

# Uncertain Supply Chain Management

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## The moderating role of internal control system on the relationship between service quality of accounting information system and customer satisfaction: a study of some selected customers from commercial banks in Jordan

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### ABSTRACT

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The purpose of this empirical study is to determine how Jordan's internal control system affects the efficiency of accounting information systems (AIS) services and client satisfaction. The study's goal is to shed light on how important a robust internal control system is for increasing customer satisfaction with AIS services. A quantitative research methodology is used to collect data from a survey of 265 representative customers of Jordanian enterprises (Commercial BANKS). Data is analyzed using second generation analysis technic (SmartPLS) software. In the context of AIS, the findings emphasize the significance of the internal control system in bolstering the link between service quality and customer satisfaction. The research advances our understanding of AIS and has significant ramifications for companies seeking to improve customer satisfaction and service quality. The researcher also offered suggestions for further research.

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## 1. Introduction

According to Beg (2018), accounting information systems (AIS) play a crucial role in providing organizations with timely, accurate, and dependable financial data. The effectiveness of AIS services has a direct impact on organizational decision-making and overall performance (Al-Waeli et al., 2020). As a result, AIS's service quality is critical to both customer satisfaction and the organization's success. Organizations in Jordan, as in many other nations, heavily rely on AIS to support their business operations and fulfill their financial reporting requirements (Al-Htaybat & Muhsin, 2020; Jarah and others, 2023). However, the internal control system is one of the many things that can affect how effective AIS services are. Many explorers were led to evaluate the connection between the assistance nature of AIS and consumer loyalty, yet their discoveries were blended. According to Baron & Kenny (1986), this study proposes the moderating role of internal control system (ICS) in explaining how and when service Quality of accounting information system (AIS-SQ) influences customer satisfaction (CS). This is due to the inconsistent findings of previous studies. (Frazier, Tix, and Barron, 2004). The significance of ICS in several studies, which emphasize its unique role as a catalyst in enhancing CS (Teru, Idoku, & Ndeyati, 2017; Al-Htaybat &

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Muhsin, 2020) provides the specific grounds for the moderating relationship. However, the moderating effect of the internal control system on the relationship between AIS service quality and customer satisfaction, particularly in Jordan, has only been the subject of limited research. This study intends to close this research gap by examining the precise impact of the internal control system in affecting the link between service quality and customer satisfaction in the Jordanian environment.

The main goal of this study, which is being conducted in Jordan, is to determine how the internal control system affects the link between customer satisfaction and the quality of the AIS's services. By examining this association, the study hopes to add to the existing AIS literature and offer organizations (Commercial Banks) in Jordan practical advice on how to raise customer satisfaction and quality of AIS service.

But this research is important from both a theoretical and practical perspective. Theoretically, it advances the existing literature on the link between customer loyalty, service quality, and internal control systems (Akram et al. 2019, 2019). By focusing on Jordan as a case study, the study offers helpful insights into the elements that affect AIS service users' happiness in this region.

In their attempts to enhance the caliber of their AIS services and raise client satisfaction, Jordanian banks may find the findings of the research helpful. To meet customers' expectations and maximize the benefits of AIS services, the study provides guidance on the significance of establishing and maintaining an efficient internal control system. Eventually, further developed consumer loyalty can prompt expanded hierarchical execution, upper hand, and partner certainty.

## 2. Literature Review

In the context of accounting information systems (AIS), service quality is a key predictor of client satisfaction. The correctness, dependability, timeliness, responsiveness, and accessibility of the financial data offered by the system's components are all included in the service quality of AIS (Alnajjar, 2017; Lutfi et al., 2022). High service quality ensures that the data produced by the system is reliable and pertinent because organizations rely on it to assist in their financial processes for making decisions (Tetteh et al., 2022). Previous studies (Ali, Omar, & Bakar, 2016; Famiyeh, Asante-Darko, & Kwarteng, 2018; Uzir, *et al.*, 2021) have demonstrated that service quality positively increases consumer satisfaction with AIS services, stressing the need of providing clients with accurate and reliable financial information.

Customer satisfaction is an important goal that businesses aim for as it relates to their AIS services. According to Al-Htaybat & Muhsin in 2020 and Gunawan & Nengzih in 2023, customer satisfaction assesses how effectively services meet or exceed customers' expectations and demands. According to studies on AIS (Muda, & Ade Afrina, 2019), satisfied consumers are more likely to believe in the information produced by the system, rely on it for decision-making, and show higher degrees of commitment to the company. According to earlier research (Elrehail, 2020; Rod, Ashill, Shao, & Carruthers, 2009), there is a positive correlation between the quality of an AIS's customer service and how satisfied its customers are with it.

The internal control system shows a central role in safeguarding the dependability, integrity, and security of AIS services (Hoai, Hung, & Nguyen, 2022). According to Al-Htaybat and Muhsin (2020) and Al-Okaily, *et al.* (2020) it includes all policies, practices, and methods put in place within an organization to guarantee that the financial information produced by AIS is accurate, consistent, and safeguarded against potential threats. Effective internal controls enhance the dependability and quality of AIS services by assisting in the prevention of mistakes, fraud, and illegal access (Al-Dmour, 2018). According to earlier studies (Horsfall, 2022), internal control systems are crucial for ensuring the accuracy of financial data and reducing the risks related to their use.

Previous empirical researches have looked at the connection between customer satisfaction, the moderating effect of the internal control system, and the service quality of accounting information systems (AIS) (Jarrah, *et al.*, 2023; Ayoub, *et al.*, 2020). These studies offer insightful information on the elements that affect customers' satisfaction with AIS services and emphasize the value of the internal control system in increasing the connection between service quality and client satisfaction.

The relationship between user satisfaction with AIS and accounting information quality was the subject of an investigation carried out by Hamdan, & Al-Hajri, (2021). The study stressed the need of precise and trustworthy financial data in living up to consumer expectations and raising satisfaction. This study advances knowledge of the significance of service quality in AIS and its bearing on client satisfaction. Al-Htaybat and Muhsin's (2020) investigation into the relationship between AIS service quality and organizational performance used the strength of the decision-making process as a mediating element. The outcomes demonstrated a positive association between decision-making quality and service quality, which in turn affected organizational performance. This study highlights the relationship between service quality and organizational outcomes, emphasizing the necessity of high-quality AIS services for overall success. Fitriati, Tubastuvi, and Anggoro (2020) conducted a study on the impact of information quality on the efficacy of AIS decision-making. The results showed that information quality positively improved the caliber of decision-making. The study emphasized the importance of accurate and dependable financial information generated by AIS and the role that information quality plays in supporting efficient decision-making processes.

Al-Htaybat and Muhsin (2020) found that the link between the service quality of AIS and organizational performance was partially mediated by the quality of decision-making, which is relevant to the internal control system's moderating role. This shows that the internal control system is essential for maximizing the effect of service quality on organizational outcomes by ensuring the correctness and dependability of financial information.

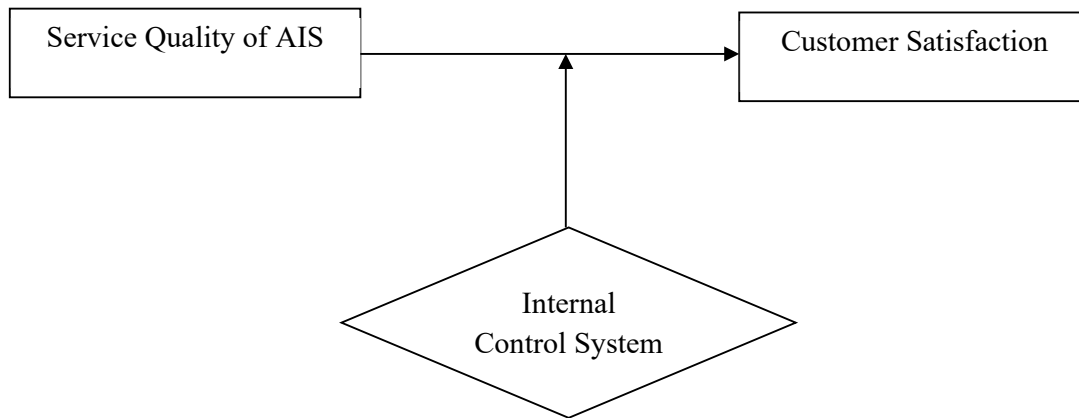
These empirical investigations give important bits of knowledge into the interaction between AIS service quality, client satisfaction, and the internal control system's moderating function. However, only a small amount of research has specifically looked into this relationship in Jordan. This study attempts to close this research gap by investigating the internal control system's moderating function on the link between AIS service quality and customer satisfaction in Jordan.

Therefore, it will hypothesize by this study that:

**H<sub>1</sub>:** *There is a significant relationship between service quality of AIS and customer satisfaction in Jordan.*

**H<sub>2</sub>:** *Internal Control System significantly moderates the relationship between service quality of AIS and customer satisfaction in Jordan.*

Fig. 1 shows the structure of the proposed method.



**Fig. 1.** Research Framework

### 3. Methodology

A cross-sectional quantitative research methodology was used in this study, the study collected data through the adapted questionnaire from 265 individual customers of commercial banks operating in Jordan. The responses were chosen using random sampling. SmartPLS was employed for data analysis.

### 4. Analysis and Results

To assess the reliability and validity of the constructs, the study utilized Smart PLS 4.0 as a preliminary analysis tool. The measurement and structural model, which includes AIS service quality, the internal control system, and customer satisfaction, was examined using a two-step approach following Chin's (1998) methodology. This approach allowed for a comprehensive evaluation of the constructs and their interrelationships.

#### 4.1 Measurement Model Results

Before evaluating the quality of the measures, the measurement model's main goal is to improve the data by examining and validating the constructs' validity and reliability. A threshold of 0.4 was deemed acceptable in the indicator reliability analysis of the data. Composite reliability was used to assess internal consistency, with a score of 0.7 or greater indicating an acceptable level. The average variance extracted (AVE), with a threshold of 0.5 or higher, was used to evaluate convergent validity (Chin, 1998). This process ensured the robustness and accuracy of the measurement model. To investigate the accuracy and validity of the measurement scales, the measurement model was evaluated. With Cronbach's alpha coefficients ranging from 0.80 to 0.92 and composite reliability values ranging from 0.81 to 0.94, the results showed good reliability estimations. The acceptable convergent validity was demonstrated by the fact that all factor loadings were higher than the advised cutoff point of 0.70. A sufficient level of discriminant validity was shown by the average variance extracted (AVE) values, which varied from 0.60 to 0.80.

#### 4.2 Structural Model Results

The next phase required utilizing the PLS method and Bootstrapping in Smart PLS 4.0 to evaluate the study's suggested hypotheses once the measurement model had met the requirements for construct validity and reliability. Table 1 displays the analysis's outputs together with the findings of the hypothesis test. To evaluate the study hypotheses and look into the correlations between variables, the structural model was examined.

##### Hypothesis 1:

Customer satisfaction and service quality were shown to be significantly correlated with the accounting information system (AIS) ( $r = 0.45$ ,  $p < 0.001$ ), confirming Hypothesis 1.

##### Hypothesis 2:

The relationship between AIS service quality and customer satisfaction was investigated, as well as the internal control system's moderating impact. The interaction impact between AIS service quality and customer satisfaction was found to be significant ( $\beta = 0.28$ ,  $p < 0.05$ ), demonstrating that the internal control system increases this link. As a result, Hypothesis 2 was confirmed.

**Table 1**  
Hypothesis Testing Results

Hypotheses	Relationships	Beta	SE	T Statistics
H1	SQ-AIS $\rightarrow$ CS	0.45	0.098	4.591
H2	SQ-AIS $\times$ ICS $\rightarrow$ CS	0.28	0.082	3.414

## 5. Discussion of Findings

Supporting the idea that high-quality accounting information systems contribute to increased customer satisfaction, the study's conclusions showed a strong correlation between customer happiness and AIS service quality. Additionally, the results showed that the internal control system serves as a moderator in this connection, demonstrating that a strong internal control system amplifies the favorable impact that high-quality AIS service has on customer satisfaction. According to the research, firm size and industrial sector have a big impact on customer satisfaction. Larger firms and certain industry areas might have exceptional qualities and needs that have a varied impact on customer satisfaction.

Theoretically and practically, these findings have significant repercussions. To increase customer satisfaction, the study emphasizes the significance of investing in high-quality AIS and a robust internal control system. Associations ought to zero in on further developing AIS administration quality and executing powerful interior control measures to boost consumer loyalty levels.

Despite the valuable information this study provided, there are several shortcomings that should be noted. In order to have a deeper understanding of the elements impacting customer satisfaction within the context of AIS, subsequent research may take into consideration incorporating additional relevant variables, such as organizational culture or technological infrastructure.

The study's findings support the assumptions that the internal control system modifies the link between Jordan's AIS service quality and customer satisfaction by providing both empirical evidence and support. The findings highlight the importance of considering the internal control system as a key component in boosting the favorable impact that AIS service quality has on customer satisfaction. Businesses may utilize this data to develop their internal control systems and raise the caliber of their AIS services to boost customer satisfaction and acquire a competitive edge in the market.

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