

# The Extent of Support Presented by AIS to Intellectual Capital within Commercial Banks Sector in Jordan

Dr. Kayed Ab Allah Al- Attar

Faculty of Business, Al- Isra University-Jordan

## Article Info

Volume 83

Page Number: 4861-4872

Publication Issue:

July - August 2020

## Article History

Article Received: 25 April 2020

Revised: 29 May 2020

Accepted: 20 June 2020

Publication: 10 August 2020

## Abstract:

Commercial banks in Jordan operate in a changing and highly competitive environment, which required the banks to arm themselves with the necessary equipment in order to confront crises and ensure their survival in order to be able to efficiently manage their financial resources. Current study aimed at examining the level of support presented by AIS applications to the intellectual capital within commercial banks in Jordan through the fiscal year 2019-2020. Study adopted principles of AIS including (Control, Accountability, Relevance, Compatibility, and Flexibility). Depending on quantitative approach and through utilizing a questionnaire distributed in (87) individuals within commercial banks in Jordan; results of study indicated a positive influence and support to intellectual capital that is attributed to compatibility and referring to the fact that AIS application give out precise and accountable information give intellectual capital and mainly human capital the chance to make the right decisions based on valid and accountable information available.

Study recommended developing the skills of workers in the field of accounting information systems through training courses to see all that is new and necessary in the field of computerized accounting in order to raise efficiency and confidence.

**Keywords:** *Accounting Information Systems, Intellectual Capital, Human Capital, Knowledge Management, Capabilities, Contribution, Knowledge Support*

## INTRODUCTION

Financial accounting information systems are considered a subsystem of the functional information system in the organization, as it is concerned with collecting data and information related to the financial activities of the organization from its internal and external sources, and it processes it in order to obtain information and provide it to the financial and investment decision-making centers according to their needs and in right time (Amin and Aslam, 2017).

Also, it is of great importance in the life of the organization by providing a set of periodic and exceptional information that expresses the various financial activities in the organization, which supports and helps the management to define future financial policies, and it helps to give a comprehensive view of the financial situation of the organization through Being an integrated hub with other functional systems, in addition to helping in forecasting financial needs, and controlling the use of funds through reports and financial statements (Kianto et al, 2017).

## PROBLEM STATEMENT

Within the information revolution that we are living in today, information and data are considered an important

wealth, and their optimal utilization will achieve profits and future successes for the organization and a guarantee of continuity and development (Piontkewicz et al, 2016). The good information produced by accounting information systems plays an important role in providing the various levels of decision-making with ready, correct and accurate information in a timely manner, in addition to leadership and discretionary budgets, which contribute effectively to support decision-making bodies, employees and stakeholders in interpreting and evaluating the actual results of the financial activities in the organization (AbdulRaheem, 2018; Piontkewicz et al, 2016).

The concept of intellectual capital was widely used in the 90s of the last century as representing a fact about the ability of institutions to compete and achieve success. Before this date, reliance on natural resources was a basis for wealth, but nowadays knowledge is viewed as the main resource for production and establishment. Wealth and knowledge has become the most powerful strategic force and organizations need intellectual capital to achieve excellence in their work (Al-Obaidi, 2008).

According to Afaneh (2019) and Piontkewicz et al (2016), the obsession of business organizations has become innovation and innovation, and the main work of

managers is the extent of his skill in managing knowledge and managing knowledge that leads to the promotion of innovation and creativity that is an effective element to outperform competitors, as knowledge is the most capable of adding value to things and thus generating money. Proper knowledge requires sound knowledge, for knowledge is one of the most important factors of production, and it enjoys a special priority and forms a new type of capital based on ideas and experiences, which develops and is never exhausted through use, as knowledge-based companies are able to survive and continue.

From that point, and launching from the fact that intellectual capital needs all support in order to utilize information and data, and given that AIS has the ability to present all kinds of information and data for the organization; current study seeks to measure the nature of support presented by AIS applications to the intellectual capital within commercial banks in Jordan. The following model represents the nature of relationship between study variables:

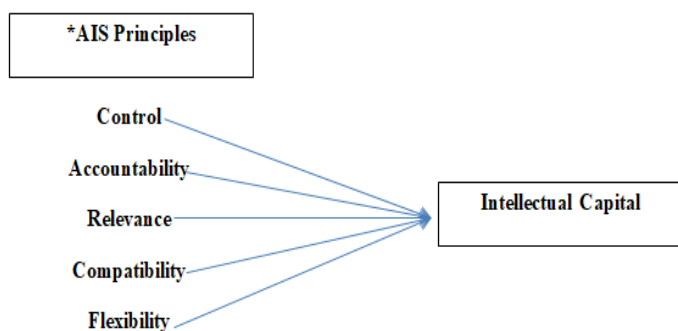


Figure (1): Study Model \*(Balhadri, 2017); (Hamdan, 2018)

From study model above, following set of hypotheses was generated:

## Hypothesis Development

### Main Hypothesis

**H: AIS application support intellectual capital within commercial banks in Jordan**

### Sub-hypotheses

**Ha: Control in AIS support intellectual capital within commercial banks in Jordan**

AIS applications should be in control; this means that such application should have the ability to monitor the internal and external operations of the organizations and push employees and staff towards abiding the law and follow the managerial methods in completing their tasks (Alrabei, 2014). In addition to that, when AIS application is in control, it basically have better power to present data that has a meaning and a benefit for the organization, other than that the presented data won't be of weight due

to its inability to preserve the best and most accurate approaches in collecting such data, the loss of control may help in increasing data loss which will end up presenting unauthentic data that are not realistic and faraway from the reality of the organizational performance (Asatiani et al, 2019).

**Hb: Accountability in AIS support intellectual capital within commercial banks in Jordan**

Accountability relates to the integrity of the information, it means that audited accounts (accounting information) are seen to be more accountable than unaudited accounts, even if they appeared to be identical in form and content. The degree of accountability in accounting information is a clear reflection of the sound measurement methods or the source of data on which that information was retrieved (Berquedich et al, 2017). In order for the accounting information to be accountable, it is urgent to establish a well-built accounting foundation that meets the accounting principles and norms controlling the accounting work, as well as to develop standardized, acceptable and practical measurement bases (Chen et al, 2018).

From here it can be said that accountability supports decision-makers in providing a high degree of congruence between information and phenomena to be reported in addition to the possibility of verification of information, which means in the accounting concept the availability of the objective condition in any scientific measurement, as well as their decisions are based on the neutrality of information as Information provided based on honest facts without deleting or selecting information for the benefit of a particular group or decision (Chiu et al, 2014).

**Hc: Relevance in AIS support intellectual capital within commercial banks in Jordan**

According to Hasibuan (2020), relevance means that there is a logical connection between the information and the decision under study, meaning the information's ability to effect a change in the direction of the decision, accordingly, relevance serves the intellectual capital in providing the ability to form expectations about the results of past, present, or future events, reinforcing current expectations or making a change in these expectations, and this means that relevant information leads to a change in the degree of certainty regarding the decision. Hutahayan (2020) argued that the relevant data that AIS present can help in improving the decision-maker's ability to predict the expected results in the future and reinforcing or correcting previous and current expectations, as well as evaluating the results of the decisions that were based on these decisions.

**Hd: Compatibility in AIS support intellectual capital within commercial banks in Jordan**

For an AIS application to be beneficial and meaningful for an organization it has to be compatible with the organization itself, this means that AIS applications, systems and programs must meet the nature of the organizational activity and be more able to serve the organization in the best way possible (Iskandar, 2015). According to Ismail and King (2014) having a compatible AIS application is the best way for the system to develop data and information that based on the degree of suitability with the mission and vision of the organization. Making sure that AIS applications used are compatible with the organizational strategies and aims can make it easier for stakeholders and managers to take the right decision at the right time.

#### ***He: Flexibility in AIS support intellectual capital within commercial banks in Jordan***

Having flexible AIS application means to be able to retrieve data that are resilient and in accordance with the recognized accounting principles (Ramazani and Allahyari, 2013). Mancini and Lamboglia (2017) saw that flexibility in AIS can help intellectual capital to be able to cope with change and sudden changes with no need for excessive efforts. Mirzaey et al (2017) also noted to the fact that the flexibility in AIS applications are one of the most important aspects that play a role in adapting its approach to the organizational environment and aid users to come up with better and more appropriate decisions.

## **LITERATURE REVIEW**

### **Accounting Information Systems**

Accounting information systems or (AIS) are automated systems that are responsible to develop and presented statistical, accounting and financial reports, data and information for decision makers in order for them to make informed decisions based on the reports presented by the systems (Nakhaei et al, 2014). Pelich et al (2014) saw that AIS applications and programs are designed in a way that can give financial and accounting data within both internal and external environment of the organization including parties like business size, business activities, investors' information, debtors and accountants.

AIS are widely known nowadays within business environment as there appeared massive approaches in which such system can operate. Among those approaches Ramazani and Allahyari (2013) noted that AIS can help in a great way to operate data and make use of it, deliver the information to decision makers and make sure that all data gathered are dependable and trustworthy. Mandala (2019) also supported the same idea arguing that depending on AIS in business can help to protect assets of the organization depending on reliable information presented which give an indication on the financial status of the organization.

### **Characteristics of AIS**

Shuhidan (2015) stated that in order for AIS applications to be of meaning within the organization, it has to have the needed characteristics and traits. Those characteristics include the attention to achieve high speed in presenting data especially those data related to financial information, also it has to be able to deliver the information to the management in the right time in order for the management to take the needed decisions and adopt the required actions. Sinarasri (2019) also noted that AIS applications are useful and meaningful when they are able to help the management through the process of strategy building for any possible project either on the short or long terms, while Sori (2009) argued that an AIS application won't be beneficial if it wasn't flexible enough to deal with the data in the organization that are generated by all departments.

### **Intellectual Capital**

Al-Musali and Ismail (2016) defined intellectual capital as intangible assets that are interconnected with each other and that enable the organization to work, those assets are represented in the skills, capabilities, creativity and innovation to meet the challenges of competitors and exploit opportunities to achieve success. On the other hand, Oppong and Pattanayak (2019) defined intellectual capital as the set of skills available in an organization with broad knowledge makes it capable of making the organization global by responding to customer requirements and the opportunities offered by technology, while Mohammed and Irbo (2018) saw intellectual capital as a group of workers possessing mental capabilities whose elements are knowledge, skill and experience, that can be employed and invested in increasing intellectual contributions to improve the performance of the organization's operations, and to develop its creativity space in a manner that achieves effective relationships with all parties it deals with.

### **Human Capital**

Human capital refers to the total experiences, skills, and talents that the workforce within the organization. This capital gives value to the existence of the organization through its dependency on experiences and skills that are found among individuals in the organization which facilitates their pursuit towards making the right decision (Dumay and Guthrie, 2019).

### **Structural Capital**

This capital refers to everything that remains in the organization when employees leave home which includes devices, software, programs, strategies, plans and processes. Structural capital is all elements and aspects that help the human capital to operate correctly and in a good way (Guthrie and Dumay, 2019).

### **Relational Capital**

This capital refers to all relationships that are generated within the organization that gathers its employees, managers, stakeholders; in addition to its relationship with supplies and customers (Abhayawansa et al, 2019).

### Importance of Intellectual Capital within Commercial Banks Sector

Banks are financial institutions that deeply depend as a major element on accounting data and information to manage its finances and be able to predict risks and jeopardies ahead of it. From that point, the importance of AIS strength, well-built and infrastructure can't be denied due to its ability – if it was strong enough – to supply the organization with refined and polished data that give a clear indication on the financial status of the organization, hence give decision makers more power to make the right decisions are the right time.

Generally speaking, intellectual capital is built on massive sources of importance, according to Meles et al (2016) the importance of intellectual capital can be summed in the following:

- 1- Increase the creative capacity of the organization.
- 2- Attracting clients and enhancing their loyalty to the organization.
- 3- Enhancing competition for time by introducing more new or advanced products.
- 4- The possibility of selling at competitive prices
- 5- Reducing costs and improving productivity.
- 6- Enhancing competitiveness.

### Methods

In current study, quantitative approach was adopted depending on questionnaire built by researcher; the questionnaire appeared in two main sections, the first took into perspective demographic variables of study sample (gender, age, experience and qualifications) while the second section presented statements related to AIS principles including (Control, Accountability, Relevance, Compatibility, And Flexibility).

Population of study consisted of all commercial banks in Jordan through the fiscal year 2019-2020 which reached (21) operating commercial bank in Jordan, sample of study appeared to be (105) as individuals who were exposed to study tool which included financial managers and head of accounting departments. After application process researcher was able to retrieve (87) properly filled questionnaire which gave an indication of (82.8%) response rate.

SPSS was used in order to examine reliability of study tool; Cronbach's Alpha scored a value of 0.959 which is higher than the acceptable ratio of 0.60 and indicating it as a good result (Sekaran & Bougie, 2010).

## Analysis

### Demographic Results

**Table (1): Characteristics of Sample According to Demographics**

		Gender		Valid Percent	Cumulative Percent
		Frequency	Percent		
Valid	Male	66	75.9	75.9	75.9
	Female	21	24.1	24.1	100.0
	Total	87	100.0	100.0	

		Age		Valid Percent	Cumulative Percent
		Frequency	Percent		
Valid	25-30	6	6.9	6.9	6.9
	31-36	21	24.1	24.1	31.0
	37-42	32	36.8	36.8	67.8
	+43	28	32.2	32.2	100.0
	Total	87	100.0	100.0	

		Educational level		Valid Percent	Cumulative Percent
		Frequency	Percent		
Valid	BA	51	58.6	58.6	58.6
	MA	27	31.0	31.0	89.7
	PhD	9	10.3	10.3	100.0
	Total	87	100.0	100.0	

		Experience		Valid Percent	Cumulative Percent
		Frequency	Percent		
Valid	2-5	5	5.7	5.7	5.7
	6-9	13	14.9	14.9	20.7
	10-13	34	39.1	39.1	59.8
	+14	35	40.2	40.2	100.0
	Total	87	100.0	100.0	

In table (1) above, demographics of study sample was analyzed, it appeared that majority of sample was males as they formed (75.9%) of total sample. As for age, it appeared that majority of sample was within the age range of 37-42 years old forming (36.8%) followed by (32.2%) for those who were above 43 years old, as it appeared in the table above, there is a good level of distribution of ages among the presented age ranges.

As for educational qualifications and experience; it appeared that majority of sample held BA degree forming (58.6%) of total sample followed by those who held an MA degree forming (31%) of the sample and PhD holders appeared to be the least respondents forming (10.3%) of the sample. Among the sample, it appeared that majority had an experience of +14 years forming (40.2%) of the sample followed by those who had an experience of 10-13 years forming (39.1%) of total sample, this indicated that wide experience that

respondents had in the field of interest of current study.

## Questionnaire Results

**Table (2): Questionnaire Statements Analysis**

	N	Minimum	Maximum	Mean	Std. Deviation
<b>AIS Principles</b>					
<b>Control</b>					
Accounting information systems are characterized by complete control as they are complete and cover all aspects of financial activity	87	1	5	3.85	1.040
Accounting information systems provide information that matches the size of the operating organization	87	1	5	3.92	1.081
Accounting information systems provide managers of an organization with the information needed to plan, organize, lead and control	87	1	5	3.72	1.086
Accounting information systems serve administrative functions in planning, control and decision-making at the administrative level	87	1	5	4.00	1.057
The revenues of accounting information systems support decision-makers in the field of planning, performance and control	87	1	5	3.86	1.058
<b>Accountability</b>					
The outputs of accounting information systems are considered to be of high reliability and free of errors, supporting the activities and practices of intellectual capital	87	2	5	4.28	.758
The information can be obtained when it is needed and as required	87	1	5	3.91	1.074
Accounting information systems achieve integration between the activities of the organization through the circulation of information	87	3	5	4.20	.729
The output of accounting information systems consists of selected and structured data for use in decision-making	87	1	5	4.17	.918
The output of accounting information systems can be adopted to make sound financial decisions	87	3	5	4.07	.759
<b>Relevance</b>					
Accounting information systems provide high quality financial statements that honestly express the financial position of the organization	87	3	5	4.33	.659
The outputs of accounting information systems cover all aspects and concerns of their users, so their financial decisions are easily and controlled	87	3	5	4.38	.686
The output of accounting information systems provides important information in the field of human resources and senior management and facts related to the human factor	87	3	5	4.22	.637
Accounting information systems monitor activities related to payment of wages, control, incentives and employment	87	2	5	4.38	.735

### Compatibility

Accounting information systems provide a picture appropriate to the current situation of the organization in a way that serves the working individuals	87	2	5	3.95	.975
The outputs of accounting information systems are compatible with the tasks required to be accomplished by working individuals	87	2	5	4.29	.834
The outputs of accounting information systems help in matching the requirements of the business environment and the tasks of working individuals	87	2	5	4.02	.964
Accounting information systems provide appropriate information of the necessary quality	87	2	5	3.93	1.009
The output of accounting information systems helps the decision maker to adjust his expectations due to its suitability	87	2	5	3.91	.858

### Flexibility

The outputs of accounting information systems contribute to the ease of decision-making due to their flexibility	87	2	5	4.31	.687
Accounting information systems display their outputs in a way that is easy to understand and understand, and can be used by individuals easily	87	2	5	3.92	.719
The output of computer information systems helps those with experience and at the same time supports novices in accounting practice	87	2	5	4.13	.804

### Intellectual Capital

Intellectual capital has the ability to increase organization's profitability as it enables organization to develop new products and services	87	2	5	4.23	.773
Intellectual capital influence overall business performance and accounting performance	87	3	5	4.24	.698
Experienced intellectual capital has to be found in all departments of organization	87	3	5	4.41	.771
Accounting is a sensitive part of an organization which requires high profile intellectual capital	87	3	5	4.40	.706
Intellectual capital is required to use all organizational resources to reach the most suited information and data	87	2	5	3.97	.855
Valid N (listwise)	87				

Above table (2) presented results of questionnaire statements analysis according to respondents' answers, it appeared through analysis that respondents had a positive attitude towards statements of questionnaire based on the mean of each statement above which scored higher than mean of scale 3.00. Among the most positively answered statements was within intellectual capital variable articulated "Experienced intellectual capital has to be found in all departments of organization" which scored a

mean of 4.41 which focuses on the concept of experience and skills in managing AIS applications and take the most of them for the benefit of the organization. This result rhymed with the analysis of demographic variables of experience in table (1) indicating the variety of experiences among participants and focusing on the majority of respondents who had an experience of more than 14 years. On the other hand, the least positively answered statement was articulated "Accounting

information systems provide managers of an organization with the information needed to plan, organize, lead and control" scoring a mean of 3.72 indicating the importance of data presented by AIS application and focusing on the role of these data in helping managers to present informed decision based on data they receive.

### Variables' Descriptive Statistics

**Table (3): Variables' Descriptive**

	N	Minimum	Maximum	Mean	Std. Deviation
Control	87	1.00	5.00	3.8713	.89701
Accountability	87	3.00	5.00	4.1241	.70099
Relevance	87	3.00	5.00	4.3276	.58607
Compatibility	87	2.00	5.00	4.0207	.80176
Flexibility	87	2.67	5.00	4.1188	.64294
Intellectual capital	87	3.00	5.00	4.2506	.64715
Valid (listwise)	N87				

In table (3), overall attitudes towards variables of study were analyzed; it appeared that all variables scored higher than mean of scale referring to the fact that all respondents had positive attitudes towards them. Most positively answered variable appeared to be "Relevance" scoring a mean of 4.32 which is considered to be higher than mean of scale 3.00.

### Hypotheses Testing

*H: AIS application support intellectual capital within commercial banks in Jordan*

**Table (4): Testing of Main Hypothesis**

Model Summary						
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	.894 <sup>a</sup>	.799	.787	.29880		
ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	28.786	5	5.757	64.481	.000 <sup>b</sup>
	Residual	7.232	81	.089		
	Total	36.017	86			
Coefficients						
Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	.565	.285		1.986	.050
	Control	.178	.062	.247	2.880	.005
	Accountability	.346	.079	.375	4.390	.000
	Relevance	-.098	.106	-.089	-.925	.357

Compatibility	.087	.090	.108	.974	.333
Flexibility	.399	.103	.396	3.884	.000

Table (4) showed results of multiple regression which was used to test this hypothesis; it was seen that F value was significant at 0.05 level which accepts that fact that intellectual capital within commercial banks in Jordan, to further focus on the this result, an R value of 0.894 was seen present which indicated that the independent variables explain 79.9% of the variance in the dependent variable.

### Sub-hypotheses

*Ha: Control in AIS support intellectual capital within commercial banks in Jordan*

**Table (5): Testing of Ha**

Model Summary						
Model		R	R Square	Adjusted R Square	Std. Error of the Estimate	
1		.683 <sup>a</sup>	.466	.460	.47560	
ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	16.791	1	16.791	74.230	.000 <sup>b</sup>
	Residual	19.227	85	.226		
	Total	36.017	86			
Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.344	.227		10.318	.000
	Control	.493	.057	.683	8.616	.000

In table (5) above, 1<sup>st</sup> sub-hypothesis was tested depending on linear regression, F value was significant at 0.05 level and an R value of 0.683 was reached; this indicated that Control in AIS support intellectual capital within commercial banks in Jordan, and explains 46.6% of the variance in the dependent variable.

*Hb: Accountability in AIS support intellectual capital within commercial banks in Jordan*

**Table (6): Testing of Hb**

Model Summary					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	
1	.803 <sup>a</sup>	.645	.641	.38782	
ANOVA					
Model	Sum of Squares	df	Mean Square	F	Sig.

1	Regression	23.233	1	23.233	154.467	.000 <sup>b</sup>
	Residual	12.785	85	.150		
	Total	36.017	86			

		Coefficients		t	Sig.
Model		Unstandardized Coefficients	Standardized Coefficients Beta		
	B	Std. Error			
1	(Constant)	1.193	.250	4.780	.000
	Accountability	.741	.060	12.428	.000

In table (6) above, 2<sup>nd</sup> sub-hypothesis was tested depending on linear regression, F value was significant at 0.05 level and an R value of 0.803 was reached; this indicated that Accountability in AIS support intellectual capital within commercial banks in Jordan, and explains 64.5% of the variance in the dependent variable.

**Hc:** *Relevance in AIS support intellectual capital within commercial banks in Jordan*

**Table (7): Testing of Hc**

		Model Summary		Std. Error of the Estimate
Model	R	R Square	Adjusted R Square	
1	.498 <sup>a</sup>	.248	.240	.56432

		ANOVA		F	Sig.
Model		Sum of Squares	df		
1	Regression	8.949	1	8.949	28.102 <sup>b</sup>
	Residual	27.068	85	.318	
	Total	36.017	86		

		Coefficients		t	Sig.
Model		Unstandardized Coefficients	Standardized Coefficients Beta		
	B	Std. Error			
1	(Constant)	1.869	.453	4.121	.000
	Relevance	.550	.104	5.301	.000

In table (7) above, 3<sup>rd</sup> sub-hypothesis was tested depending on linear regression, F value was significant at 0.05 level and an R value of 0.498 was reached; this indicated that relevance in AIS support intellectual capital within commercial banks in Jordan, and explains 24.8 % of the variance in the dependent variable.

**Hd:** *Compatibility in AIS support intellectual capital within commercial banks in Jordan*

**Table (8): Testing of Hd**  
**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.815 <sup>a</sup>	.664	.660	.37757

		ANOVA		F	Sig.
Model		Sum of Squares	df		
1	Regression	23.900	1	23.900	167.646 <sup>b</sup>
	Residual	12.118	85	.143	
	Total	36.017	86		

		Coefficients		t	Sig.
Model		Unstandardized Coefficients	Standardized Coefficients Beta		
	B	Std. Error			
1	(Constant)	1.607	.208	7.720	.000
	Compatibility	.658	.051	12.948	.000

In table (8) above, 4<sup>th</sup> sub-hypothesis was tested depending on linear regression, F value was significant at 0.05 level and an R value of 0.815 was reached; this indicated that compatibility in AIS support intellectual capital within commercial banks in Jordan, and explains 66.4 % of the variance in the dependent variable.

**He:** *Flexibility in AIS support intellectual capital within commercial banks in Jordan*

**Table (9): Testing of He**

		Model Summary		Std. Error of the Estimate
Model	R	R Square	Adjusted R Square	
1	.721 <sup>a</sup>	.520	.515	.45086

		ANOVA		F	Sig.
Model		Sum of Squares	df		
1	Regression	18.739	1	18.739	92.189 <sup>b</sup>
	Residual	17.278	85	.203	
	Total	36.017	86		

		Coefficients		t	Sig.
Model		Unstandardized Coefficients	Standardized Coefficients Beta		
	B	Std. Error			
1	(Constant)	1.260	.315	3.998	.000
	Flexibility	.726	.076	9.602	.000

In table (9) above, 4<sup>th</sup> sub-hypothesis was tested depending on linear regression, F value was significant at 0.05 level and an R value of 0.721 was reached; this

indicated that flexibility in AIS support intellectual capital within commercial banks in Jordan, and explains 52 % of the variance in the dependent variable.

## **DISCUSSION, CONCLUSION AND RECOMMENDATIONS**

Current study aimed at examining the level of support and help presented by AIS applications to the intellectual capital of the organization among commercial banks in Jordan through the fiscal year 2019-2020. Reaching such aim was done through adopting a quantitative approach depending on a questionnaire and distributing it on (87) individuals within commercial banks in Jordan.

### **Results of study indicated the following:**

- There is a positive influence of AIS in supporting intellectual capital within commercial banks in Jordan that is attributed to the presentation of precise and accurate information to managers and stakeholders which helps in decision making process.
- Sample of study appeared to have full awareness of the importance of intellectual capital in terms of its ability to influence the performance of the organization including the financial performance.
- Among chosen variables of (Control, Accountability, Relevance, Compatibility and Flexibility), it appeared that all those variables were influential on the intellectual capital of the organization. The most influential variable appeared to be "compatibility" scoring an R value of 0.815 and contributing to 66.4% of the variance. Other variables appeared all to be influential and contributed to increasing the efficiency of intellectual capital through supporting its approaches and tools.

It was seen from results above that AIS proved its influence on intellectual capital within organizations; this influence appeared on three different levels:

### **Human Capital**

Results indicated that AIS application in all its types can help in maximizing the support and help presented to intellectual capital in the knowledge that exists in the minds of the organization's workers, whether they are creative workers or ordinary workers who possess a percentage of knowledge commensurate with their capabilities and this knowledge is represented by skills, creativity and applied experience that enables them to interact with customers and the ability to solve business problems.

### **Structural Capital**

Support of AIS to structural capital can be represented through giving the organization explicit, implicit, hidden, and embodied knowledge of the organization's routine,

which is present within the organization's boundaries and operations, and includes buildings, devices, computers, software, patents and trademarks, through which the organization can face the changes that occur in the environment.

### **Relational Capital**

Through information presented by AIS to intellectual capital of the organization; there would be a chance for the organization to be acquainted with knowledge that the customers have (the customer's loyalty to the organization), which has become imperative. The organization must acquire this knowledge that its customers have to complete its intellectual capital and thus cooperate with them to satisfy their needs and desires.

According to current study results, the relationship that combines intellectual capital and accounting information systems is a relationship based on the nature of the benefits that they add to the latter, meaning that accounting information systems support the intellectual capital within their function in providing information that will enhance the decision-making process, since accounting information systems are not only accounting systems, rather, they are operational systems that are directly and basically directed towards the information wealth activity in the organization which rhymes with what was agreed on by Piontkewicz et al (2016).

In addition, the information provided by accounting information systems actively contributes to supporting the intellectual capital in the organization by providing information about the reality of the organization in terms of internal operations, its reality in the market and its relationships with competitors in view of the digital data developed by the accounting information systems which help stakeholders and managers in their decision making process.

Also, Afaneh (2019) agreed with current study results which stated that the accounting information systems provide the necessary support for the intellectual capital by generating financial information that enhances the management's ability to control costs and thus control losses and achieve the desired goals. And based on the idea that accounting information systems are actually providing information, it is worth noting that intellectual capital is a combination of knowledge, information, intellectual characteristics and creative experiences that workers in the organization possess, meaning that accounting information systems are actually providing what intellectual capital need in order to continue and evolve as AbdulRaheem (2018) noted before.

In conclusion, the study has proven the importance of accounting information systems provide because of the useful information they provide to management and

leadership in the decision-making process and its rationalization if it is best used in an effective scientific way based on accuracy in the feeding and operation of accounting data, in addition to the presentation, analysis, form and appropriate time to provide information accounting on demand. This benefit was represented in supporting the administration in preparing and operating these facilities and protecting them from the problems encountered in the present and future, and to raise the performance to its highest levels, and then achieve its generally desired objectives.

The current study may contribute to drawing attention to the importance of accounting information systems and their positive impact on the intellectual capital of the organization, in terms of qualification, training and providing the necessary information that would help in managing financial crises by increasing attention to indicators of success of accounting information systems, and improving the degree its presence in banks to raise the level of success of these systems, especially since the study demonstrated the success of these systems in supporting intellectual capital at all levels, which would support organizations in the face of crises that threaten their survival and continuation.

According to what was mentioned above, current study recommends the following:

- The necessity of focusing the efforts of organizations and their management on paying attention to intellectual capital and its components, as it is a very important feature of the organization through which it can compete to support the creative development process.
- The need to develop the skills of workers in the field of accounting information systems through training courses to see all that is new and necessary in the field of computerized accounting in order to raise efficiency and confidence.

Among the most important methods that help in developing the impact of accounting information systems and intellectual capital in organizations are:

A- Proper and effective recruitment, which is represented in attracting qualified individuals for the purpose of selecting them to fill vacant jobs in the organization.

B - Skill and knowledge: As organizations need individuals who possess knowledge and skill, they are a vast store of skills and knowledge. Therefore, organizations must encourage intelligence and encourage innovation and creativity.

C-Preserving the existing human resources: This is done through continuous training, compensation, and material and moral incentives in order to preserve its intellectual

capital.

D - Attention to the beneficiaries: It is represented in maintaining customers and meeting their needs and desires, as customer satisfaction is the focus of the organizations' success.

## REFERENCES

- AbdulRaheem, A. (2018). **Role of Intellectual Capital Information in Financial Performance Evaluation in Higher Education Institutions in Sudan**, (PhD Dissertation, UmDerman Islamic University) – Sudan
- Abhayawansa, S., Guthrie, J., & Bernardi, C. (2019). Intellectual capital accounting in the age of integrated reporting: a commentary. *Journal Of Intellectual Capital*, 20(1), 2-10. doi: 10.1108/jic-01-2019-223
- Afaneh, A. (2019). **The Impact of Accounting Measurement and Disclosure of Intellectual Capital and Social Responsibility on Evaluating the Performance of Banking: A Case Study on Local Palestinian Banks-Gaza**, (PhD Dissertation, UmDerman Islamic University) – Sudan
- Al-Musali, M. A., & Ismail, K. N. I. K. (2016). Cross-country comparison of intellectual capital performance and its impact on financial performance of commercial banks in GCC countries. *International Journal of Islamic and Middle Eastern Finance and Management*, 9(4), 512-531
- Al-Obaidi, N. (2008). The role of the components of intellectual capital in the effectiveness of marketing information systems (MIS), *Tikrit Journal of Administration and Economics Sciences*, 4(9), 21-46
- Alrabei, A. M. A. (2014). The impact of accounting information system on the Islamic Banks of Jordan: an empirical study. *European Scientific Journal*, 10(4).
- Amin, S., & Aslam, S. (2017). Intellectual capital, innovation and firm performance of pharmaceuticals: A study of the London Stock Exchange. *Journal of Information & Knowledge Management*, 16(02), 1750017.
- Asatiani, A., Apte, U., Penttinen, E., Rönkkö, M., & Saarinen, T. (2019). Impact of accounting process characteristics on accounting outsourcing-Comparison of users and non-users of cloud-based accounting information systems. *International Journal of Accounting Information Systems*, 34, 100419.

- Berquedich, M., Kamach, O., Masmoudi, M., & Deshayes, L. (2017, April). Agile decision support system for the management of tensions in emergency services using AIS techniques. In *2017 International Colloquium on Logistics and Supply Chain Management (LOGISTIQUA)* (pp. 118-123). IEEE.
- Chen, P., Shi, G., Liu, S., & Zhang, Y. (2018, July). Decision support based on artificial fish swarm for ship collision avoidance from AIS data. In *2018 International Conference on Machine Learning and Cybernetics (ICMLC)* (Vol. 1, pp. 31-36). IEEE.
- Chiu, C. M., Liang, T. P., & Turban, E. (2014). What can crowdsourcing do for decision support?. *Decision Support Systems*, 65, 40-49.
- Dumay, J., & Guthrie, J. (2019). Reflections on interdisciplinary critical intellectual capital accounting research. *Accounting, Auditing & Accountability Journal*, 32(8), 2282-2306. doi: 10.1108/aaaj-08-2018-3636
- Guthrie, J., & Dumay, J. (2019, May). Intellectual Capital Accounting Research Analysed Over the Past Two Decades. In *European Conference on Intangibles and Intellectual Capital* (pp. 389-XI). Academic Conferences International Limited.
- Hamdan, A. (2018). Intellectual capital and firm performance. *International Journal of Islamic and Middle Eastern Finance and Management*, 11(1), 139-151.
- Hasibuan, M. A. (2020). Effect Of Accounting Information System Effectiveness, Information Technology Utilization And Task Fit On Performance With Work Satisfaction As Moderating Variables In The Education Office Of North Sumatera Province. *International Journal of Public Budgeting, Accounting and Finance*, 2(4), 1-11.
- Hutahayan, B. (2020). The mediating role of human capital and management accounting information system in the relationship between innovation strategy and internal process performance and the impact on corporate financial performance. *Benchmarking: An International Journal*, 27(4), 1289-1318. doi: 10.1108/bij-02-2018-0034
- Iskandar, D. (2015). Analysis of factors affecting the success of the application of accounting information system. *International Journal of scientific & Technology research*, 4(2), 155-162.
- Ismail, N. A., & King, M. (2014). Factors influencing the alignment of accounting information systems in small and medium sized Malaysian manufacturing firms. *Journal of Information Systems and Small Business*, 1(1-2), 1-20.
- Kianto, A., Sáenz, J., & Aramburu, N. (2017). Knowledge-based human resource management practices, intellectual capital and innovation. *Journal of Business Research*, 81, 11-20.
- Mancini, D., & Lamboglia, R. (2017). Accounting information system and transparency: A theoretical framework. In *Reshaping Accounting and Management Control Systems* (pp. 249-261). Springer, Cham.
- Mandala, I. G. N. A. K., & Astika, I. B. P. (2019). Effect of work environment, quality of system and work culture on satisfaction of accounting information system user. *International research journal of management, IT and social sciences*, 6(4), 37-43.
- Meles, A., Porzio, C., Sampagnaro, G., & Verdoliva, V. (2016). The impact of the intellectual capital efficiency on commercial banks performance: Evidence from the US. *Journal of Multinational Financial Management*, 36, 64-74.
- Mirzaey, M., Jamshidi, M. B., & Hojatpour, Y. (2017). Applications of artificial neural networks in information system of management accounting. *International Journal of Mechatronics, Electrical and Computer Technology*, 7(25), 3523-3530.
- Mohammed, A. A., & Irbo, M. M. (2018). Intellectual capital and firm performance nexus: evidence from Ethiopian private commercial banks. *International Journal of Learning and Intellectual Capital*, 15(3), 189-203.
- Nakhaei, H., Nakhaei, K., & Ahmadimousaabad, A. (2014). Surveying the Effect of Qualitative Characteristics of Accounting Information on Improvement of Management Decisions. *International Research Journal of Applied and Basic Sciences*, 8(6), 645-648.
- Novas, J., Alves, M., & Sousa, A. (2017). The role of management accounting systems in the development of intellectual capital. *Journal Of Intellectual Capital*, 18(2), 286-315. doi: 10.1108/jic-08-2016-0079
- Oppong, G. K., & Pattanayak, J. K. (2019). Does investing in intellectual capital improve productivity? Panel evidence from commercial banks in India. *Borsa Istanbul Review*, 19(3), 219-227.

- Pelich, R., Longép , N., Mercier, G., Hajduch, G., & Garelo, R. (2014). AIS-based evaluation of target detectors and SAR sensors characteristics for maritime surveillance. *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, 8(8), 3892-3901.
- Piontkewicz, R., Maria do Carmo, D. F., Kemczinski, A., & San Martin, C. D. (2016, May). Management of intellectual capital in a system of management accounting information. In *2016 6th International Conference on Computers Communications and Control (ICCCC)* (pp. 180-187). IEEE.
- Ramazani, M., & Allahyari, A. (2013). Compatibility and Flexibility of Accounting Information Systems. *Journal of Emerging Trends in Computing and Information Sciences*, 4(3).
- Sekaran, U. & Bougie, R. (2010). Research methods for business: **A skill building approach**. John Wiley & Sons.
- Shuhidan, S. M., & Nori, W. M. N. W. M. (2015). Accounting information system and decision useful information fit towards cost conscious strategy in Malaysian higher education institutions. *Procedia Economics and Finance*, 31, 885-895.
- Sinarasri, A. (2019, November). The Antecedents and Consequences of Accounting Information System Implementation: An Empirical Study on MSMEs in Semarang City. In *5th International Conference on Accounting and Finance 2019 (ICAF 2019)*. Atlantis Press.
- Sori, Z. M. (2009). Accounting information systems (AIS) and knowledge management: a case study. *American Journal of scientific research*, 4(4), 36-44.
- Stefanou, C. (2006). The complexity and the research area of AIS. *Journal Of Enterprise Information Management*, 19(1), 9-12. doi: 10.1108/17410390610636841
- Teru, S. P., & Hla, D. T. (2015). Appraisal of Accounting Information System and Internal Control Frameworks. *International Journal of Scientific and Research Publications*, 5(9), 1-3.
- Volkova, V. N., Vasiliev, A. Y., Efremov, A. A., & Loginova, A. V. (2017, May). Information technologies to support decision-making in the engineering and control. In *2017 XX IEEE International Conference on Soft Computing and Measurements (SCM)* (pp. 727-730). IEEE.