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Exploring the Impact of the use of Business Information systems BIS on the organizational performance effectiveness in banks in Jordan

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ABSTRACT*Business Information System BIS is considered as a critical tool, which has a major supporter of the economy which use BIS in an effectively manner. Organizations marked experiencing and acceleration towards the use of BIS to support its operations in order to improve performance and achieve superiority over competitors, which is reflected in the organizational effectiveness.*

This study aims to identify the impact of the use of Business Information Systems BIS on the organizational performance effectiveness in banks in Jordan. The study population are all (23) banks in Jordan. The study instrument distributed a (42) questionnaire to all senior directors in the banks, The questionnaires were analysed using regression, correlation analysis in order to determine the impact of business information systems BIS and its dimensions as an independent variable on the organizational performance effectiveness which is dependent variable in banks in Jordan..

The study outcomes shown that business information system BIS adoption would increase organizational performances, and offering practical suggestions that may ensure the achievement of the objectives to be accomplished by using BIS contributing to organisational effectiveness. Beside, effective use of BIS in banks would maximizing the total value to financial performance. Also Banks in Jordan gives great importance to the use of BIS significantly, in the belief that they contribute to improving the competitive position.

KEYWORDS*Business Information Systems BIS, organizational performance effectiveness, banks in Jordan*

I. INTRODUCTION

The twenty first century has been characterized by an acceleration frantically between the various organizations involved in the production and service fields to invest meaningful developments created by globalization and the information revolution variables, communications technology, and knowledge, and the Internet, and other variables which became a cause to the attention of the administrative leaders, striving to invest in cemented performance and efficiency and effectiveness in completing the tasks associated with the organization of economic performance in general (Khresat, 2015).

To go into the fields of investment effects created by the information technology revolution in achieving effective banking sector performance, has become meaningful in light of the era of development thinking, and enduring monument in the tender and asset protective undermine backwardness parameters, to make those evolutionary underpinnings pioneer in the effective achievement, and undermine all the combined performance of the monotony and lack of development. To keep up with technology has become inevitable, and the requirement for excellence, and a way to achieve effectiveness in the performance, which is the focus of a successful leader (Aureli et al. 2014).

All software applications which be designed to conduct and support business processes considered as Business Information Systems BIS. In this digital era, Business Information Systems BIS have a crucial role in the competitiveness of the organisations by improving strategic procurement, global outsourcing, physically distributed operational environments, and global business alliances. BIS is an unbounded field of study regarding to how Information Systems applications along with information and communication technologies that can be deployed to enhance business transactions and improve the organisation's effectiveness. Specifically,

banks should use BIS in efficient, effective and competitive way to acquire, produce, and deliver services all over the world. Also a computer-based skilled users will enable a better understanding needed to operate Business Information Systems BIS effectively and enable organisations to take advantage and maintain competitiveness in their industries (Mabry et al. 2014).

The banking system is fundamental shape of the pillars of the Jordanian economic system, as in all other countries' economies generally. Continuing technological innovation and intense competition between the banking sector components has contributed to the events of rapid developments in the banking industry that has emerged as new forms of banking products and services in various areas, BIS for banking is running a processes for banking servies, such as: e-banking, credit cards, ATM services (Wu et al. 2011). In spite of the big benefits achieved by technological innovation, but the organizations in developing countries are still at the beginning of the road regarding the exploitation of information technology and information systems, and benefits of the information effectively and profitably. In which the technical characteristics of the environment and information technology considered key element of the elements that must be considered when preparing the organizations strategy (Edwards and Cost, 2014).

Based upon that, following parts of the study contained the general framework for the study, which included the introduction, significance and problem of the study and the theoretical framework of the concept of study variables, relevance and prospects associated with the evolution and the relationship between Business Information Systems BIS, and performance of the banks in Jordan, and their significance to economic, and difficulties they face, along with an empirical study to analyse the data and test hypotheses, and eventually display the results and recommendations of the study.

1.1 SIGNIFICANCE OF THE STUDY

The importance of this study comes from shedding light on the process of using Business Information Systems BIS, and the implications of their use to achieve the effectiveness of the banking sector's performance, as the aiming usage of Business Information Systems BIS and its dimensions associated with hardware, software and user's skills, that would contribute in achieving the envisaged attainable objectives of the organization concerned, in addition to investment optimization of available resources, especially if BIS has become the sole and the twentieth century strategic resource, that could be operating in various economic fields, organizations achieve their goals, particularly in light of the different variants of the effects of globalization and the movement of the free trade, and competitiveness, and other trends that pervade the turbulent Business environment, Therefore, investment in BIS, information technology and information systems in various organizations has become a the aspiration for many business organizations, and a purposeful field, aiming to achieve performance effectiveness, essentially in banks. Meanwhile this study aimed to identify the extent of the use of BIS in the banks in Jordan, and reveal the nature of the relationship between BIS and the effectiveness of the banks performance, and to explore the impact of BIS on banks performance, and suggested some recommendations that may contribute to improve the banks' performance effectiveness.

II. THEORETICAL BACKGROUND

Previous studies have argued that business information systems would contribute to the improvement of organizational performance (Brynjolfsson and Hitt 1996; Kohli and Devaraj 2003; Mukhopadhyay et al. 1995). Aureli et al. (2014) analysed business information systems penetration and usage in Italy and Hungary and find a well-grounded evidence that business information systems is regarded as a source of competitive edge or an essential condition for survival by different enterprises in different countries, while Mabry et al. (2014) suggested operationalizing the conceptual methodology to identify and quantify the strategic and innovative value of BIS, so managers, particularly in resource-challenged businesses, can use BIS to determine risk and success of the architecture, the financial net-present-value model. Meanwhile Edwards and Cost (2014) explored reasons that asset-intensive of BIS, and explained that investment in computing power was often a surefire way to get it, although high barriers to switching, relative price insensitivity, and ease of cross-selling new modules once you're embedded, all make expanding use of BIS solutions within business organisations are attractive for potential effectiveness, at the time, Banabakova and Panev (2011) examined the characteristic features of the basic business information systems and how they are applied in practice to improve the logistical service, which provide indicators for the estimation of the efficiency of the logistical systems and for the logistical planning, and quality of the service to the customers, and enhance the role and importance of business informational systems to improve insurance of the logistical system, and lately khresat (2015) confirmed the relationship between management information system and organizational performance at telecommunication companies in Jordan, also Ali and Younes (2013) came to results structural equation analyzes that supported the Impact of Information systems on user performance.

Lipaj and Davidaviciene (2013) indicated that business performance and improving internal processes and financial performance of organisation, could be influenced by the deployment of business information system, while Kharuddin et al. (2010) investigated the impact of business information system on firm performance of Malaysian SMEs, and revealed that SMEs adopting business information system show significant improvement in performance compared to non-adopters, since Malaysian government has allocated special grants and various initiatives to assist Malaysian SMEs to adopt business information systems, on the other hand, AL-Gharaibeh and Malkawi (3013) identified the impact of management information systems on the performance of governmental organizations, and Olugbode et al. (2008) conducted a case-study on Beale and Cole company in UK, which fully supported and integrated business information system that sustain and maintain their competitive advantage and facilitate their continued growth and profitability, besides, Melville et al. (2004) developed a model of value-based business information systems in the resource-based view of the organisation which provide the contribution of business information systems to organizational performance.

2.1 BUSINESS INFORMATION SYSTEMS (BIS)

Information systems are commonly known as an integration of various resources (hardware, software, database, skilled users and processes) managed together to conduct a particular transactions, being processed (data storage, maintaining, securing, analysing, monitoring, controlling) inorder to relevant information being transmission to users. Business information systems (BIS) can be defined as computer-based applications that integrate information management, information technology, skilled users and business processes within the business organization, Business information systems (BIS) has appeared as a result of Information technology revolution, to produce different types of software applications for processing the management transactions and information in the organizations, like CMR, CRP, SCM, MRP, MRP-II, ERP, ERP-II,. Recently we notice a large majority of software application, information conceptions, approaches and technologies, which have ensure their dependability in the business development on the whole and for the banks in part, and many of them have already acquired a status of being an international standard. The need for a standard in the info technologies led to the appearance of a new science called itology, its main task being the creation of a basis, upon which to build the info systems (Banabakova and Panev 2011).

Business information systems are characterized by a large use of computers and information technology, which help standardize a significant part of the information and communication system, thus making it easier to produce and use management information, and making most companies use business information systems which have increased the capabilities of business processes (Rainer &Cegielski, 2010).

2.2 ORGANISATIONAL PERFORMANCE IN BANKS

activity of attracting investment and activation investors' performance have become of the strategic priorities, which highlights the importance and the role of the banking system to absorb the cash flows and providing typical performance standards, especially after the bitter experiences that the world has inherited from the financial crisis and its repercussions, so It has become a standard measurement of financial performance of commercial banks decisive importance cannot be overcome or circumvent them, and any robust banking system needs an investment guarantees until it becomes of the factors attracting investment and stimulating business (Khosla 2015).

Banking system also must meet the terms of maintaining the rights of the shareholders, depositors and investors and to ensure the safety of the implementation of monetary and fiscal policies. To achieve those conditions the banking system is subject to the supervision of the central banks at the same time It depends on the measurement and assessment of the performance of several other parties, like government parties, shareholders and depositors, and thus it highlights the role of the financial performance measurement to determine the effectiveness of the banking performance, analysing and evaluate its performance levels, such measurement is assumed to provides adequate information on the strengths and weaknesses during a certain period of time, which provides an effective way to optimize and correct the performance (Wu et al. 2011).

Previous studies referred to the performance measurement motivations, Croteau and Raymond (2004) stated four main reasons encourage organizations to measure their performance:

- Screening position: performance measurement used to determine the organization's position, and assist in determining the strategies and plans for improvement, and measurement also used to help organizations to compare themselves with other organizations to see their position relative to its competitors.
- Communications position: where measurement gives a way of communicative performance, and this may have legislative requirements such as tax and accounting goals.
- Forced progress: measuring the impact of individuals' behavior and their attitudes, when organizations measure that aspects of their performance, they send signals show what is important.

- Priority Confirmation: measurement allows organizations to highlight the most important issues, the measurement can be organized to control organisational improvements, cost control, and management control.

There are many different ways to measure organisational performance, in this study we relied on the benefits of considering both operational and financial areas in measuring organisational performance (Protopappa-Sieke and Seifert, 2010):

• Financial performance criterion: where is the most scales used to measure the performance of the organization such as ROA and ROI which specified and determining the effectiveness of organizations

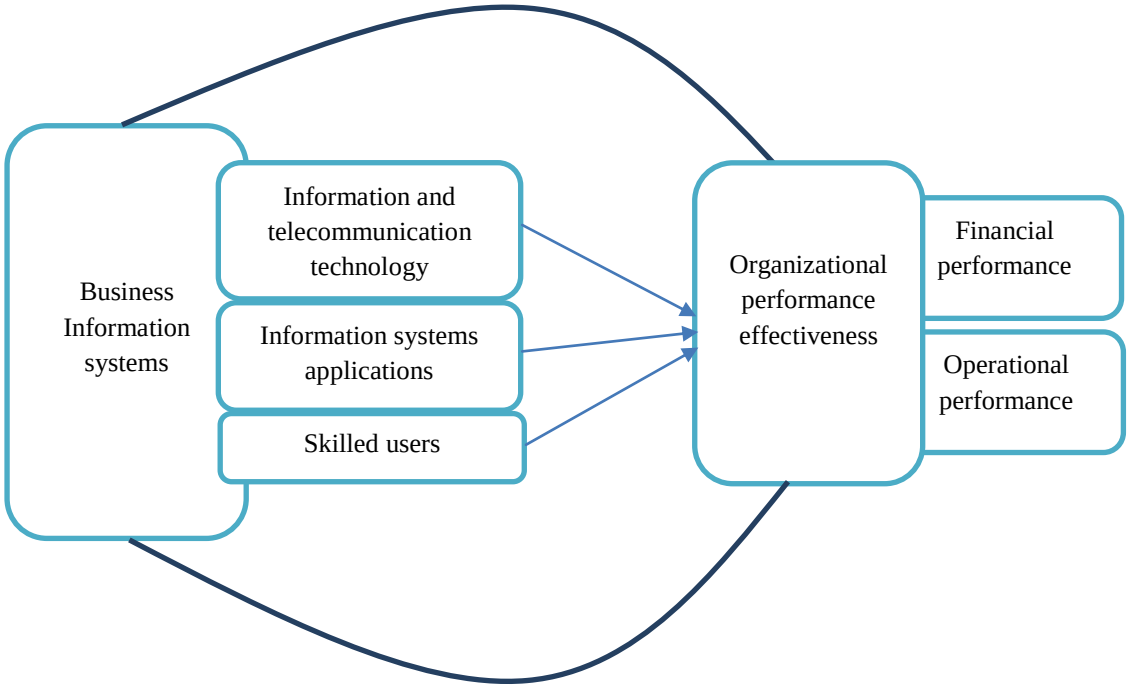
• Operational performance criterion: represents the non-financial area of performance, which aims to adoption of non-financial marketing areas such as market share, introduce new products, product or service quality.

III. DIALECTICAL OF THE STUDY AND ITS MODEL

Despite the organizations' interest to expand the level of adoption of Business Information Systems BIS, information technology and information systems, especially in the banking sector, but still there is a gap between the desired level and the current level, especially in the scope of information technology, including speed, flexibility, transparency, and accuracy, in providing information required to its operations, and what expected to improve and develop and increase the effectiveness of performance in banking organizations. Accordingly, this study comes to examine the impact of the use of Information technology on the organizational performance effectiveness in banks in Jordan.

3.1 THE STUDY'S MODEL

The idea of the study model derived from the possibility of enhancing the organisational performance of banking that apply Business Information Systems BIS, which guide banks the ability to achieve its objectives through adoption of suitable Information Systems BIS.



3.2 HYPOTHESES OF THE STUDY

Based on the dialectical of the study and its model, previous studies' attitudes, and current study's objectives, the following null hypotheses were proposed:

HO: There is no statistical significant impact at the level of significance (a=0.05) of the use of Business Information systems (Information and telecommunication technology, Information systems applications, and Skilled users) on the organizational performance effectiveness in banks in Jordan.

HO_1: There is no statistical significant impact at the level of significance (a=0.05) of the use of Information and telecommunication technology on the organizational performance effectiveness in banks in Jordan.
HO_2: There is no statistical significant impact at the level of significance (a=0.05) of the use of Information systems applications on the organizational performance effectiveness in banks in Jordan.
HO_3: There is no statistical significant impact at the level of significance (a=0.05) of the availability of Skilled users on the organizational performance effectiveness in banks in Jordan.

IV. METHODOLOGY OF THE STUDY

The study adopted an exploratory, descriptive, and analytical approach, since it explore level of existence of study's variables at study sample, and describe the level of awareness to it, and then analyzes impact of the use of Business Information systems on the organizational performance effectiveness. The study population is banks in Jordan which they are (23) banks. The unit of analysis consist of departments' managers at those banks, and they were (42) senior directors available, since they are most familiar to study's variables.

The study based on a questionnaire as a data collection tool, it relied on field data, in order to reach the required results to test study's hypothesis. The questionnaire has been designed in which it composed of the first part that composed of items to measures the use of business information systems. The second part composed of items to measures the organisational performance effectiveness of variable dimensions. The variables measured through paragraphs are designed by a group five Likert scale, with values ranged between agree to disagree.

The face validity of the questionnaire was checked. The adequacy and appropriateness of a questionnaire's items were assessed. Additionally, the reliability of the questionnaire was checked through using Cronbach Alpha to measure the questionnaire's items' internal consistency. The values of Cronbach Alpha which ranged from (0.65) to (0.85) are accepted.

V. DATA ANALYSIS AND RESULTS

5.1 DESCRIPTION OF THE MANAGERS' PERCEPTION TOWARDS STUDY VARIABLES

Results shown in table (1) illustrates the description of the managers' perception towards the use of Business Information systems and organizational performance effectiveness, which present that all means of all dimensions of the use of Business Information systems and organizational performance effectiveness were above the medium value of the test criteria with (2.33) out of (5.00) degrees indicating that managers' opinions at bank in Jordan concerning the importance of both, the Business Information systems and organizational performance, and were positive in general.

Table (1) Description of the managers' perception towards study variables

variables of study		M	Std	Sig rank	Sig level	Sig
use of Business Information systems	Information and telecommunication technology	3.53	0.713	2	medium	0.01
	Information systems applications	3.14	0.800	3	medium	0.02
	Skilled users	3.55	0.754	1	medium	0.00
Organizational performance effectiveness	Financial performance	3.10	0.991	4	medium	0.01
	Operational performance	2.52	0.827	5	medium	0.02

5.2 HYPOTHESIS TESTING

As it illustrated in table (2), the calculated (F) value (8.082) was higher than the tabulated (F) value (2.52) at the level of significance (a=0.05). Furthermore, the statistical significant value (0.000) is less than the significance level (a=0.05) and therefore the null major hypothesis is rejected indicating the validity of the Multiple Linear Regression Model. Accordingly, there is statistical significant impact at the level of significance ($a \leq 0.05$) of the use of Business Information systems (Information and telecommunication technology, Information systems applications, and Skilled users) on the organizational performance effectiveness in banks in Jordan.

Table (2) Results of ANOVA test between use of Business Information systems and Organizational performance effectiveness

	Source	SOS	MS	DF	F* calculated	sig
use of Business Information systems in Organizational performance effectiveness	Regression	12.67	1.810	7	8.082	0.00
	Remains	7.615	0.224	34		
	Total	20.28		41		

* table value of F=2.52 at level of significance (0.05).

Based on the results illustrated in table (3), we can conclude:

- The Regression coefficient (β) of use of Business Information systems in Organizational performance effectiveness of; (Information and telecommunication technology, Information systems applications, and Skilled users) was statistically significant and therefore there is statistical significance effect at the level of significance (a=0.05) to the dimensions mentioned previously in Organizational performance effectiveness at banks in Jordan. These results are confirmed by the calculated (t) value of the Skilled users (3.86) and its significance (0.009) in addition to the calculated (t) value of Information and telecommunication technology (2.44) and its significance (0.007), also to the calculated (t) value of Information systems applications (1.35) and its significance (0.001), which is less than the level of significance (a=0.05). Considering these results, the null hypothesis is rejected
- The coefficient of determination (R2) value (0.624) showed that use of Business Information systems interprets (63%) of the changes in the Organizational performance effectiveness and (37%) of the changes could be attributed to other variables were not included in study model.

Table (3) Results for Multi Linear Regression of use of Business Information systems in Organizational performance effectiveness

use of Business Information systems dimensions	β	t*	sig	B	r	r^2
Constant	0.47	2.12	0.004		0.79	0.624
Information and telecommunication technology	0.19	2.44	0.007	0.19		
Information systems applications	0.22	1.35	0.001	0.24		
Skilled users	0.12	3.86	0.009	0.14		

* table value of t=1.65. at level of significance (0.05).

And to test the first sub-hypothesis, a simple regression analysis was used to check the impact of Information and telecommunication technology in the organizational performance effectiveness. Results as it is illustrated in table (4) showed that (r) was (0.79) at (a≤0.05) and (r2) was (0.624) which indicates that (0.624) of the changes in the organizational performance effectiveness due to the change in the level of interest in the Information and telecommunication technology. Additionally, the β value was (0.21) which means that the increase with one degree in the interest in the Information and telecommunication technology causes an increase in the level of the organizational performance effectiveness equal to (0.21), this significance was confirmed by the calculated (t) value which showed the significance of the degree of the Information and telecommunication technology at (a≤0.05). Accordingly, there is direct statistical significant impact of Information and telecommunication technology in the organizational performance effectiveness at (a≤0.05).

Table (4) Simple regression of Information and telecommunication technology in the organizational performance effectiveness

	B	SE	β	t*	sig	r	r^2
Information and telecommunication technology	0.51	0.38	0.21	3.13	0.004	0.79	0.624
	0.21	0.21		2.82	0.007		

* table value of t=1.99. at level of significance ($\alpha \leq 0.05$).

And to test the second sub-hypothesis, a simple regression analysis was used to check the impact of Information systems applications in the organizational performance effectiveness. Results as it is illustrated in table (5) showed that (r) was (0.35) at (a≤0.05) and (r2) was (0.121) which indicates that (0.121) of the changes in the organizational performance effectiveness due to the change in the level of interest in the Information systems applications. Additionally, the β value was (0.27) which means that the increase with one degree in the interest in the Information systems applications causes an increase in the level of the organizational performance effectiveness equal to (0.27), this significance was confirmed by the calculated (t) value which showed the significance of the degree of the Information systems applications at (a≤0.05). Accordingly, there is direct statistical significant impact of Information systems applications in the organizational performance effectiveness at (a≤0.05).

Table (5) Simple regression of Information systems applications in the organizational performance effectiveness

	B	SE	β	t*	sig	r	r^2
Information systems applications	0.39	0.41	0.27	4.01	0.002	0.35	0.121
	0.27	0.18		3.91	0.007		

* table value of t=1.99. at level of significance ($\alpha \leq 0.05$).

And to test the third sub-hypothesis, a simple regression analysis was used to check the impact of Skilled users in the organizational performance effectiveness. Results as it is illustrated in table (6) showed that (r) was (0.37) at (a≤0.05) and (r2) was (0.138) which indicates that (0.138) of the changes in the organizational performance effectiveness due to the change in the level of interest in the Skilled users. Additionally, the β value was (0.14) which means that the increase with one degree in the interest in the Skilled users causes an increase in the level of the organizational performance effectiveness equal to (0.14), this significance was confirmed by the calculated (t) value which showed the significance of the degree of the Skilled users at (a≤0.05). Accordingly, there is direct statistical significant impact of Skilled users in the organizational performance effectiveness at (a≤0.05).

Table (6) Simple regression of Skilled users in the organizational performance effectiveness

	B	SE	β	t*	Sig	R	r^2
Information systems applications	0.47	0.46	0.14	2.12	0.004	0.37	0.138
	0.14	0.17		2.44	0.001		

* table value of t=1.99. at level of significance ($\alpha \leq 0.05$).

5.3 DISCUSSIONS OF RESULTS

Results of the respondents' perception showed the level of importance and existence for both, the use of Business Information systems, and organizational performance effectiveness, and their dimensions at banks in Jordan were medium. Results of the statistical analysis allowed to reject the null hypothesis, and acceptance of alternative hypothesis, to prove the impact of the use of Business Information systems (Information and telecommunication technology, Information systems applications, and Skilled users) on the organizational

performance effectiveness in banks in Jordan. The study found that banks in Jordan have a considerable progress regarding the adoption of applications, networks, infrastructure and information technology to run their operations, which has become a strategic and competitive requirement for the survival and growth.

It should be stated here that these results are incompatible with the results of (Khresat, 2015; AL-Gharaibeh and Malkawi, 2013; Ali and Younes, 2013; Lipaj and Davidaviciene, 2013; Kharuddin et al. 2010; Olugbode et al. 2008; Croteau and Raymond, 2004; Melville et al. 2004) that they ensure the impact of business information systems on organizational performance, study results also confirmed the respondents' believe of the need to better staff training in banking information system, computer skills, and systems that applied in the banks, as well as focused on the importance of modernizing the infrastructure of computers, networks, and associated equipment, also better adoption information systems application that integrating to with all banking operations.

5.4 RECOMMENDATIONS

Banking informations systems' services shall be designed to serve clients both internally and externally, and should have a strong management in order to be able to compete and achieve satisfactory customers, and the adoption of agile strategies based on advanced technologies in the provision of banking services

Banks should adopt strategies and methodologies tools to develop and modernize the services they provide, through technology transfer processes that lead to upgrade the performance of the banking sector, and enable it to compete with international banks

Increase senior management' awareness of the technology and information systems are competitive, strategic tool and a resource indispensable. It is useful that the banking institutions are keen to upgrade their computer applications, and encourages managers to diversify and intensify the areas in which they are used.

Conduct research to evaluate its position in terms of cost benefit, and explore competitive conditions. And each new system implementation to be accompanied by better user training, and how to collect the greatest benefit from it

REFERENCES

[1] Khresat, Alaa,The Effect of Management Information System on Organizational Performance: Applied Study on Jordanian Telecommunication Companies, *Information and Knowledge Management, 5(6),* 2015, 45-50.

[2] Aureli, Selena; Ciambotti, Massimo and Sasvari, Peter, The Penetration of Business Information Systems in Small and Medium-sized Enterprises in Italy and Hungary: A Comparative Study, *The International Journal of Management Science and Information Technology (IJMSIT), Issue11*, 2014, 84-95.

[3] Mabry, Sibylle; Hsieh, Chengho and Bigler, William, Quantifying the Value of the Service oriented Approach to Business Information Systems, *Business Studies Journal, 6*, 2014, 1-22

[4] Wu, Cheng-Ru; Linb, Chin-Tsai and Tsaic, Pei-Hsuan, Financial service sector performance measurement model: AHP sensitivity analysis and balanced scorecard approach, The Service Industries Journal, 31(5), 2011, 695–711.

[5] Edwards, Paul and Costa, Robert, Evolving Business Information Systems (BIS) Usage in Asset-Intensive Industries: What to Look for as an Investor, *The Journal of Private Equity, Summer*, 2014, 23-34

[6] Brynjolfsson, E., and Hitt, L, Paradox Lost? Firm-Level Evidence on the Returns to Information Systems Spending, *Management Science 42(4),* 1996, 541-558.

[7] Kohli, R, In Search of Information Technology Business Value: Do Measurement Levels Make a Difference?,*Proceedings of the Ninth Americas Conference on Information Systems*, Tampa, FL, 2003.

[8] Mukhopadhyay, T., Kekre, S., and Kalathur, S. "Business Value of Information Technology: A Study of Electronic Data Interchange," *MIS Quarterly, 19(2),*1995, 137-156.

[9] Banabakova, Vania and Panev, Atanas, Characteristics of Business Information Systems and their Importance for the Improvement of Logistical Service, *Management and Economics, 4(64),* 2011, 413-417.

[10] Ali,Bejjar and Younes, Boujelbene, The Impact of Information Systems on user Performance: An Exploratory Study, *Journal of Knowledge Management, Economics and Information Technology, Issue.2*, 2013

[11] Lipaj, Dmitrij and Davidaviciene, Vida, Influence of Information Systems On Business Performance, *Mokslas - LietuvosAteitis: Science - Future of Lithuania, 5(1),* 2013, 38-45.

[12] Kharuddin, Saira; Ashhari,Zariyawati and Nassir, Annuar, Information System and Firms' Performance: The Case of Malaysian Small Medium Enterprises, *International Business Research, 3(4),* 2010, 28-35.

[13] AL-Gharaibeh, Shehadeh and Malkawi, Nazem, The Impact of Management Information Systems on the Performance of Governmental Organizations- Study at Jordanian Ministry of Planning, *International Journal of Business and Social Science, 4(17),*2013,. 101-109.

[14] Olugbode, Mojisola; Elbeltagi, Ibrahim; Simmons, Matthew and Biss, Tom, The Effect of Information Systems on Firm Performance and Profitability Using a Case-Study Approach, *Electronic Journal Information Systems Evaluation, 11(1),* 2008, 35-40.

[15] Melville, Nigel; Kraemer, Kenneth and Gurbaxani, Vijay, Information Technology and Organizational Performance: An Integrative Model of IT Business Value, *MIS quarterly, 28(2),*2004, 283-322.

[16] Rainer, R.K. &Cegielski, C,.*Introduction to Information Systems: Enabling and Transforming Business*. (3rd Edition. John Wiley&Sons, USA, 2010)

[17] Khosla, Arunachal, Impact of Organisational Culture on Organisational Performance, *The Journal of Institute of Public Enterprise, 38(1&2),* 2015, 150-164.

[18] Croteau, A and Raymond, L, Performance Outcomes of Strategic and IT Competencies Alignment, *Journal of Information Technology, 19,* 2004, 178-190

[19] Protopappa-Sieke, Margarita and Seifert, Ralf, Interrelating operational and financial performance measurements in inventory control, *European Journal of Operational Research, 204(3),*2010, 439-448.