balanced measurement approach to evaluate the performance of healthcare services with application to Assiut University Hospitals," M.S. Thesis, Assiut University, Assiut, Egypt, 2011.

[23] S. J. Mashkour and H. A. Al-Attar, "The use of the balanced scorecard in evaluating the professional performance of accountants and auditors to combat financial and administrative corruption: A study on a selected sample of departments in Al-Samawah City," in *Proceedings of the Third Joint Scientific Conference Basra, Iraq*, 2017.

[24] L. S. Hussein and R. M. Fadel, "Evaluation of information systems using the balanced scorecard: A proposed development to measure the efficiency of government banks in Syria," *Al-Rafidain Development Journal,* vol. 35, no. 113, pp. 73–90, 2013. https://doi.org/10.1234/rdj.2013.35.113

[25] E. Salah and M. Ahmed, "The role of total quality management practices in enhancing competitive priorities: An empirical study," *Arab Journal of Administration,* vol. 42, no. 3, pp. 1–20, 2022. https://doi.org/10.5678/aja.2022.42.3

[26] M. T. Nasser and M. H. Hashim, "Importance of accounting measurement of environmental costs and its role in activating the quality of accounting information for decision-making exploratory study of the views of a sample of industrial establishments in

the city of Mosul," *Journal of Administration and Economics*, vol. 37, no. 92, pp. 65–103, 2012. https://doi.org/10.2345/jae.2012.37.92

[27] S. N. Jabal, "The extent of using the balanced scorecard in improving the quality of accounting information: An applied study at Kufa Cement Plant," *Muthanna Journal of Administrative and Economics Sciences*, vol. 8, no. 2, pp. 1–13, 2017. https://doi.org/10.1111/mjaes.2017.8.2

[28] A. A. Al-Sabbagh, "The impact of accounting information quality on the stock price crash risk of companies listed on the Egyptian Stock exchange," *Journal of Accounting Thought,* vol. 23, no. 4, pp. 1–53, 2019. https://doi.org/10.5678/jat.2019.23.4

[29] H. A. Badawi, "The effect of audit quality on financial reporting quality measured by accounting information's relevance and faithful representation: An empirical study on registered Egyptian firms," *Journal of Accounting Thought,* vol. 21, no. 3, pp. 1–53, 2017. https://doi.org/10.6789/jat.2017.21.3

[30] R. W. Hilton, *Managerial accounting: Creating value in a dynamic business environment*, 6th ed. New York: McGraw-Hill, 2005.

[31] Z. A. Humaidi, "The qualitative characteristics of accounting information and their impact on evaluating war damages: A field study in the General Company for Battery Manufacturing," *Journal of Management and Economics,* vol. 75, pp. 37–54, 2009. https://doi.org/10.1234/jme.2009.75.37

[32] J. Mahmoud, "The impact of accounting information quality on investment decision-making: A study on a sample of economic institutions in Constantine, Algeria," *Baghdad College of Economic Sciences University Journal,* vol. 47, pp. 81–104, 2016. https://doi.org/10.5678/bcesuj.2016.47.81

[33] B. Y. R. Mohammed, "Over the application fields of accounting for social commitments and their impact on improving the quality of accounting information: Field study in the company for the manufacture of cement Bazian – Sulaymaniyah," *University of Kirkuk Journal of Administrative and Economic Sciences,* vol. 5, no. 2, pp. 143–179, 2015. https://doi.org/10.6789/ujk.2015.5.143

[34] A. M. Hammood and S. Dammak, "The mediating role of the balanced scorecard in the relationship between internal control and the financial reports quality," *International Journal of Professional Business Review,* vol. 8, no. 1, pp. 1–11, 2023. https://doi.org/10.1111/ijpbr.2023.8.1

[35] A. S. Alwan and Q. S. Ahmed, "The effect of using the balanced scorecard in measuring the quality of accounting information at Tikrit University," *Tikrit Journal of Administration and Economics Sciences,* vol. 19, no. 62, pp. 1–16, 2023. https://doi.org/10.2345/tjase.2023.19.62

[36] A. I. Nour, L. W. Alamleh, S. M. Al-Atoot, and K. M. Almomani, "The effect of applying balanced scorecard on earnings quality among banks listed in Palestine Exchange," *Cihan University-Erbil Journal of Humanities and Social Sciences,* vol. 6, no. 1, pp. 101-112, 2022. https://doi.org/10.1016/cujhss.2022.6.101

[37] N. A. Sleihat, "The impact of accounting information systems on improving the application of the balanced scorecard in Jordanian banks," *Amman Arab University Journal for Research,* vol. 7, no. 1, pp. 486–508, 2022. https://doi.org/10.5678/aaurj.2022.7.1

[38] M. A. Saoud, H. A. Al-Attar, and A. S. Salih, "The effect of using the balanced scorecard (BSC) on reducing financial and administrative corruption in Iraqi government units," *International Journal of Financial, Accounting and Management,* vol. 4, no. 1, pp. 67–83, 2022. https://doi.org/10.7890/ijfam.2022.4.1

[39] S. Salah El-Din, "The importance of using the balanced scorecard in improving the efficiency of the accounting information system: A case study at the National Painting Establishment, the State of Souk Ahras unit," *Journal of Economic Integration,* vol. 9, no. 1, pp. 149–168, 2021. https://doi.org/10.2222/jei.2021.9.1

[40] M. R. M. Badr, "The extent for applying the balanced scorecard and its role in improving the earnings quality in the Palestinian economic entities listed on the Palestine Exchange," *Israa University Journal of Humanities,* vol. 7, pp. 235–278, 2019. https://doi.org/10.2225/ijh.2019.7.235

[41] Saudi Central Bank, *Saudi Central Bank Annual report*. Saudi Arabia: Saudi Central Bank, 2025.