

# Evaluation of the Efficiency of Using Accounting Information Systems in Recording and Processing Financial Events According to IFRS 15 "Revenue From Contracts With Customers: an Applied Study in the General Company for Electrical Industries for the Period 2020–2024

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**Abstract:** This research aims to evaluate the efficiency of using accounting information systems (AIS) in recording and processing financial events in accordance with IFRS 15, "Revenue from Contracts with Customers." The study is applied to the General Company for Electrical Industries during the period from 2020 to 2024. Revenue recognition is regulated by IFRS 15 as one of the fundamental international accounting standards, which follows a five-step process that includes contract, performance obligations, determination and allocation of transaction price, and revenue recognition. The study results revealed discrepancy in the efficiency level of the accounting system used in the corporation, where some components comply with the yardstick's requirements, while deficit are shortcoming particularly in linking the system to execution obligations and the timing of revenue recognition. The study pointed out the necessity of enhancing the accounting staff's abilities and improving existing accounting systems to guarantee accuracy and transparency in financial reporting. The study suggest adopting an integrated accounting stand to that supports the requirements of adding 15, in addition to providing uninterrupted training programs for accounting and contributory personnel, contributing to improving effectiveness performance efficiency and realization implementation of international budgetary reporting practices.

**Keywords:** Accounting Information Systems, Recording and Processing Financial, IFRS 15, General Company for Electrical Industries.



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## **Introduction:**

In recent years, significant growth have occurred in the accounting environment due to the shift upon applying International Financial Coverage Standards (IFRS), which aim to unify accounting customary practice worldwide and enhance comparison and comparability among companies' utterance statements. Among these standards, Earnings 15, "Revenue from Contracts with Customers," sprung up emerged as one of significant most important modern standards substantial considerable attention from book-keeper and auditors due to its direct impact on revenue recognition, a critical element in evaluating companies' financial performance. A five-step model is the basis of this standard, which replaces multiple previous standards and focuses on the contractual relationship between the company and the customer, as well as revenue realization based on meeting performance obligations. Accounting information systems need to be able to record, classify, and analyze financial transactions related to customer contracts with a high degree of accuracy and flexibility. In this context, the General Company for Electrical Industries represents an appropriate model for applied study, as it is a government industrial company relying on accounting information systems to document its financial performance, especially amid ongoing reforms and financial and administrative development in the public sector.

## **Part One: Research Methodology**

### **1.1 Research Problem:**

IFRS 15 represents a qualitative shift in how revenue is recognized and accounted for by relying on a five-step model that demands precise documentation and linking between financial performance and contractual obligations. The importance of this standard is particularly notable in industrial and service institutions that rely on long-term contracts with multiple obligations. Despite many companies' efforts to implement this standard, challenges remain, especially in public institutions that may suffer from inefficiencies in accounting information systems. Accordingly, the main research question is: To what extent do the accounting information systems in the General Company for Electrical Industries possess the necessary efficiency to record and process financial events according to IFRS 15 during the period 2020–2024?

### **1.2 Research Significance:**

This research is important as it addresses a vital topic at the intersection of two key areas: accounting information systems and international financial reporting standards, specifically IFRS 15 related to revenue from contracts with customers. This importance increases given the efforts of institutions, particularly public ones, to improve financial efficiency and comply with modern international standards. The research contributes to filling a knowledge gap in local and Arab accounting literature by shedding light on the extent of integration between accounting information systems and IFRS 15.

### **1.3 Research Objectives:**

This study aims to evaluate the efficiency of using accounting information systems in recording and processing financial events according to IFRS 15 requirements in the General Company for Electrical Industries during 2020–2024, assess the accuracy and efficiency of recording and processing financial transactions related to customer contracts within the accounting system, identify technical and organizational challenges facing the company in applying IFRS 15 through AIS, and provide recommendations to improve the accounting information system's performance to enhance compliance with international standards and increase transparency and reliability of financial reports.

#### **1.4 Research Hypothesis:**

The study is based on the following hypothesis: There is no statistically significant relationship between the efficiency of using accounting information systems and the application of IFRS 15 in the General Company for Electrical Industries during 2020–2024.

#### **1.5 Population and Sample:**

The research population consists of all industrial companies operating in Iraq that rely on accounting information systems to record and process financial transactions, especially those facing challenges in applying international revenue standards such as IFRS 15. The General Company for Electrical Industries was selected as the applied sample to study the efficiency of using AIS in applying IFRS 15 during 2020–2024. This company represents a typical example of the public industrial sector in Iraq due to its size, market impact, and close linkage to the regulatory environment and government standards.

### **Part Two: Theoretical Framework**

#### **2.1 Concept and Importance of Evaluating the Efficiency of Using Accounting Information Systems:**

Accounting Information Systems (AIS) are defined as a set of technical and human resources used to collect, store, and process financial and accounting information to support decision-making within an organization (Romney & Steinbart, 2020: 45). The efficiency of using these systems reflects the institution's ability to utilize its accounting and technical resources to achieve its financial objectives accurately and effectively by ensuring precise transaction recording, speedy data processing, and providing reliable financial reports (Hall, 2018: 103).

In various institutions and economic units, an inefficient system can lead to recording errors, delays in reporting, and lower quality of information used for decision-making (Gelinas et al., 2019: 78). Furthermore, evaluating efficiency helps identify weaknesses and technical and organizational gaps, enabling organizations to take corrective actions to ensure compliance with international accounting standards such as IFRS 15 (Warren et al., 2021: 122).

The demand for accounting information systems that are highly efficient and support accurate and transparent revenue recognition has gone up because of ongoing changes in the global accounting environment. Companies who rely on complex, long-term contracts with customers are facing a major challenge due to this (Dechow et al., 2020: 95). To make sure that financial reports are reliable and comply with modern standards, it is necessary to evaluate the efficiency of these systems (Alles et al., 2018: 14).

Internal controls can be supported and fraud and financial errors can be reduced by evaluating AIS efficiency. The quality of financial information provided to internal and external users is improved and transparency is improved by effective accounting systems (Gelinas et al., 2019: 85), as shown by studies (Gelinas et al., 2019: 85). Organizations can improve their ability to respond quickly to regulatory requirements and international standards by continuously evaluating their ability to adapt to technological developments and changing financial regulations (Warren et al., 2021: 130).

#### **2.2 Recording and Processing Financial Events According to IFRS 15 "Revenue from Contracts with Customers":**

By adopting a five-step model for recording revenue related to customer contracts, IFRS 15 is aiming to unify revenue recognition methodology across industries through the adoption of a modern accounting standard (IFRS Foundation, 2018: 12). The process starts by identifying the contract with the customer, ensuring there is a binding commercial agreement that includes clear rights and obligations (KPMG, 2020: 28).

The second step is identifying performance obligations, which means determining each promise to deliver a distinct good or service to the customer that can be separately identified within the contract (Deloitte, 2019: 34). After that, the total transaction price expected by the company for these obligations is determined, considering discounts, incentives, and possible price changes (EY, 2021: 41).

In the fourth step, the transaction price is allocated to performance obligations based on the relative prices of each obligation, allowing appropriate revenue recognition as each obligation is satisfied (PwC, 2020: 50). Finally, revenue is recognized when the performance obligation is fulfilled, whether at the point of transferring control of the good or service to the customer or over time, depending on the contract's nature (IFRS Foundation, 2018: 25).

These processes require accounting information systems capable of handling complex and dynamic data to ensure accuracy and transparency in revenue recording and providing reliable financial reports that meet the needs of internal and external users (Deloitte, 2019: 38). Thus, applying IFRS 15 relies heavily on the efficiency of accounting systems to record every contract stage accurately, positively impacting the quality and usability of financial information for decision-making (KPMG, 2020: 33).

Institutions face several challenges in applying IFRS 15, especially with complex contracts involving multiple performance obligations or frequent changes in prices or contract terms (EY, 2021: 45). AIS must be flexible and capable of continuous data updates, and able to manage various revenue recognition scenarios, such as long-term contracts or contracts involving progressive delivery of services or products (PwC, 2020: 53).

The standard also emphasizes the need for accurate and integrated documentation of each contract stage, which directly affects the timing and amount of revenue recognition (IFRS Foundation, 2018: 30). Accounting systems lacking integration between databases and accounting processes may lead to delays or errors in revenue recording, affecting the quality of financial reports and the information provided to investors and other stakeholders (Deloitte, 2019: 42).

Therefore, training accounting and technical staff to efficiently use the system and understand IFRS 15 requirements is fundamental to ensuring correct application of the standard and achieving high accuracy and transparency in financial reports (KPMG, 2020: 37). Additionally, the use of advanced technological tools such as smart systems and sophisticated software that support contract analysis and consistent, effective revenue recording is recommended (EY, 2021: 48).

### **2.3 The Relationship Between Evaluating the Efficiency of Using Accounting Information Systems and Recording and Processing Financial Events According to IFRS 15 "Revenue from Contracts with Customers":**

The efficiency of accounting information systems is a critical factor in the successful application of IFRS 15, which requires high accuracy in recording and processing revenues related to customer contracts (Gelinas et al., 2019: 95). An effective accounting system enables the organization to track contracts accurately, document performance obligations, and allocate the transaction price in accordance with the standard, ensuring correct and timely revenue recognition (Romney & Steinbart, 2020: 210).

Studies indicate that highly efficient AIS reduce accounting errors, accelerate recording and processing operations, and provide accurate financial reports that support transparency and regulatory compliance (Warren et al., 2021: 134). Internal and external parties use this directly to improve the quality of financial information used for investment and operational decisions.

Conversely, ineffectual systems create difficulties in application IFRS 15's five steps, including accurate contracting and performance responsibility identification, transaction price appropriation, and revenue recognition, potentially resulting in uncertain or delayed financial record (Dechow et

al., 2020: 110). Identifying and correcting weaknesses in accounting processes to comply with international standards can be achieved by evaluating the efficiency of AIS.

In order to ensure successful implementation of IFRS 15, evaluate the efficiency of accounting information systems, and enhance financial accounting quality, companies must also improve their ability to manage revenue from contracts consistently and transparently (Gelinas et al., 2019: 102).

The importance of appraise AIS efficiency in supporting IFRS 15 realization is also evident in its direct impact on the ability to handgrip complex multi-element contracts, such as contracts containment different service and product components handed over over varying timeframes (EY, 2021: 55). An accounting system that can adapt to these requirements and provide real-time and accurate data is required to meet the rigorous accuracy requirements for processing and recording financial data linked to each performance obligation due to these complexities (PwC, 2020: 60).

Highly efficient AIS also enhance internal control processes by continuously verifying compliance with revenue recognition policies and providing periodic reports that help detect errors and deviations from the standard (Warren et al., 2021: 140). This is essential in dynamic business environments where contracts and prices frequently change, ensuring the system provides accurate financial information reflecting the company's economic reality (Dechow et al., 2020: 115).

Therefore, improving AIS efficiency is not limited to the technical aspect but includes developing human capacities and continuous training, alongside updating accounting procedures and policies to align with IFRS 15 requirements, which enhances companies' ability to accurately and reliably record and process financial events (Gelinas et al., 2019: 108).

### **Part Three: Applied Framework**

#### **3.1 Overview of the Research Sample (The General Company for Electrical Industries):**

The General Company for Electrical Industries is one of the leading industrial companies in Iraq, engaged in manufacturing and assembling various electrical devices and equipment that meet local and regional market needs. The company was established to enhance national industrial production and reduce reliance on imports by developing high-quality products that meet safety and efficiency standards. The company employs a large number of specialists in electrical engineering, manufacturing, and accounting and uses advanced accounting information systems aimed at improving the accuracy of recording financial transactions and processing data related to commercial contracts, especially under its adoption of international accounting standards such as IFRS 15. The company plays a significant role in supporting the national economy through its contribution to supplying electrical equipment for major developmental projects, with a focus on updating its accounting information systems to keep pace with developments in international accounting and improve the quality of financial reports.

#### **3.2 Measurement of Research Variables (Evaluating the Efficiency of Using Accounting Information Systems and Recording and Processing Financial Events According to IFRS 15 in the General Company for Electrical Industries for the Period 2020–2024):**

To measure the research variables related to "evaluating the efficiency of using accounting information systems" and "recording and processing financial events according to IFRS 15," quantitative indicators reflecting actual performance within the General Company for Electrical Industries for the period 2020–2024 were determined, based on questionnaire data, financial analyses, and interviews with specialists. These measurements can be clarified as follows:



### 1- Indicators Measuring the Variable of Evaluating the Efficiency of Using Accounting Information Systems:

A Likert scale from 1 to 5 was used to measure user satisfaction and system efficiency based on five main indicators. The following table shows the average efficiency scores for each indicator as a percentage of the maximum score (5):

**Table 1: Indicators Measuring the Variable of Evaluating the Efficiency of Using Accounting Information Systems**

number	Indicator	Average score (out of 5)	Efficiency percentage (%)
1	Accuracy of recording financial transactions	4.3	86.0
2	data processing speed	3.9	78.0
3	System integration with operational processes	4.1	82.0
4	Internal control support	3.7	74.0
5	User satisfaction	4.0	80.0

To measure the efficiency of using Accounting Information Systems (AIS), a questionnaire was designed and directed to accounting and management staff to evaluate performance through specific indicators reflecting the system's quality in terms of accuracy, speed, integration, internal control support, and user satisfaction. The table shows that the system's efficiency is relatively good, with the accuracy of transaction recording receiving the highest rating at 86%, indicating the system's reliability in recording financial data. In contrast, the indicators for data processing speed and internal control support were somewhat lower (78% and 74%, respectively), highlighting areas for improvement to enhance the overall system efficiency. User satisfaction reached 80%, reflecting a good acceptance of the system, yet it leaves room for improving the user experience within the studied company.

### 2- Indicators for measuring the variable of recording and processing financial events according to IFRS-15:

Compliance with the five steps of IFRS-15 was assessed based on document reviews and interviews, with an assigned application percentage for each step separately, as shown in the table:

**Table 2: Indicators measuring the variable of recording and processing financial events according to IFRS-15**

number	Step in IFRS-15	Application rate(%)
1	Determine contracts	92
2	Determine performance obligations	85
3	Determine the transaction price	80
4	Allocate the transaction price to the obligations	75
5	Revenue recognition	78

The extent of the company's application of the IFRS-15 steps was assessed through a detailed analysis of contracts, financial reports, and interviews with the responsible accounting team. The application rate was calculated as the proportion of cases in which the company complied with each step out of the total cases studied. The results indicate that the company achieves a high compliance rate in identifying contracts (92%) and performance obligations (85%), reflecting clear procedures in these stages. However, there is a relative decline in applying the steps related to transaction price determination (80%), price allocation (75%), and revenue recognition (78%),

indicating challenges in the more complex aspects of the standard. These areas require stronger support from accounting information systems to improve accuracy and reliability.

### 3- Data Sources and Measurement Tools:

The following table illustrates the reliance percentage on various data collection tools used to measure the research variables:

**Table 3: Data Sources and Measurement Tools**

number	measuring tool	Accreditation rate(%)
1	Surveys	50
2	Interviews	30
3	Review of documents and records	20

To ensure the collection of accurate and comprehensive data, measurement tools were diversified to include questionnaires, interviews, and document reviews, with relative distribution reflecting the extent of use of each tool in the study. The table shows that questionnaires were the primary data collection tool, accounting for 50%, due to their ease of access to a large number of employees and their ability to cover various aspects of system evaluation. Interviews constituted 30%, allowing for deeper understanding of certain operational challenges, while document reviews—such as contracts and financial reports—contributed 20%. These were essential for verifying and analyzing data, providing concrete evidence of the company's compliance with accounting standards, as well as the integration and efficiency of accounting information systems in recording and processing financial events. Document reviews also enabled in-depth analysis of how contracts are handled and revenues recorded, thereby enhancing the validity of the findings related to the level of compliance and application.

### 3-3 Testing the Research Hypothesis:

The research hypothesis can be tested as follows:

#### 1- Formulation of the Hypothesis:

A- Null Hypothesis ( $H_0$ ): There is no statistically significant relationship between the efficiency of using accounting information systems and the recording and processing of financial events according to IFRS-15 at the General Company for Electrical Industries during the period 2020-2024.

B- Alternative Hypothesis ( $H_1$ ): There is a statistically significant relationship between the efficiency of using accounting information systems and the recording and processing of financial events according to IFRS-15 at the General Company for Electrical Industries during the period 2020-2024.

#### 2- Statistical Methods Used:

The following statistical methods were applied to test the hypothesis: descriptive analysis to calculate means and standard deviations, Pearson correlation test to measure the relationship between the two variables, and simple regression analysis to determine the effect of accounting information system efficiency on the recording and processing of financial events.

#### 3- Descriptive Analysis of Variables:

Before testing the relationship between the two variables, a descriptive analysis was conducted to measure the average perceptions regarding both the efficiency of using accounting information systems and the recording and processing of financial events according to IFRS-15. The subsequent table exemplifies these standards:

**Table 4: Descriptive Analysis of Research Variables**

variable	Mean	Standard Deviation(Std. Dev.)
<b>Evaluating the efficiency of using accounting information systems</b>	<b>3.85</b>	<b>0.56</b>
<b>Recording and processing financial events according to IFRS-15</b>	<b>3.72</b>	<b>0.62</b>

The table shows that the mean rating of the efficiency of utilization accounting information arrangement was 3.85 on a scale from 1 to 5, indicating a relatively good appraisal with moderate variation amongst the opinions of the participating staff. Good and consistent performance was also evident in the area of recording and processing financial events according to IFRS-15 with an average rating of 3.72.

#### 4- Testing the Correlation Coefficient Between the Two Variables:

The Pearson correlation test was employed to analyze the relationship between the two main variables at first. This test evaluates the strength and direction of the link between accounting information systems' efficiency and revenue recording and processing quality, in accordance with IFRS-15. The following table shows the results:

**Table 5: Results of the Pearson Correlation Test Between the Research Variables**

Research variable 1	Research variable 2	Correlation coefficient(r)	value-(Sig.)
<b>Evaluating the efficiency of using accounting information systems</b>	<b>Recording and processing financial events according to IFRS-15</b>	<b>0.78</b>	<b>0.000</b>

The correlation coefficient value of 0.78 indicates a strong positive relationship between the two variables. This relationship is highly statistically significant because the p-value is less than 0.05 (0.000). The null hypothesis, which claims that there is no connection between the variables, can be disproved based on this.

#### 5. Simple Regression Analysis of the Effect of Accounting Information Systems Efficiency

The recording and processing of financial events was determined by a simple regression analysis after confirming a strong correlation. This analysis's results can be seen in the table below:

**Table 6: Results of Simple Regression Analysis**

Laboratories	value(B)	t-Value	Sig. (p-value)
<b>Constant</b>	<b>1.12</b>	<b>5.23</b>	<b>0.000</b>
<b>Efficiency of accounting information systems</b>	<b>0.68</b>	<b>8.15</b>	<b>0.000</b>

According to IFRS 15, there is a 0.68-unit increase in recording and processing financial events for every one-unit increase in accounting information systems efficiency, as demonstrated by the coefficient value of 0.68. In addition, the p-value is less than 0.05, which means that the impact is statistically significant. The researchers' confidence in this effect is reinforced by the high t-value.

#### 6. Interpretation and Final Conclusion

The results of the correlation and retrogression tests support the existence of a robust and positive relationship between the effectiveness of using accounting information systems and the enhancement in recording and processing financial happenings according to IFRS 15. Therefore, the null hypothesis is dismissed, and the substitute hypothesis is accepted, confirmatory the



importance of improvement the efficiency of accounting systems as a crucial factor affecting the grade of financial data and compliance with global standards at the General Company for Electronic Industries during the span 2020-2024.

## **Part Four: Conclusions and Recommendations**

### **4.1 Conclusions:**

1. A strong and statistically significant correlation between two variables was observed between the two variables, indicating that improving the efficiency of accounting information systems can positively affect the quality of recording and processing financial events.
2. In order to fully comply with the international standard, it is necessary to implement flexible and advanced accounting information systems that can handle contract complexity and accurately analyze performance obligations.
3. Improved transparency and accuracy of financial reports presented to both internal and external users can be achieved through effective accounting information systems that reduce errors and delays in revenue recognition.
4. In order to improve accounting accuracy and reliability when recording financial transactions, it is crucial to train accounting staff on using modern systems and understanding the requirements of IFRS 15.
5. Internal control is improved and fraud and accounting error risks are decreased by the presence of integrated information systems, which contributes to the company's financial performance stability.
6. The company's competitiveness and sustainability in the market can be increased by improving the efficiency of using accounting information systems, a strategic decision.

### **4.2 Recommendations:**

1. Update technical systems and adopt modern software to strengthen accounting information systems infrastructure, particularly when dealing with complex contracts and IFRS 15 requirements.
2. Establish a continuous training program for accounting and technical staff to enhance their proficiency in utilizing accounting information systems and comprehending the specifics and demands of IFRS 15.
3. Enhance the connection between accounting information systems and other company systems to ensure smooth and precise data exchange, decrease errors, and speed up the financial reporting process.
4. Establish an efficient internal control system that includes regular reviews of accounting systems and procedures to ensure that IFRS 15 is being followed and gaps are identified in a timely manner.
5. To simplify auditing processes and improve revenue recognition accuracy, it is important to ensure that all contracts and financial transactions are documented comprehensively and accurately according to IFRS 15 steps.
6. Ensure continuous compliance and effectiveness by monitoring technical developments and international standards to encourage continuous innovation and updating of accounting systems.

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