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ERP IMPLEMENTATION IN BANKS: SUCCESS FACTORS & IMPACT ON FINANCIAL PERFORMANCE

Abstract

The study aims to measure the extent of implementing ERP systems in the banking sector in Jordan, and identify the main factors that influence the implementation decision, in addition, to measure the impact of the post-implementation of the ERP system on the financial performance. The study utilized a content analysis as a research instrument. The study of population consisted of all the banks in Jordan, where the study applied 'Purposive Sample' type. Therefore, the study included 11 banks from 2011 to 2016.

The study indicated that the implementation year of the ERP system started in most of the Jordanian banks in 2013, and the rates vary from bank to bank according to their importance and the level of awareness. Training courses are considered the main variable that these banks face in the process of implementation. In addition, awareness of the advantages, the cost, and supporting the infrastructure are the core factors needed to influence the implementation decision.

There is no impact when implementing the ERP system on the financial performance of the Jordanian banks in regard to the ROI and the DPS; on the other hand, there is an impact of the ERP system on the overall performance of the banks.

The study recommends to disseminate knowledge on the advantages of implementing of ERP system in Jordanian banks and to develop the IT department efficiency. Moreover, it will be worthwhile to examine the effect of ERP systems by utilizing financial and non-financial measurements.

Keywords ERP system, financial performance, implementation rate, banks

JEL Classification M41, L1, D78, G21

INTRODUCTION

An accounting information system is designed to identify, measure and deliver important economic information to enable its users to act in the light of a clearer vision for the economic decision-making (Yigitbasioglu, 2016; Huang et al., 2004). The accounting for this science is affected by the modern technology, which is part of the accounting information systems that collect, record, store, and process data, and provide accounting operations so that this data is usable for decision-makers in the organization. Moreover, the accounting information system aims to improve the quality, reduce the costs related to the service, and increase the efficiency of operations within the organization (Romney & Marshall, 2012; Hwang & Min, 2015).

The ERP is one of the most important systems within the organization, it allows companies to integrate and use various business units and also allows for the distinction between the various productive sectors, such as sales, marketing, finance, and human resource management through the use of automatic programs that regulate activities using integrated accounting programs (Samwel & Patrick, 2013; Pelsak, 2006;

Samaranayake, 2009). Recently, the attention towards ERP and other creative implementations such as customer relationship management, knowledge management, e-commerce, warehouse management, and project management systems have significantly increased in recent years (Huang & Yasuda, 2016; Gavidia, 2016). Moreover, ERP can support and help the flow of information between the internal activities of the organization; it also helps in creating a database associated with the outsiders' interests (Bidgoli, 2004; Liu, 2011).

As noted in recent years, many institutions began to adopt new systems to increase productivity and performance, and ERP being one of the most prevalent concepts within the business, as the researches and studies regarding ERP have shown that 30% of the changes in organizations today are due to ERP in terms of the daily operations of the system and the speed of decision-making (Davenport, 2007). Most of the studies indicated that the adoption of the ERP system in an organization helps to improve the compatibility of workflow within the functional departments, their performance, as well as to improve the prediction of new business operations in different markets (Romney & Marshall, 2012; Mike & Andy, 2001; Yahia, 2010; Galy & Sauceda, 2015; Ram et al., 2013). On the other hand, several studies were conducted in order to investigate the factors that influence the decision implementation and usage (Sternad et al., 2011; Pishdad & Haider, 2013; Garg & Garg, 2014; Beheshti et al., 2014; Ifinedo & Nahar, 2009; Garg & Chauhan, 2015).

The commercial banking sector, as evidenced in the Hashemite Kingdom of Jordan, shows significant competitive presence, as the global economic changes have forced organizations to take into account these challenges and this has also resulted for some institutions in applying the ERP or any similar planning systems (Al-Nimer et al., 2012).

Accordingly, the current study will attempt to identify the extent of the implementation of the organization's ERP, and will identify the pros and cons of the system and also the impact of ERP post-implementation in the Jordanian commercial banks system on achieving the objectives of the organization – particularly the financial performance. In addition, the study aims to identify the reasons why business organizations adopt ERP.

Research problem

The ERP is considered as a significant system by which it provides numerous benefits such as: cost reduction, increase in the efficiency and effectiveness, and how to achieve the competitive edge among banks that apply ERP. Due to the lack of researches and studies on the subject "ERP", the importance of using the system within the commercial banks, and its impact on the financial performance of banks, in Jordanian context, the current study will attempt to answer the following questions:

1. What is the extent of the ERP system implementation in the Jordanian commercial banks?
2. What are the main factors that influence the implementation decision in Jordanian commercial banks?
3. What is the impact of the ERP system post-implementation on the financial performance of the Jordanian commercial banks?

Objectives of the study

This study aims to identify the extent of the ERP system implementation in the Jordanian commercial banks which will be achieved through the following:

1. Measure the extent of the ERP implementation in the Jordanian commercial banks.
2. Identify the main factors that influence the implementation decision in Jordanian commercial banks from the perspective of the IT managers.
3. Measure the impact of the ERP system post-implementation on the financial performance of commercial banks operating in Jordan.

Significance of the study

The importance of this study is to shed light on the ERP system, and the impact of the ERP system post-implementation on the financial performance of commercial banks in Jordan, which represent an important sector, in addition to the nature of the research topic of modernity, and the lack of local studies on this topic in full, identifying the importance of the system implementation, and the wealth of great ability to maintain data integrity within the organization.

As the importance of this study comes from the importance of the question posed by the problem of the study concerning the ERP impact on the financial performance of the Jordanian commercial banks system, and since the implantation of the ERP system in all banking areas actively influences the management decisions through information provided by the managers that take short- and long-term decisions, as commercial banks resort at the present time to use the ERP as it provides data accuracy and the speed of the output, which makes this study an addition to and helps improving this industry; hence, this study was to shed light on the impact of the ERP on the financial performance of the Jordanian banking system.

Jordan is one of the developing countries with limited financial resources and a banking sector which is considered a fundamental pillar of the country's texture and economy as a whole, and because the distinct economic and social tasks contribute to get the economy moving by providing funds to invest, to facilitate internal and external financial transactions, and provide other services and banking facilities to all segments of society, it became necessary to pay attention to the level of performance of this sector's organizations, and work to improve their performance (Sleihat et al., 2012).

Finally, the present study highlights the importance of trying to identify how the developing countries are able to help the commercial banks in achieving objectives, and most importantly to increase their financial returns.

Study limits

As the spatial boundaries of the study, the study is limited to the commercial banks located and operated in Jordan. The study has covered the period from 2011 to 2016. While as a scientific border of the study: the study limits the measurements of financial performance based on ROI, EPS and DPS in the banks that implement the ERP system.

Study constraints

Non-inclusion of all commercial banks operating in Jordan, and conducting research on the Jordanian commercial banks, as described later in the study methodology, are the study constrains.

1. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Yahia (2010) provided a brief review of current literature on ERP and its implementation in industries, to fully understand the ERP software key points, risks, benefits, critical success factors, implementation issues, and identify and review the fundamentals of the ERP system. The study claimed that there is lack of research studies on risk-benefit analysis for ERP system.

Galy and Sauceda (2015) indicated that increased technological competence specially ERP system affects net sales; relationships with outside experts affect earnings, return-on-assets and return-on-investment; top management support affects net sales and net income; long-range planning nega-

tively affects earnings; and the sharing of information between departments affects net income, along with return-on-assets and return-on-investments.

Aslan et al. (2015) explored the applicability and impact of ERP systems on the financial performance of Make-To-Order (MTO) production strategy. The study concluded that production strategy is an important contextual factor affecting both applicability and impact.

Madapusi and D'Souza (2012) asserted that better understanding of the contribution of ERP systems to operational performance can be obtained if researchers and managers assess changes in operational performance at both the modular and the system levels. In the study the changes in operational performance that result from ERP system implementation are investigated, and it is indicated that the implementation of each ERP system module influences operational performance measures differently.

Chang et al. (2015) indicated in a research aimed to evaluate the risk level for both intra-organizational cultures and for different industries in implementing ERP systems by utilizing the collected survey data of 20 ERP experts in Taiwan, that lack of management support and assistance is vital risk for a successful ERP implementation. Top management support and involvement are crucial and essential factors to the success of a firm's ERP implementation. "Ineffective communication with users" was found to be the second highest risk factor.

Hwang (2014) claimed that user experience and personal innovativeness are two important factors in new technology adoption. The study investigated moderating effect of user experience on the relationship between the personal innovativeness and the ERP adoption motivations. The findings, based on the PLS analysis of the model using 107 ERP end users, show that there are clear moderating effects of user experience such as impacts of personal innovativeness on ERP systems adoption motivations are higher in case of low user experience samples, as expected.

Yeh and Xu (2013) developed an innovative objective-oriented approach with one evaluation model and three optimization models for managing the implementation of a set of critical success strategies (CSSs) for (ERP) project in an organization. To evaluate the CSSs based on their contribution to the organizational objectives, the evaluation model addresses an important issue of measuring the relationship between objectives in a three-level hierarchy involving the organization, its functional departments, and the ERP project. To determine the optimal management priority for implementing the CSSs from the organization's perspective, the three optimization models maximize their total implementation value by integrating individual departments' management preferences.

Hwang and Min (2015) indicated that the firm's ERP adoption and implementation decision is mainly affected by its internal environment. Defying the conventional wisdom, the firm's external environment has little influence on its decision to adopt and implement ERP. In addition, it was pointed out that the external environment still indirectly influences the ERP adoption and ERP implementation decision. Finally, the authors found that ERP could enhance the ERP adopter's organizational capability and supplier capability.

Jennifer, Ho L. C. et al. (2008) examined whether forecast revisions vary with the timing of adoption from the financial analysts' perception. The study showed that significantly positive revisions occur in longer-term forecasts (i.e. three-year-ahead forecasts) but not in the shorter-term predictions such as one- and two-year-ahead forecasts. In addition, there is some weak evidence that financial analysts react less positively to middle adopters than to early or late adopters. These results might help financial analysts consider ERP implementations to the adopters in the long term. Companies contemplating ERP adoption should take this time horizon into account.

Peslak (2006) explored the views of top corporate financial executives on the success of implementation of ERP systems as well as the variables associated with ERP project success. The findings indicate that ERP implementations are generally viewed as moderately successful by top

financial executives. In addition, both cost and time were significantly correlated with an overall view of success with cost performance holding higher influence. In addition, the researcher claimed that the findings can be used to guide management teams in emphasizing control of the important variables in implementing ERP that influence project success.

The rapid development of information technology and the emergence of the Internet have created a borderless business environment and intensified market competition. The study indicated that the companies implemented ERP and knowledge management (KM) in order to achieve these targets and maintain competitive advantages. In addition, the study found that proper training and education programs have positive influences on management performance (Liu, 2011).

Based on the study's problem and questions, hypotheses have been formulated from the study according to the null hypothesis, where it was formulated as follows:

1.1. The main hypothesis

No effect is statistically significant at the level of $\alpha \leq 0.05$ for the post implementation of the ERP system on the financial performance of the Jordanian commercial banks.

1.1.1. Sub-hypotheses

First sub-hypothesis H01: There are no statistically significant differences between the return on investment prior and post implementation of the ERP syste**m.**

Second sub-hypothesis H02: There are no statistically significant differences between earnings per share prior and post implementation of the ERP system.

Third sub-hypothesis H03: There are no statistically significant differences between dividends per share prior and post implementation of the ERP system.

2. THE STUDY METHODOLOGY (METHOD AND PROCEDURES)

Based on the nature of the study and the information to be obtained from the Amman Stock Exchange for banks that applied an ERP system (13 banks), and through the questions that the present study seeks to answer, the researcher utilized the descriptive analytical method plus qualitative method by utilizing interviews in order to find out the factors affecting the implementation decision, extent usage, and main obstacles.

To test previous hypotheses of this study, it will depend on the use of regression analysis of the ERP system's influence on the financial performance of commercial banks operating in Jordan, by measuring the impact of financial instruments on the financial performance of commercial banks which implement the ERP system.

2.1. Study population and sample

The study population consisted of all commercial banks of the banking sector in Jordan listed on the Amman Stock Exchange from 2011 to 2016. The standards of these banks in order to be listed on ASE as Jordanian banks are: public joint stock companies, shares are traded on the ASE, value of shares by the end of December 2016 exceeding nine (9) billion JD or equivalent to 45% of the market capitalization of companies traded, and it contributes by 59.6% or more in capital by Jordanians. Therefore, ten foreign banks operating in Jordan were excluded from the study population (CBJ, the annual report 2016).

The study sample was selected according to the following:

1. A field survey was made on all banks operating in Jordan: the total number of banks amounted to 26 banks, with 770 branches and offices operating throughout Jordan and 183 branches and offices outside Jordan. 13 banks were commercial banks, 10 were non-Jordanian banks and 3 were Islamic banks (CBJ, the annual report 2016).

2. Both non-Jordanian banks and Islamic banks were excluded from the study. Only commercial banks that implement ERP system were included.

3. Two of the 13 commercial banks were excluded from the study: The Arab Bank was excluded from the sample, because their ERP system has been applied in the bank prior the study period of 2011, in addition to insufficient information about the history of the system implementation. The Investment Bank was excluded due to the lack of providing full financial statements.

4. The study applied the Purposive Sample type, which is considered as a non-representative subset of some larger population, and is constructed to serve a very specific need or purpose. Therefore, the study included a sample of banks that applied an ERP system and they were 11 banks.

5. In order to determine the percentage of the ERP system implementation in the sample banks, personal interviews have been carried out at the banks. The practical implementation procedures, the main factors that influence the decision of implementation, in addition to finding out the main obstacles that affect the extent of usage were also discussed and examined through the interviews. As the implementation rate is different from one bank to another – according to their importance at each bank.

2.2. Measurement of study variables

The study variables include three financial measures of performance: return on investment (ROI), earnings per share (EPS), and the dividends per share (DPS), as this study is concerned with using three main measures of the overall performance of companies without paying attention to performance standards related to operational performance aspects, as well as to determine the percentage of use of ERP system in banks.

2.3. Study method and access to information sources

To obtain sufficient data and information in order to carry out the purposes of the study and build the current theoretical framework and construction of its hypotheses, a comprehensive literature review of the ERP system and previous studies on the subject of this study were examined and analyzed. The preliminary data and its content analysis are mainly financial analysis and in reference to the annual financial reports of the study sample, i.e. the selected 11 commercial banks listed on the Amman Stock Exchange.

2.4. Statistical methods used

The study utilized two sets of statistical methods: descriptive statistical methods to analyze the variables of the study and their basic qualities, and statistical tests to test the hypotheses of the study (standard deviation, coefficient, averages, percentages, and test simple regression), in order to measure the type and degree of analysis and the relationships between the variables of the study.

2.5. Study tool and methods of data analysis and hypothesis testing

To test the hypotheses of the study and achieve their goals of measuring the impact of the ERP system post implementation, SPSS was utilized to analyze the study data, where these methods were used as a Statistical Package for Social Sciences: paired samples T-test, descriptive statistics methods, standard deviations, simple regression analysis test, and normal distribution test which were obtained from the financial statements of the selected commercial banks listed on the Amman Stock Exchange.

3. ANALYSIS AND FINDING DISCUSSION

For the purpose of achieving the objectives of this study, it relied on testing the average of three main variables (financial metrics for performance): return on investment (ROI), earnings per share (EPS), and dividends per share (DPS), and the comparison between them prior running the

Table 1. Descriptive analysis of the variables prior-implementation of the system

Variable	Std. deviation	Mean	Maximum	Minimum
ROI	0.994	0.266	3.832	–1.208
EPS	0.177	0.263	0.835	0.065
DPS	0.101	0.106	0.300	0.050

Notes: prior the implementation of the ERP system, the arithmetic mean of ROI is 0.266, reaching the highest value of 3.832% and the lowest at –1.208%, while the arithmetic mean of EPS is 0.263, and 0.106 for the DPS.

ERP system in the selected banks, and its post implementation.

The comparisons were made between their average values three years prior-implementation of the system, and four years post-implementation, in addition to the extent of the changes of statistically significant differences on these variables post-implementation.

The purposive sample of the study examined all 13 Jordanian commercial banks, and excluded 2 banks as they did not meet the conditions of the study. Therefore, the selected banks accounted for 84.6% of the total purposive sample. All banks selected and covered in the sample implemented the ERP system between the years 2011 and 2014. The implementation dates were acquired through field visits to the banks and through the information technology companies that provided their ERP systems.

3.1. Descriptive analysis for the study sample and variables

It is also noticed that the standard deviation of the ROI is much higher than thet of EPS and DPS, which explains the obvious difference between the highest value and the lowest value of the ROI.

The highest proportion of implementation amounted to 75%, while its lowest rate is 60%, except that when you look at the values of the arithmetic average and the standard deviation of the implementation ratios, you can see that the rate of implementation of the system of banks is 66.801% and they are stationed mostly between 60-75%.

When comparing the values of the study variables in the previous two tables, it is concluded that:

1) there is a decline in banks' ability to generate profits through investments post the implantation of the ERP system, as the arithmetic mean of the ROI was 0.266 in the period prior-implantation, and –0.030 post-implementation with a difference of – 0.296;

2) there is no significant difference between the averages of EPS for the two periods, as the arithmetic mean of the EPS was 0.263 in the period prior-implantation, and 0.370 post-implementation with a difference of 0.107, which shows improved performance for some banks;

3) there is insignificant difference in the arithmetic average of the DPS = 0.002, and therefore no effect of ERP implementation on DPS.

Table 2. Descriptive analysis of the variables post-implementation & implementation rate

Variable	Std. deviation	Mean	Maximum	Minimum
ROI	0.374	–0.030	1.693	–1.391
EPS	0.124	0.370	0.519	0.016
DPS	0.076	0.108	0.300	0.050
Implementation rate	8.011%	66.801%	75%	60%

Notes: post the implementation of the system, the arithmetic mean of the ROI is –0.03, while the standard deviation reached 0.374. The arithmetic average of the EPS and DPS are, respectively, 0.370 and 0.108, and their standard deviation values are 0.124 and 0.076.

3.2. Normal distribution test of the data

To check if the data is distributed normally, the study conducted test of normality (Normal Distribution) using the "One Sample Kolmogorov-Smirnov" test.

Table 3. One sample Kolmogorov-Smirnov test for the variables

Variables/Test	Kolmogorov-Smirnov Z	Sig.
Return on investment	0.894	0.401
Earnings per share	1.163	0.134
Dividends per share	0.857	0.455

Notes: all statistical significance values for the variables ranged between 0.134-0.455, as all of results are greater than the level of statistical significance ($P \leq 0.05$), this indicates that all variables follow distribution normally.

3.3. Testing hypotheses of the study

The study examined and tested the hypotheses of the study, to find the impact of the independent variable (post-implementation of ERP system) on the dependent variables (ROI, EPS, and DPS), through testing and calculating the difference between the averages of each variable prior and post the implementation periods. The below tests are conducted to find out if these differences are statistically significant or not, in order to accept/reject each hypothesis.

3.3.1. Testing hypothesis Ho1: "There is no statistically significant effect of the ERP system implementation on return on investment"

This also supports the lack of real statistically significant differences between both periods. It also confirms the lack of impact of the implementation of the ERP system on the return on investment in Jordanian banks. Therefore, the null hypothesis is accepted: "There is no statistically significant effect of the implementation of the ERP system on the return on investment", which differs from the findings of the study by Barakat (2011).

Table 4. "T-test" results of ROI prior- and post-implementation of the ERP system

Period	Mean	Std. deviation	T-statistics	T-distribution table	Degrees of freedom	Sig.
Prior	0.266	0.994	1.892	2.890	75	0.062
After	–0.030	0.374				

Notes: there is no difference between the ROI averages of the two periods (–0.296). In addition, when applying the test (Paired Samples T-test), it is clear from the above table that the value of T-statistics has reached 1.892, which is less than the tabulated value T-distribution Table (2.89), when the degree of freedom of 75, level of statistically significant Sig. = 6.2.

Table 5. Simple regression results of the impact of the ERP implementation on ROI

Sig.	T-statistics	Coefficients	Constant B	ROI
0.521	–0.719	0.092	–0.275	0.004
Adjusted R-squared: –0.012				
Model F test: 0.418				

Notes: the results in the above Simple Regression test support the previous findings in Table 4. The value of Sig. = 0.521, which is greater than 0.05, which also supports the lack of impact of the implementation of ERP system on the return on investment.

Table 6. "T-test" results of EPS prior- and post-implementation of the ERP system

Period	Mean	Std. deviation	T-statistics	T-distribution table	Degres of freedom	Sig.
Prior	0.263	0.177	3.025	2.89	75	0.003
After	0.37	0.124				

Notes: the difference in the arithmetic average of EPS prior and post the ERP system implementation period is 0.107. In addition, by applying paired samples T-test, it is clear from the above table that the value of T-statistics has reached 3.025, which exceeded Tabulated value T-distribution table (2.890), when the degree of freedom is 75 and the level of statistical significance Sig. = 0.003. This indicates the presence of real significant differences between both periods, and also confirms the existence of the impact of the ERP system implementation on EPS in Jordanian banks.

Table 7. Simple regression results of the ERP implementation impact on EPS

Sig.	T-statistics	Coefficients	Constant B	EPS
0.003	–1.270	0.404	–0.149	0.006
		Adjusted R-squared: 0.146		
		Model F test: 9.545		

Notes: the results in the above Simple Regression test support the previous findings in Table 6. The value of Sig. = 0.003, which is less than 0.05, which supports having real impact of the ERP implementation on the earnings per share; the value of coefficients is equal to 0.404, which means there is a strong positive correlation between the EPS and the implementation rate; the value of adjusted R-squared is 0.146 – a ratio that explains a change in EPS according to the implementation rate.

Table 8. "T-test" results of DPS prior- and post-implementation of the ERP system

Period	Mean	Std. deviation	T-statistics	T-distribution table	Degrees of freedom	Sig.
Prior	0.106	0.101	–0.100	2.89	75	0.921
After	0.108	0.076				

Notes: the difference in the arithmetic average of DPS prior and post the ERP system implementation period is 0.002. In order to support/reject this result, a paired samples T-test is conducted in the above table.

Table 9. Simple regression results of the ERP implementation impact on DPS

Sig.	T-statistics	Coefficients	Constant B	DPS
0.118	–0.149	0.222	–0.011	0.002
		Adjusted R-squared: 0.030		
		Model F test: 2.529		

Notes: the results in the above simple regression test support the previous findings in Table 8. The value of Sig. = 0.118, which is greater than 0.05, which also supports the lack of impact of the ERP system implementation on the dividends per share.

3.3.2. Testing hypothesis Ho2: "There is no statistically significant effect of the ERP system implementation on earnings per share"

Tabulated value T-distribution table (2.890), when the degree of freedom is 75 and the level of s statistically ignificant Sig. = 0.003, this indicates the presence of real significant differences between both periods, and also confirms the existence of the impact of the ERP system implementation on EPS in Jordanian banks.

Therefore, the null hypothesis: "There is no statistically significant effect of the ERP system implementation on the earnings per share" is rejected. These results coincided with the findings of the study by Poston and Grabski (2001).

3.3.3. Testing hypothesis Ho3: "There is no significant effect of the ERP system implementation on the dividends per share"

The value of T-statistics has reached –0.100, which is less than Tabulated value T-distribution table (2.89) at the degree of freedom of 75 and the level of statistically significant Sig. = 0.921. This indicates lack of real statistically significant differences between both periods (prior and post implementation). It also confirms the lack of impact of the ERP system implementation on DPS in Jordanian banks. Therefore, the null hypothesis: "There is no statistically significant effect of the ERP system implementation on the dividends per share" is accepted. These results coincided with the findings of the study by Hunton et al. (2003).

CONCLUSIONS AND RECOMMENDATIONS

This study aims to identify the impact of implementing ERP system on the financial performance of the local commercial banks in Jordan in post implementation period, due to the increase observed in the implementation and use of this system as an alternative to most of the old information systems is

correlated significantly. In order to achieve the desired objective of the study, the research attempted to identify the ingredients and procedures of the system implementation based mainly on the related previous literature. To attain these objectives, the study examined the ERP system implementation rate and its impact on the financial performance of the sample banks. The study utilized ROI, EPS, and DPS indicators as financial performance measurements.

The study focused on examining the ERP implementation level in Jordanian banking sector. For the purposes of answering the research questions, the study examined the research hypotheses, through a field survey comparing the aforementioned financial measurements of banks before and after implementing the ERP system in each bank, taking into consideration the implementation percentage.

The study reached several important results and conclusions that could enrich and enhance the literature and theories related to the subject of the study. Moreover, the researcher hopes that the results of this study would lead to a range of important decisions for the Jordanian commercial banks, and to all the companies in general and influence their decisions when applying ERP systems. Following are the most important findings of this study.

1. Based on the interviews that have been carried out, the study indicated that the implementation rates vary in each bank according to their importance which is influenced by their awareness of the ERP system. As for the factors that influence the implementation decision: awareness of the advantages of the system, cost of system, supporting infrastructure needed, management orientation, strategic planning, and competitive advantages were the main factors. As for the variables that banks face in the process of implementation: the degree of awareness of the employees using the ERP system, training courses for the employees, complexity of the system, shifting process to the ERP system, and resistance to change were the main variables.

2. The degree of compatibility between the ERP system and its operations was at the average level of the point of the study sample: that ERP system has an impact on the overall performance of the bank. These findings coincided with those of Hunton et al. (2003) which concluded that ERP system has an impact on the overall performance of the company. It also coincided with the findings of Hassabelnaby et al. (2102) that concluded ERP system affects both the organizational capabilities of the company's business strategies, which in turn enhances the performance of companies.

3. In terms of the ability to generate profits through investments, it was not significantly affected when the Jordanian banks that applied the ERP system, as there were no statistically significant differences between the average return on investment (ROI) prior and post the implementation of the ERP system. This disagreed with the findings of Barakat (2011) which stated: there is an effect of the level of the four components (sales and marketing, management, production, accounting and finance, and human resources – the combined return on investment) when implementing ERP system. Yet, it coincided with the findings of Poston and Grabski (2001) study that was conducted only in the United States, and showed that there are no statistically significant differences between the financial performance indicators prior and post the implementation of the system. As for the impact on the earnings per share, implementation of the ERP system in Jordanian banks has led to an increase in earnings per share, as the statistical tests indicate strong statistical significance in the differences in average earnings per share prior and post the ERP system implementation. This result agrees with the findings of the Nicolaou and Bhattacharya (2006) study on the impact of long-term financial performance versions of the ERP system, and augmentation, and conversions for companies that have adopted the use of the ERP system. In addition, the results agreed with the findings of the study by Davenport (2007) on the existence of tangible and intangible effects of the extent of the improvement in the critical elements of success, derived from the organization's resources for each of the cost, time, quality planning system, and accuracy.

4. Concerning DPS, the study indicated that there is no effect of the ERP system implementation on the DPS, where the results of the statistical analysis showed that there are no statistically significant differences between the average DPS prior and post the implementation of the system. This coincided with the findings of the study by Hunton et al. (2003), which worked on the analysis and comparison of the performance of companies that applied the ERP system in the United States, using financial ratios and based on the financial information for the six-year period of three years prior and another three post the implementation. The study found the lack of substantial positive effects on the financial ratios used.

Previous results indicate that there is an impact on the financial performance of the Jordanian commercial banks that applied ERP system. The overall result perfectly matches the expectations of some researchers and coincides with many previous studies, where the majority of studies confirm that the ERP system has an impact on the financial performance.

Davenport (2007) has indicated that the ERP system has a positive effect with statistic significance on the performance of financial companies. Yet, this disagrees with the results of another study (Poston & Grabski, 2001), which was conducted in the United States and showed no statistically significant differences between the financial performance indicators prior to and post the implementation of the system. It refers to the possible existence of a defect in the development of the mechanism, use the ERP system in the companies, or the probability distribution of shares affected by the policy of its own process of distribution, as well as vulnerability to an increase of capital of these banks, which affects the return on stock dividends.

Thus, the results of this study cannot be generalized. One cannot say implementing an ERP system does not affect the financial performance of banks, simply because companies in Jordan continue to suffer from a lot of financial problems, referring to them in Lozi (2008) study, that there are factors within the organization, such as: harmony strategy within the company, work procedures that go along with ERP system, the rules of the management change, the support and commitment of senior management, the rules of project management, support and containment of end users, technical support, and other influential factors outside the organization (such as support breakers advisers, support the vendor selection process, or the planning system providers, and weak technical capacities of the users of the system in Jordanian businesses, in addition to the high financial cost, and the need for technical competencies trained to use it).

Based on the findings of this study, it has been concluded that:

- Most banks started implementing their ERP system in 2013. The implementation rate varied from one bank to another according to the awareness and importance of the system at each bank.

- Awareness of the advantages of the system, cost, and supporting infrastructure, management orientation, strategic planning, and competitive advantages are the main factors that influence the implementation decision.

- The degree of awareness of the employees using the ERP system, the training courses given to them, the complexity of the system, the shifting process to the ERP system, in addition to the resistance to change are the main variables that banks face in the process of implementation.

- There is no impact of the ERP system implementation on the financial performance of the Jordanian commercial banks regarding both ROI and DPS. There are economical and political conditions that can affect the financial performance of the Jordanian commercial banks – inclusive of the global financial crisis in 2008 and their economic consequences on the economies of developing countries.

- There is an impact of the ERP system implementation on the financial performance of commercial banks regarding EPS.
- There is an impact of the ERP system on the overall performance of banks as it reduces the time needed to accomplish the tasks and operations of the organization, increases control over the completion of the work, and provides information in a timely manner for important decision making.
- The ERP system helps to improve the quality of the data during the collection, compilation and analysis of its operations, as all organizations need such resource planning systems to ensure the integrity and quality of data.

According to the findings and conclusions of this study reached through the theoretical framework, as well as the results obtained from the reality of the statistical analysis of the data, it is recommended:

For banks:

1. To disseminate knowledge on the advantages of implementing the ERP system in Jordanian banks.
2. To expand the implementation of the ERP system to the highest degree possible, and include all sections and departments (for banks that have recently began to implement the ERP system).
3. To develop the efficiency of the IT department, as the impact on the financial performance in terms of service delivery accelerates the implementation of financial transactions for customers.

For researchers:

1. To conduct further studies on the impact of the ERP system on the financial performance of all commercial banks operating in Jordan due to the lack of such studies.
2. To conduct advanced research on the impact of the ERP system on the financial performance of the banking system in Jordan using financial and non-financial measures.
3. To conduct new studies related to the effectiveness of the ERP systems and their impact on the performance of the Jordanian commercial banks, covering new aspects and dimensions.

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