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The Effect of Delone and Mclean's Information System Success Model on The Job Performance of Accounting Managers in Iraqi Banks

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Abstract

Organizations have taken into consideration the rapid shifts in the business environment, which made them consider implementing various strategies to face fierce worldwide market competition. Such a job performance has become increasingly challenging for many organizations, in general, and particularly in banks.

This study aims at proposing system quality, information quality, and service quality utilizing user satisfaction to enhance job performance by evaluating the mediating function of user satisfaction in the association between system quality, information quality, and service quality and job performance in the Iraqi banking sector.

A quantitative approach is used to obtain data from a survey (questionnaire) consisting of 55 items with a five-point Likert scale

A total of 65 account managers participated in the Iraqi banking sector in the study. (a 91.5% response rate).

The data analysis was conducted using Smart PLS 3.2.9. The findings of the path analysis of partial least squares (PLS) support variables in their hypothesized direct relationships with job performance. User satisfaction partially mediates the relationship between System Quality, Information Quality, Service Quality, and job performance. The paper advances several recommendations that can be beneficial for researchers to conduct further studies in this area as well as account managers in their efforts to enhance the job performance of organizations in the future.

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Keywords: System Quality (SQ), Information Quality (IQ), Service Quality (SEQ), User satisfaction (US), job performance (JP), Iraqi Banking Sector.

1. Introduction

The banking sector, all over the world, has seen many developments over the last ten years. These developments are likely to increase in the coming years in light of globalization and the implementation of the Financial Services Liberalization Agreement. These developments will undoubtedly show significant influences on banks of the future of the challenges ahead.

The Secretariat requires that we clarify the fact that the global environment in which Iraqi banks are operating has changed entirely and in a way that has not been taken into account. This development will not stop, but it is a continuous process under which the fierceness of competition and continuously diversifying their instruments and increasing the movements of capital in search of profit and safety (Hashem, 2019).

In more details, users experience as well as the ability of the bank to manage and control the people's business has been known as the key factor for a successful IS strategy and model(Sabah, Rashid, Nasuredin, Falih, & Yaseen, 2020). We could confirm that the key point for successful IS are to know the user perceptions and the factors related associated with it. At the moment, various sectors stated that technology and IS needs to be done under full explanation of model and strategy.

Omran (2015)noted that vulnerability factors for banks in the Iraqi sector are poorly developed banking industries in Iraq, the superiority of government banks, inadequate financial infrastructure, poor governance, reduced rate of reforms, and the challenging operating environment.CBI (2019) From those as mentioned above, The Central Bank of Iraq 's actions in addressing problems were dependent on a procedure of analysis of the banking industry's internal and external environment and identifying strengths, shortcomings, opportunities, and vulnerabilities. A strategic plan was developed aimed at building an efficient, effective, and competitive banking sector. The main objectives of the strategic plan Support and achieve financial stability, development of the organizational structure and organizational structure, the development of human capital, and Activating and integrating internal and external relations.

The original purpose of this paper is to explore how user satisfaction mediates the association between the system quality, information quality, service quality and job performance of the Iraqi banking sector. Until now, researchers have not investigated such an influence. It is regarded in the literature as a noticeable gap.

The problem is crystallized in the light of the need for banks to a more profound philosophy and more comprehensive vision for understanding the concept of system quality, information quality, service quality, user satisfaction, which leads to improving job performance. On this basis, the research problem is formulated in response to the knowledge gap.The study also sought to establish challenges that are being encountered in ensuring that banks have high quality capital competence that promotes improvements in profitability (Hamawandy et al., 2020). The World Bank and IMF are to a great extent persuading spurring powers for the allocation of IFRSs by making countries and rising

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economies wishing to look into overall capital markets (Hamawandy et al., 2021). That the Restatement financial statements, reduce the company ability to access lower cost external finance (Sulaiman & Hamawandy, 2020).The financing decision in banks is also considered one of the important decisions that affect the bank's future cash flow, its profitability and its liquidity (Al-shatnawi et al., 2021).Zanko Bank faces the following problems in CAS, costs such as staff training and software updates, competent personnel needs, employee sharing (Yaba et al., 2020).

2. Literature Review

2.1 Iraqi Banking Sector

The banking sector in Iraq has in recent years appreciated exponential development in products offering, growth in deposits, and asset profitability ascribed to the mechanization of services and branch organizations both locally and regionally. Also, The Iraqi Banks Sector provides to its clients a package of facilities, such as deposits, loans, and finance on different ventures, and other services to the market in Iraq (Alalie, Harada, & Noor, 2019). The number of banks operating in Iraq is 71 banks for 2019, including 6 state banks, 1 Islamic state bank, 24 local private banks, 22 Islamic private banks, 2 Islamic foreign banks, and 16 foreign banks. All national (public and private) and financial institutions that are foreign operating in Iraq are officially licensed and under the direct supervision of the Central Bank of Iraq, including banks that are specialized and Islamic. All these banks shall have the license to carry on their business under the terms of the Central Banking Law of Iraq and the Banking Law No. 56 of 2004, Article 40, section 8 and the Banking Law No. 94 of 2004, Article 4 (CBI, 2019).To become effective and efficient in all economic activities, the performance of management should be absolutely impeccable (Hamawandy & Omer, 2021). sub-optimization always sets in when attention is drawn towards improving the efficiency of individual activities instead of the whole system (Hasan, Nawzad, 2020).

2.2 Information System (IS) Success Model

2.2.1 System quality

AIS is used to process the transformation of data into useful information to achieve the primary objective of the system (Iskandar, 2015). Therefore, system quality is often referred to as the capability of the system of providing the characteristics that are required by its users to achieve the system's intended objective(Mamić Sačer & Oluić, 2013).

According toIsmail, (2017), system quality is commonly viewed in terms of technical characteristics of the system, such as features, functions, response time and system reliability. Nevertheless, on top of the primary objective of the system, some sub-objectives vary according to the function and application of the system, as well as the level of its users. Measuring system quality is quite difficult because it has multiple dimensions, including technical, operational, tangible and intangible(Ifinedo, 2014). One of the most widely used methods for measuring system quality is through the system's users' perceptions.

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2.2.2 Information quality

Ives, H. Olson, & Baroudi, (1983), technically define user information satisfaction as 'the extent to which users believe the information system available to them meets their information requirements'. Similarly, Mamić Sačer and Oluić (2013), refer to useful information as being information that satisfies certain expected criteria by the user. Generally, the quality of information is needed to meet a user's requirements and expectations.

The information quality dimension receives greater attention among scholars in IS effectiveness studies and is regarded as an important measure for the successful implementation of the systems in organization (Al-mamary, Shamsuddin, & Aziati, 2014) High-quality information is seen as a key resource for organizations that can be used in sustaining their competitive advantage(Barney, 1991). However, measuring the construct is difficult due to divergent views of how the construct should be operationalized and what it comprises (Redman, 1998). Recognizing the inconsistency in the measures of information quality, (Delone & McLean, 1992) conceptualize the concept as a holistic construct comprising various characteristics such as accuracy, completeness, timeliness, and relevance, among others. Despite the conceptualization of the information quality concept as a composite construct in IS literature, previous studies usually treat this construct reflectively, thus leading to incorrect specification of the measurement model, which, in turn, could lead to biases in evaluating the structural model (Petter, Straub, & Rai, 2007).

2.2.3 Service quality

Quality of service can be understood as a comprehensive customer evaluation of a particular service and the extent to which it meets their expectations and provides satisfaction (Sultan, 2017). While, Mualla (2011) stated that banks amend, develop and, create effective strategies to determine the different parameters influencing service quality, to increase the number of their customers based on the competitive market situation by evaluating customer satisfaction concerning the various dimensions that influence service quality. Due to the important role played by the banking sector in Iraq is one of the sectors that contribute to the national economy organizations need innovative solutions to improve the value delivered to shareholders and customers to gain and maintain a competitive advantage as well as to avoid elimination from the banking sector (CBI, 2018). The service management literature shows increasing interest in relationship strategies where the focus is evidently on building customer loyalty and service quality(Nawzad M Hamawandy, 2020). In a user-based approach, quality corresponds to satisfaction: the highest quality means the best satisfaction of consumers' preferences (Yarimoglu, 2014). Organizations have realized that service quality brings a sustainable and competitive advantage (Ab Hamid, Saaidin, Kamari, Rose, & Ahmad, 2018). Service quality and customer satisfaction are critical success factors for companies that are thinking about competitiveness, development, and growth in the market (Angelova, 2011). Different definitions of service quality have been proposed by researchers; they state that it involves conforming to requirements.Measuring service quality is a better

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way to dictate whether the services are good or bad and whether the customer will or satisfied with the service received (Nawzad M Hamawandy, Humran, 2020).

2.2.4 User Satisfaction

Delone and McLean (1992)suggest in their original paper, that individual measures from the information system dimensions should be systematically combined to build a comprehensive measurement instrument of system success.

Several models such as Technology Accept Model (TAM) (Davis, 1985), EUCS (Doll & Torkzadeh, 1988) and D&M IS System Success (Delone & McLean, 1992), as well as specific measures of ABC system success, significantly contribute to the basis for development of user satisfaction measurement in information system, ERP, ABC system and AIS. These models and measures are then partially applied, or modified by other researchers, in the measurement of user satisfaction towards the studied system. Among the common constructs used in previous studies are system quality, information quality, system benefit, ease of use and usefulness of the system.

2.3Job Performance

Job performance is a set of actions taken by employees to fulfil the requirements of the job description (Biswas & Varma, 2012). According to Osibanjo, Akinbode, Falola, and Oludayo (2018) performance is the completion of tasks that make up one's job. It is the outcome which an individual produce in a specific job during a specific time (Ladley, Wilkinson, & Young, 2015).

Individual performance also relates to the efforts exerted, initiatives taken, standards maintained, absenteeism and display of commitment while performing a particular job (Albrecht, Bakker, Gruman, Macey, & Saks, 2015). With this, individuals translate their potential into behavior which can be seen in terms of the standard they have to achieve in the work and is viewed as the desired result of individual behavior (Ariani, 2013).

3. Methodology

In this paper, an attempt is made to study the relationship between system quality, information quality, service quality, user satisfaction and job performance within the sector of banking in Iraq. A quantitative methodology is taken in which the data collected are separated into two sections by a survey. The first section focusses on the general features of the subjects, including age group, educational level, and years of working experience and worked in the private sector. In the second section, measuring the components of system quality, information quality, service quality, user satisfaction and job performance is our interest.

According to Adeyemi, Martin, and Kasim, (2017), a representative sample is crucial if evidence from the sample is being used to make generalizations about the larger population from which the sample is selected.

The study is applied to a sample of (65) account managers from the Iraqi banking sector. The participants are invited to give their opinions on a Likert-scale (1-5) ranged from

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"Strongly Disagree" to "Strongly Agree to analyze data obtained using a Smart PLS 3. Partial least square structural equation AL modeling is used to test the hypothesis. PLS-SEM technique is superior to other statistical methods in many ways such as effective for statistical model building along with forecasting, no sample size restriction, and suitable especially in case of mediation and precise and accuracy in estimation, soft modeling assumptions doesn't require normality of data (Hair Jr., Matthews, Matthews, & Sarstedt, 2017).

Capital markets and the role it plays as an intermediary among investors and entrepreneurs has been given extra importance as the economic structures, policy and financial institutions rapidly improved under globalization.Capital markets and the role it plays as an intermediary among investors and entrepreneurs has been given extra importance as the economic structures, policy and financial institutions rapidly improved under globalization (Hasan, nawzad et al., 2019&Nawzad Hamawandy & Abubakr, 2020).

3.1 Conceptual Framework

The conceptual framework of (Bani, Nordin, & Hanafi, 2018) has an essential part in research to explain the methodology used for the study. Thus, to direct this research into its aim, a conceptual framework is necessary. As can be seen in "Fig. 1", the author has developed a clear conceptual framework for this paper.

4. Results and Discussion

4.1 Demographic profile

Table 1 shows the general characteristics of respondents, including gender, age,educational level, Years of working experience, and Worked in the private sector:

Table 1: Demographic profile

Variable	Category	Frequency	Percentage %	Total
Gender	Male	48	73.8	65
	Female	17	26.2	
Age	Below 40	11	16.9	65
	40 – 50	31	47.7	
	51 – 60	14	21.6	
	Above 60	9	13.8	
Educational level	Ph.D.	4	6.1	65
	Master's Degree	15	23.1	
	Bachelor's Degree	41	63.1	
	Diploma	5	7.7	
Years of working experience	1-5	2	3.1	65
	6-10	9	13.8	
	11-15	13	20.1	
	16-20	19	29.2	
	20 Above	22	33.8	

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Worked in the private sector	1-5	3	27.3	11
	6-10	5	45.4	
	11-15	3	27.3	
	Above 15	-	0	

4.2 Examination of outliers

Outliers introduce an observation that varies significantly from other observations owing to the high or low scores (Hair et al., 2017). Outliers take place when the standard score is more significant than ±4 (Tabachnick, Fidell, & Ullman, 2007). The result indicated that all Z-scores are within the acceptable range. In this perspective, Table 2 shows the outlier results of the current research.

Table 2: Result of outlier test

Variables	N	Minimum	Maximum
Z Score (System Quality)	65	-2.666	1.659
Z Score (Information Quality)	65	-3.288	1.742
Z Score (Service Quality)	65	-3.361	1.729
Z Score (User satisfaction)	65	-3.226	1.652
Z Score (job Performance)	65	-2.960	1.974

4.3 Normality Assumptions

According to Hair et al. (2017), Normality relates to the bell-like data distribution curve and its correspondence with a standard distribution for the individual metric variable.

Hair et al. (2017) claimed that skewness values that are not within the range of +1 and -1 are significantly skewed.

Normality can be verified by calculating the skewness and Kurtosis ratings in SPSS. (see table 3).

Table 3: Results of Skewness and Kurtosis for Normality Test

Variables	Skewness		Kurtosis	
	Statistic	Std. Error	Statistic	Std. Error
System Quality	-0.854	.163	0.757	.324
Information Quality	-0.367	.163	0.284	.324
Service Quality	-0.364	.163	0.370	.324
User satisfaction	-0.466	.163	0.260	.324
job Performance	-0.377	.163	-0.134	.324

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As shown in Table 3 the result demonstrated that there is no normality issue because the kurtosis and skewness values are within the range of critical values. Hence, it can be concluded that the data set of all the items is well-modeled by a normal distribution.

4.4 MulticollinearityTest

It is essential to confirm the Multicollinearity issue in the measuring model before evaluating the structural model. To detect Multicollinearity, variance inflation factor (VIF) and tolerance values for the latent variables were examined. Hair et al. (2017) suggested that an average variance extraction value of 5 or lower and tolerance level of 0.2 or upper are required to avoid the collinearity problem. (See table 4)

Table 4: Multicollinearity Test

Dependent variables	Independentvariables	Collinearity statistics	
		Tolerance	VIF
Job Performance	System Quality	0.819	1.221
	Information Quality	0.374	2.533
	Service Quality	0.475	2.334
	User Satisfaction	0.289	2.196

As shown in table 4, it is found that the variance inflation factor values for all latent variables are lower than 5, and tolerance for all the variables is also higher than 0.20. This indicated that there are no Multicollinearity problems in the data (Hair et al., 2017).

4.5 Convergent validity

Convergent validity is defined as "subcategories of construct validity", it is assessed to validate the measurement model. Average Variance Extracted (AVE) is used to calculate the proportion of the Variance described by way of metrics for calculation errors. Based on the PLS analysis, the lowest recommended level of reliability is 0.7 (Hair et al., 2017), and the lowest acceptable level of Average Variance Extracted (AVE) is 0.5. As seen in Table 5, composite reliability and Cronbach's Alpha are deployed to evaluate the internal consistency reliability of each dimension. If the overall Cronbach's alpha coefficient of all the items of a construct exceeds 0.7, the items are deemed highly reliable (Kannan & Tan, 2005). The items are considered highly reliable because the individual Cronbach's alpha coefficients of constructs were all more than 0.7.

Table 5: composite reliability and Cronbach's

Variables	Cronbach's Alpha	Composite reliability	AVE
System Quality	0.943	0.954	0.746
Information Quality	0.941	0.950	0.681
Service Quality	0.956	0.961	0.675

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User Satisfaction	0.934	0.949	0.755
Job Performance	0.953	0.961	0.638

As shown in Table 6, the correlation of latent variables and discriminant validity (Fornell-Larcker) the squared correlations between the factors were smaller than the corresponding AVE estimates. This result shows that the constructs had a stronger relationship to their respective indicators; the result indicated that the measure had adequate discriminant validity.

Table 6: Correlation of latent variables and discriminant validity

Construct	SQ	IQ	SEQ	US	JP
System Quality	**0.885**				
nformation Quality	0.734	**0.865**			
Service Quality	0.430	0.417	**0.864**		
User satisfaction	0.605	0.815	0.459	**0.869**	
job Performance	0.731	0.738	0.395	0.863	**0.899**

4.6 Coefficient of Determination (R2)

The coefficient of determination or what is known as R^2 is one of the central criteria in the evaluation of the structural model by PLS-SEM.

R^2 value represents the portion of the variation in the endogenous variable(s) that can be explained by one or more exogenous variables. Hair et al. (2011)

Chin (2010), suggests that values of R2 more than 0.67 are considered high, while values ranging from 0.33 to 0.67 are considered moderate, whereas values between 0.19 to 0.33 are considered weak and any R2 values less than 0.19 are unacceptable. Thus, based on the results, all values of R2 have fulfilled Chin's (2010) criteria. Table 7 presents the R-Square (R2) of the endogenous latent variables.

Table 7: R-Square of the Endogenous Latent Variables

Latent construct	R^2	Result
JP	0.905	high

4.7 The Effect Size (f^2)

According to Cohen's (1988) suggestions, the operational definition for multiple regressions represents criteria to determine if a predictor's exogenous variables have no, small, medium or large f^2. Accordingly, values of f^2 more than 0.35 are considered to be a large f^2 while values ranging from 0.15 to 0.35 are considered medium, values between 0.02 and 0.15 considered small and lastly any values less than 0.02 are considered not to affect. The effect sizes for the present study are calculated as per the above formula and are provided in Table 8.

Table 8: Effect Sizes of the Latent Variables

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Constructs	F Square	Effect Size
SQ -- JP	0.359	large
IQ -- JP	0.047	Small
SEQ -- JP	0.155	Medium
US -- JP	0.380	large

4.8 Predictive Relevance of the Model (Q^2)

Predictive relevance (Q^2) is another criterion to assess the quality of the structural model to predict (Hair et al., 2017). According to Saunders, Lewis, and Thorn hill, (2016) suggestion, if the value of cross-validity redundancy is above zero, this indicates that predictive relevance while a value of Q^2 less than zero means that the model lacks predictive relevance. Table 9 shows the results of the Q^2 of the endogenous latent variables.

Table 9: Predictive relevance of the endogenous latent variables

Construct	Validated redundancy (Q^2)	Results
JP	427	Q^2> 0 Explanatory variable provides predictive relevance

4.9 Hypotheses Testing (Path Coefficient)

The final step in evaluating the structural model is examining the research hypotheses through assessing the path coefficient. The smaller the p-value, the stronger the significance of the relationship will be (Hair et al., 2017). Table 10 shows below the direct relationship results of the structural model, the relationship between hypothesis as H1, H2, H3, and H7.

Table 10: Direct results of hypotheses

Hypothesis	Path Coefficient (β)	Std. Error	T-value	P-value	Inference	Decision
H1 - SQ > JP	0.118	0.032	3.633	0.000	Significant **	Supported
H2 - IQ > JP	0.115	0.038	3.040	0.002	Significant *	Supported
H3- SEQ > JP	0.087	0.042	2.066	0.039	Significant *	Supported
H7 - US > JP	0.679	0.036	19.020	0.000	Significant **	Supported

4.10 Testing the Mediation Relationship (Indirect Effects)

The theoretical design of this study provides a unique opportunity to test whether User satisfaction (US) mediates the relationship between System Quality, Information Quality, Service Quality and Job Performance (JP). Hayes, (2009) define the mediator as a variable that accounts for all or part of the relationship between a predictor and

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outcome. The predictors in this study are System Quality, Information Quality, and Service Quality while the outcome is the Job Performance (JP). Table 11 displays the findings of the specific indirect effect for the mediating variable.

Table 11: Results of the Specific Indirect Effects (Mediation Test)

Hypothesis	Path Coefficient (β)	Std. Error	T-value	P-value	Inference	Decision
H4 – SQ > US > JP	0.193	0.032	6.108	0.000	Significant **	Supported
H5 – IQ > US > JP	0.182	0.032	5.652	0.000	Significant **	Supported
H6 – SEQ > US > JP	0.269	0.036	7.399	0.000	Significant **	Supported

The important information presented in Tables 10, 11 of transactions is the statistical significance of each dependent variable. The value of t and the value of p tell us if the coefficients of the variables are zero in the population. If p is less than 0.005, we may conclude that the variables are statistically significant. In our case, we may see from the table that all independent variables have a positive effect and that the p-values for all independent variables are less than 0.001. Hence, a reasonable conclusion can state that a significant and positive impact, and we reject our empty assumptions and thus support the assumptions:

H1: There is a positive relationship between system quality and job performance.
H2: There is a positive relationship between information quality and job performance.
H3: There is a positive relationship between service quality and job performance.
H4: There is a positive relationship between system quality indirectly affects job performance through user satisfaction as an intermediate variable.
H5: There is a positive relationship between information quality indirectly affects job performance through user satisfaction as an intermediate variable.
H6: There is a positive relationship between service quality indirectly affects job performance through user satisfaction as an intermediate variable.
H7: There is a positive relationship between user satisfaction and job performance.

5. Conclusion

This paper deals with variables of system quality, information quality, service quality, user satisfaction, and job performance in the Iraqi banking sector. It is concluded that job performance is a crucial element for the country's economic development, and it is crucial for Iraqi economic development.

Directing the attention towards the banking sector's job performance enhances the performance of individuals, organizations, and the financial aspect as well. Job

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performance can enhance the customer's satisfaction, which is crucial in the Iraqi banking sector. Job performance in the Iraqi banking sector can be improved through the use of System Quality, Information Quality, and Service Quality. The findings revealed that System Quality, Information Quality, Service Quality, and user satisfaction play a key role in improving job performance. Also, user satisfaction positively contributes to Improving the job performance of the banks. More importantly, user satisfaction mediates the relationship between System Quality, Information Quality, Service Quality, and job performance, in which both direct and indirect effects do exist and point in the same direction (i.e., positive relationship). Hence, the higher the level of System Quality, Information Quality, and Service Quality implementation, the higher the user satisfaction and job performance.

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