

# Learning Organization and Intellectual Capital: An Empirical Study of Jordanian Banks

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## Abstract

The purpose of this paper is to investigate empirically the relation between the learning organization and intellectual capital Jordanian banking industry. The intellectual capital is measured by three dimensions, namely, human capital, structural capital, and customer capital. 86 Questionnaires are sent to managers and executives in Jordanian banks headquarters using convenience sample, however, 66 questionnaires were returned and the response rate is 77%. Quantitative approach is employed to test the proposed research hypotheses; correlation analysis and regression analysis are conducted. The results support the hypothesis that learning organization has a positive impact on banks intellectual capital. The results extend the understanding of the role of organizational learning in creating intellectual capital and building sustainable advantages for banks in emerging economies.

**Keywords:** Banking Industry, Intellectual Capital, Learning Organizations, Hypotheses Testing, Jordan.

## 1. Introduction

The increase of knowledge and its relationship with the learning process is a very important for all centuries (Blumentritt and Johnston, 1999). Organizational learning occurs through a process of acquiring, sharing, and integrating new knowledge from outside the firm as well as inside the firm (Crossan, Lane, & White, 1999; Argote & Ingram, 2000). Some investigators found that a focus on organizational learning has great potential to build the collaboration and continuous improvement programs that promote organizational performance (Levine, 2001, Holland, 2010).

Organizational intellectual capital represents technologies and other mechanisms that assist employees in

creating revenues for organizations such as communication systems, data bases, policies, procedures, technical systems, and other devices (Boisot, 2002; Ordoñez de Pablos, 2003). Recently, Intellectual capital can include the skills and knowledge that a company has developed about how to make its goods or services (Hernández & Noruzi, 2010). However, there is no clear direction as to how intellectual capital develops or how to institute management planning and control processes to ensure that intellectual capital inventories grow or are at least maintained (Issac et al. 2010). Nowadays, it is important to understand what a learning organization is, what its characteristics are and how it relates to the emerging topic of intellectual capital.

There is much evidence for active learning by banks. Retail banks were the outcome of much learning (through crisis, failure, error, fraud, etc.) over at least 300 years. Banks have not historically been good at learning and at exploiting prior lessons during periods of stability. Much learning has arisen during bank crises and subsequent regulation based on best practice (Holland, 2010). Harris (2002) provides evidence that learning from past mistakes, or even building upon past successes, continues to be the exception rather than the rule. Banks had to learn about these problems and their solutions via direct actions and transactions and via a strategy of active bank development. Learning arose via an iterative feedback process during active internal change and external transacting and associated errors, failures and successes, rather than through a rational ordered decision process (Holland, 2010).

In Jordan, the banking industry has been undergoing a tremendous change in the past few years. There are many changes in the number and variety of products offered because of the branching or mergers and acquisitions of banks. The intensity of competition and information technology growth within a harsh environment has led to restructuring of some retail banks (Al-Weshah and Deacon, 2009). Banks which are main player in the Jordanian business environment have a deal with intellectual capital and have all basics of the learning organization which can support the intellectual capital. Therefore, banking industry has to adopt the concept of learning organization as a solution to cope with this a problematic situation based on its intellectual capital.

This highlights the importance of the creation of intellectual capital as a critical component of an organization's ability to learn and adapt. This will be developed further in this paper as a focal point for analysis of the synergies between the learning organization and intellectual capital. Therefore, this paper provides an explanation of the relationship between the learning organization (LO) as an entity and intellectual capital (IC) on the organizational level.

## **2. Learning organizations**

Senge (1990) was one of those who early defined the learning organization as an entity within which people continually expand their capacity to create the results they desire. Senge (1990) defined the Learning Organization (LO) as the strategies and initiatives for improving organizational effectiveness through emphases on developing the capabilities, capacities and qualities of the staff, and on approaches based on behavioral and attitudinal, as well as skills enhancement.

The concept of organizational learning has taken its prominence in the past several decades as a way to

achieve competitive advantage. That's why companies are urged to become "learning organizations" to develop their learning capability for survival and maintaining competitiveness (Hong, 1999). Organizational learning occurs through a process of acquiring, sharing, and integrating new knowledge from outside the firm as well as inside the firm (Crossan, Lane, & White, 1999; Argote & Ingram, 2000). Al-Weshah et al (2011) confirmed that electronic networks can assist an organisation to discover and share knowledge and learning within the organisation and from entities outside organisation.

Thurbin (1994) defined learning organization as one, which improves its knowledge and understanding of itself and its environment over time, by facilitating and making use of the learning of its individual members. The "learning organization" is the generic term given to strategies and initiatives for improving organizational effectiveness through emphases on developing the capabilities, capacities and qualities of the staff, and on approaches based on behavioural and attitudinal, as well as skills, enhancement (Pettinger, 2002). Chetley and Vincent (2003) defined the development of a learning organisation as an ongoing, systematic process requiring trust and a recognition of the subtlety and complexity of human relations and describe three stages in this process; firstly, individuals and teams are encouraged and supported to learn; Secondly, these processes are socialised or institutionalised; and thirdly, learning is at the heart of an organization, meaning that learning is used to transform and develop the organization. Revans (1998) proposed a model of how learning should occur in organisations. He argued that learning should be greater than or equal to the rate of change in the environment. If not, then the firm would be unable to achieve a sustainable competitive advantage (SCA). This idea is clearly relevant to the core learning errors made by failing banks during the 2007-2009 Crisis and to bank specific mistakes in previous periods (Holland, 2010). Uzzi and Lancaster (2003) investigated learning in (bank lending and debt) markets between banks and firms. Bank-firm relationships formed networks and these shaped knowledge transfer and learning processes by creating the opportunities for knowledge trade and reducing the learning risks.

Mansor (2010) investigated the extensiveness of Bank Islam Malaysia Limited (BIMB) in Terengganu and Kelantan states in Malaysia as to the practice of OL. As been displayed by result on correlation analysis it seems that the awareness of OL had continuously shaped the Islamic Banking activities. But still there are rooms needed to be improved if the institutions are to be considered as one of the anchor bank in the future. There are some mistakes and errors individual bank learning and knowledge use. Learning in individual banks was not as systematic as the above multi case patterns suggested and arose via an iterative feedback process during errors, failures and successes (Holland, 2010). Therefore, this study investigates the learning and its relationship with intellectual capital in Jordanian banks

### **3. Intellectual capital**

Historically, financial and built capitals have been critical assets in the wealth creating process for organizations. More recently, these assets, which are recognized on the balance sheet, have taken a second place to more intangible forms of capital, which are generally not found on the balance sheet (Issac et al. 2010). Financial statements are insufficient to measure progress toward competitive advantage. Instead, intellectual capital assets, such as workforce knowledge and mechanisms, relationships, and organizational

structures, often not recognized on the balance sheet are critical to developing competitive advantage (Boulton et al., 2000; Lev, 2001; Low, 2000). Intellectual capital management processes must, therefore, endeavour to get employees to share knowledge, to question why they perform certain procedures, and to monitor the role that knowledge plays within the success of the organization (Issac et al. 2010).

Intangible assets have become more important to business success than the traditional factors of production - land, labor and financial capital (Edvinson & Malone, 1997; Stewart, 1998). Furthermore, organizational knowledge assets are a major component of these intangible assets. Intellectual capital is defined as the sum of intangible assets related to knowledge of a company that have been formalized, captured, and leveraged to produce a higher-valued asset and to create competitive advantage (Berry, 2004; Stewart, 1997; Subramaniam & Youndt, 2005). The most widely used definition of intellectual capital is "knowledge that is of value to an organization." Its main elements are human capital, structural capital, and customer capital. That definition suggests that the management of knowledge (the sum of what is known) creates intellectual capital (Bassi, 1997). Most of literatures insure that components of intellectual capital consist of human capital, structural capital and external (customer) capital. This problem was identified even earlier by Nonaka and Takeuchi (1995) who stated that "organizational learning theories basically lack the view that knowledge development constitutes learning and most OL theories concentrate on individual learning and have not developed a comprehensive view of learning at an organizational level". According to Sandelands (1999), organizations that are not able to embrace shared learning and knowledge generation at the organizational level simply disappear. Brown and Woodland (1999) added further insight into the learning/knowledge synergy by claiming that "it is impossible for an organization to sustain competitive advantage without constantly learning and developing new knowledge". Intellectual capital includes many issues such as data, information, intellectual property and experiences, which can be utilized to gain wealth (Rivette, 2000)

Organizational intellectual capital captures knowledge that exists within the organization, and we suspect that it arises from the human intellectual capital. Thus, its birth and evolution is highly dependent upon the workforce (Isaac et al. 2010). The theory of intellectual capital has emerged in the past decade in response to these advances within an organization. Although the theory is new and research is in the early formative stages, theoretical foundations have been identified as anchors of intellectual capital.

Some studies classified intellectual capital into human capital, structural capital, and relational capital (Johnson, 1999; Bontis, 1999; Bozbura, 2004). Ismail (2008) Classified intellectual capital into human capital, customer capital, and structural capital. Moreover, Kiran (2008) classified intellectual capital into human capital, customer capital, and social capital. However, the literature on intellectual capital has deployed a variety of different classification schemes (i.e. Petrash 1996, Walsh et al, 2008, Hernández & Noruzi, 2010). There are widely accepted, three-category classification, which divides intellectual capital into codified knowledge about an organization's systems and operations (systems capital); knowledge about customers, markets, and distribution (customer capital); and knowledge acquired from people skills and expertise (human capital) (Stewart 1997, Bontis and Fitz-enz 2002; Walsh et al, 2008).

Regarding research on intellectual capital, early research brought awareness to the existence of intellectual capital inventories within organizations and the need to manage, monitor, and measure them, but few researchers have empirically studied what internal conditions lead to the development of these important assets (Isaac et al, 2010). In developing countries, Seleim et al. (2007) test empirically a variety of hypotheses related to human capital and organizational performance within software companies in Egypt. The results provide evidence that certain types of human capital indicators show a positive statistically significant relationship with company performance. Specifically In banking industries, El-Bannany (2008) investigated the determinants of intellectual capital performance in the UK banks over the period 1999-2005. The results indicated that investment in information technology (IT) systems; bank efficiency, barriers to entry and efficiency of investment in intellectual capital variables have a significant impact on intellectual capital performance. Cabrita and Bontis (2008) examined the inter-relationships and interactions among intellectual capital components and business performance in the Portuguese banking industry. The findings confirmed that intellectual capital has a significant and substantive impact on performance.

Goh (2005) measured the intellectual capital performance of commercial banks in Malaysia for the period 2001 to 2003, using efficiency coefficient called VAIC<sup>TM</sup> developed by Ante Pulic. The findings indicate that all banks have relatively higher human capital efficiency than structural and capital efficiencies. In Jordan, Bataineh & Al-Zoabi (2011) investigated the effect of intellectual capital on organizational competitive advantage in Jordanian commercial banks. The findings indicated that there are strong significant and positive influences between human and structural capital on competitive advantage, and moderate significant and positive influences with relational capital.

Therefore, there is a growing awareness that intellectual capital is a key asset for development in today's environment. Intellectual capital is not only includes data or information in files and databases but It is also comprises all useful knowledge in its all forms in the organization. Therefore, this study investigates the relationships between and learning organization in Jordanian banks.

#### **4. Learning organization and intellectual capital**

Most literatures addressing IC have focused on the correlation between IC and organizational performances (Chong and Lin, 2008; Ho, 2009). There are relatively few discussions on the relationship between LO and IC, and even fewer studies on such a relationship in the banking industry. The core competitiveness of the banking industry is highly reliant on the ability of management teams to systematically being a learning organization Few studies were conducted to discover the relationship between the learning organization and the intellectual capital in the banking industry.

today's organizations should try to use learning organizations paradigm to be competitive. Also because our contemporary organizations may differ from the traditional organizations and so we should implement new skills to be learning organization so that our staff can adjust themselves with new technologies (Hernández & Noruzi, 2010). Learning enables a company to transfer information to valued knowledge, which in turn,

enriches organizational capability of adapting to environmental changes and demand (Yang 2003).

The literature addressing the learning organization is largely descriptive and conceptual in nature. Although many authors have described why a learning organization should work, there are few specific descriptions about the mechanics of how the learning organization as a strategy works to improve performance (Kaiser, 2000; Bates & khasawneh, 2005). Artie (2006) adopted case studies of wireless technology companies based in Canada to examine the interrelationship between intellectual capital components with a resource-based view. The findings confirmed the interrelationship between components of intellectual capital and business growth performance among the selected cases of wireless technology companies.

Building a learning organization is an important challenge for Jordanian banks. Learning organizations and the Intellectual capital became one of the most important issues that affect all kind of business including banking industry which faces a demand for better products and services has a triggered growing in the in the managerial development, this development can be reach by enhancing in the intellectual capital that the same organization can achieve it by the nature of being a learning organization. Al-Weshah et al (2010) stated that banks in Jordan are one of the largest investors in the fields of knowledge and information systems (IS). Therefore, this paper examines LO and IC empirically to generalize important factors concerning LO and IC of banks. The major purpose of this study is to explore the relationship between LO and IC through the construction of the correlation patterns between these two elements.

##### **5. The study aim and objectives**

The aim of this study is to measure how learning organization supports the intellectual capital. More specifically, the intellectual capital is measure by three dimensions (human capital, structural capital, and customer capital, therefore, the current study attempts to test some research hypotheses. the research main hypothesis is, learning organization has positive impact on intellectual capital. In order to test this hypothesis, three other sub- hypotheses:

- Learning organization has positive impact on human capital.
- Learning organization has positive impact on structural capital.
- Learning organization has positive impact on customer capital.

##### **6. The study methodology**

The current study employs the quantitative approach of research. More specifically, hypotheses testing approach are used to achieve the study aim and objectives. A self-administrated questionnaire has been developed as data collection methods from managers and executives who work in headquarters of Jordanian banks using convenience sample. 86 questionnaires were sent managers and executives in Jordanian banks. A follow up procedure was employed by telephone or personally after two to three weeks.

Only 66 questionnaires were returned with response rate is 77%. Table 1 show the respondents positions in their banks.

**Table 1: Respondents' positions in their banks**

Respondents' position	Respondents number	Respondents percentages
Information systems managers	12	18%
Strategic planning managers	11	17%
Marketing mangers	13	19%
Financial managers	11	17%
Human resources managers	10	15%
Research and development managers	9	14%
Total	66	100%

For the questionnaire validity, the questionnaire was "pilot-examined" by interviewing 10 managers and experts in the banking industry who agreed to fill in the questionnaire and also to comment on the scales employed. Then, their suggestions were collected and considered to improve validity of questionnaire. Moreover, the questionnaire was pretested by sending three questionnaires to different managers in Jordanian banks to get their comments and feedback. Although the executives' comments are considered in the final version of the questionnaire, they are not selected later to fill the latter questionnaire.

For the questionnaire reliability, Cronbach's alpha was used as a measure of internal consistency reliability. A widely cited minimum threshold for the Cronbach Alpha is 0.70 (Malhotra, 2004). However, the calculated Cronbach's Alpha for the questionnaire as whole was 0.89 percent. 89% indicates to high internal consistency among the questions in the questionnaire instrument.

## 7. Hypotheses test and analysis

In order to test research hypotheses, SPSS software (Statistical Package for Social Sciences) has been used. The results of the analysis have been discussed below.

**Table 2: The first hypothesis:** Learning organization has positive impact on human capital:

	Dependent variable	Independent Variable	R square	Standard $\beta$	T test	Result
<b>Hypothesis 1</b>	<i>Intellectual Capital</i>	<i>Learning Organization</i>	0.299	0.280	3.930	<u><i>Confirmed</i></u>

According to the results, Beta Standard ratio is calculated 0.280 which is significant. The slope of line (0.280) indicates the expected change in intellectual capital (human capital) when learning in a bank is

changed by one unit.  $R^2$  ratio is the proportion of variation (change) in intellectual capital (human capital) that can be explained by learning organization. Therefore, this ratio (0.299) indicates to the relative contribution of learning in supporting intellectual capital (human capital) in the Jordanian banks. Thus, this hypothesis is confirmed and learning organization has positive impact on human capital.

**Table 3: The second hypothesis:** Learning organization has positive impact on structural capital:

Hypothesis 2	Dependent Variable	Independent Variable	R square	Standard $\beta$	T test	Result
	<i>Intellectual Capital</i>	<i>Learning Organization</i>		0.253	0.184	2.645

According to the results, Beta Standard ratio is calculated 0.184 which is significant. The slope of line (0.184) indicates the expected change in intellectual capital (structural capital) when learning in a bank is changed by one unit.  $R^2$  ratio is the proportion of variation (change) in intellectual capital (structural capital) that can be explained by learning organization. Therefore, this ratio (0.253) indicates to the relative contribution of learning in supporting intellectual capital (structural capital) in the Jordanian banks. Thus, this hypothesis is confirmed and learning organization has positive impact on structural capital.

**Table 4: The third hypothesis 3:** Learning organization has positive impact on customer capital

Hypothesis 3	Dependent variable	Independent Variable	R square	Standard $\beta$	T test	Result
	<i>Intellectual Capital</i>	<i>Learning Organization</i>		0.207	0.225	3.339

According to the results, Beta Standard ratio is calculated 0.225 which is significant. The slope of line (0.225) indicates the expected change in intellectual capital (customer capital) when learning in a bank is changed by one unit.  $R^2$  ratio is the proportion of variation (change) in intellectual capital (customer capital) that can be explained by learning organization. Therefore, this ratio (0.225) indicates to the relative contribution of learning in supporting intellectual capital (customer capital) in the Jordanian banks. Thus, this hypothesis is confirmed and learning organization has positive impact on customer capital.



## **8. Results and conclusions**

The aim of this study is to measure how learning organization support the intellectual capital in Jordanian banks. More specifically, the intellectual capital is measured by three dimensions (human capital, structural capital, and customer capital). The concepts of the LO and IC have been shown to be closely related and mutually supporting. The hypotheses testing approach show that learning in Jordanian banks has positive impact on supporting intellectual capital by its three dimensions (human capital, structural capital, and customer capital). The results support the hypothesis that learning organization has a positive impact on banks intellectual capital. The results extend the understanding of the role of organizational learning in creating intellectual capital and building sustainable advantages for banks in emerging economies.

Therefore, it is not sufficient that organizations learn something new, but the new knowledge needs to be applied to a strategic context and needs to be relevant in that context (Bontis et al., 2001). Intellectual capital is recognized as one of the most critical factors for the success of banks in a knowledge-based economy. By ensuring better bank learning, knowledge creation and use, the banks policy makers can help support intellectual capital components and reduce banks risks of future crisis.

The banking industry must invest to transform to the learning organization which in then will increase the intellectual capital, consequently it will go forward in the competitive globalized environment. The study can consider that skills of human resources in Jordanian banks are appropriate to transform their banks into learning organizations. Building a learning organization is an important challenge for Jordanian banks. Learning organizations and the Intellectual capital became one of the most important issues that affect all kind of business including banking industry which faces a demand for better products and services has a triggered growing in the in the managerial development, this development can be reach by enhancing intellectual capital issues in Jordanian banks.

## **9. The study recommendations for practice**

In the light of the study findings, the current study proposes some recommendation for banks managers and executives. More specifically, LO and the IC are inextricably linked to the extent that they should taken in mind of the banking industry planners and decision makers. Moreover, banks should focus on the total inter-organization learning process (i.e. the creation of new corporate knowledge from the total environment within which the bank operates) and the nurturing of the cultural environment that supports and ensures its continuing development. In Jordanian banks, training approach can be employed to enhance learning organization concepts in their staff minds. On the other hand, intellectual capital is not just data or information in files and databases. It comprises all useful and available knowledge in several forms for banks managements. Therefore, it is critically important that intellectual assets be well understood and properly managed if banks are to compete successfully in today's world environment.

## **10. The study recommendations for further research**

In the light of the study limitations, the current study proposes some recommendation for future research. More specifically, future studies can consider more variables concerned with learning organizations and

intellectual capital such as knowledge management and information technologies. Management of intellectual capital is in its infancy, but interest is growing. Therefore, models and measurements can be developed by different research areas. Moreover, future studies can extend this analysis to different industries such as insurance companies and manufacturing. Methodologically, future studies can employ the qualitative approach of research to gain deep understanding for issues of learning organizations and intellectual capital.

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