



GLOBAL JOURNAL OF MANAGEMENT AND BUSINESS RESEARCH: D
ACCOUNTING AND AUDITING
Volume 14 Issue 2 Version 1.0 Year 2014
Type: Double Blind Peer Reviewed International Research Journal
Publisher: Global Journals Inc. (USA)
Online ISSN: 2249-4588 & Print ISSN: 0975-5853

An Empirical Test of the Effect of Intangible Capital on Financial Performance and Market Value in the Jordanian Companies

By Dr. Abdelwahab Salameh Al Matarneh

Zarqa University, Jordan

Abstract- The effect of Intangible capital on the financial performance of all the companies is still poorly defined. Intangible capital for all companies in the third millennium can be considered as a competitive advantage. In the modern era, organisations make use of two distinct sources for value creation and profit which are tangible and intangible resources. The main objective of this research thesis is to explore the effect of intangible capital on the financial performance and market value of Jordanian companies. For this reason, we are going to carry out an empirical study drawn from 51 listed companies in Amman Stock Exchange from 2007 till 2012. Intangible capital has been given more attention among the companies of developed nations such as USA, Italy, Australia and others. The results were analysed by using Palic method. The results achieved show that there is a significant relationship between intangible capital with market value and the financial performance of all the active companies. Applicable results of this study suggest the importance of intangible capital in financial performance of companies.

Keywords: *intangible capital, value creation, financial performance, market value, jordan.*

GJMBR-D Classification : *JEL Code: M31, N20*



Strictly as per the compliance and regulations of:



An Empirical Test of the Effect of Intangible Capital on Financial Performance and Market Value in the Jordanian Companies

Dr. Abdelwahab Salameh Al Matarneh

Abstract- The effect of Intangible capital on the financial performance of all the companies is still poorly defined. Intangible capital for all companies in the third millennium can be considered as a competitive advantage. In the modern era, organisations make use of two distinct sources for value creation and profit which are tangible and intangible resources. The main objective of this research thesis is to explore the effect of intangible capital on the financial performance and market value of Jordanian companies. For this reason, we are going to carry out an empirical study drawn from 51 listed companies in Amman Stock Exchange from 2007 till 2012. Intangible capital has been given more attention among the companies of developed nations such as USA, Italy, Australia and others. The results were analysed by using Palic method. The results achieved show that there is a significant relationship between intangible capital with market value and the financial performance of all the active companies. Applicable results of this study suggest the importance of intangible capital in financial performance of companies.

Keywords: *intangible capital, value creation, financial performance, market value, jordan.*

1. INTRODUCTION

Intangible capital (IC) is gaining importance in today's knowledge economy and plays a key role in improvement, productivity as well as in the performance and competitiveness of the organizations. The Intangible capital includes the following areas i.e. human resources, human resources research and development, organizational structure and processes technology and rights related to Intangible property, consumer networks and software. Management of Intangible capital is a field that uses creativity, new management techniques, information technologies and different ways of conceiving organization in the new post-industrial knowledge economy. Numerous attempts were made to the development of a widely accepted definition of Intangible capital. Klein and Prusak (1994) have contributed to the universal definition of IC as Intangible material that can be formalized, captured and exploited to produce higher value assets. In the same way, Edvinsson and Malone (1997) and Sullivan (2000) define IC as knowledge that can be converted into value. Stewart (1997) states that

the Intangible resources such as knowledge, experience and information, are the tools of wealth creation and defines Intangible capital as the new wealth of organizations.

Intangible capital (IC) represents the collective knowledge that is embedded in the personnel, organizational routines and network relationships of an organization (Stewart, 1997; Bontis & Choo, 2002; Kong, 2008). Intangible capital has been recognized as an essential resource that organizations need to develop to gain sustained competitive advantages (Chen, 2008; Kong & Prior, 2008; Schiuma & Lerro, 2008). Intangible capital can be defined as the economic value of three categories of intangible assets of a company that includes human capital, organisational capital and social capital collectively. Strategic analysts argue that sustained advantage can occur only in the situations in which physical, human, and organisational capital varies across the firms and where some firms may be unable to obtain necessary resources that are benefiting other firms. Intangible capital is viewed as a sub-set, where the term intangible relates to assets without physical existence and capital refers to assets retained by the organisation to contribute to future profits. Intangible resources are more likely to produce a competitive advantage because they often are rare and socially complex there by making them difficult to imitate (Black and Boal, 1994). Intangible capital is firm's overall or holistic capacity and capability which emerges from its creative and flexible orchestration and co-ordination of its human capital, innovativeness, proficiencies and capabilities, streamlined processes and expertise. Intangible capital bundles knowledge resources like constellation of employees, users, processes and technologies and work enabling a company to make a difference to users \pm . In the last decades academia has drawn attention to the role of knowledge in business development. A general consensus is that organizational capabilities are based on the management of knowledge for it is the source of organizational sustainability and competitive advantage. Given the intangible nature of knowledge, many concepts were anticipated in the academia and each try to capture a particular phenomenon. Though successful companies recognize that investing in knowledge is essential to their ability to create high value products and services.

Author : Assistant Professor, Accounting Department. Zarqa University, Jordan. e-mail: dr.abdelwahabmatarneh@yahoo.com

Identifying, valuing, managing Intangible assets is a very difficult task to business managers. Among the different notions, Intangible capital (IC) has been an interesting expression since FORTUNE magazine first published Thomas Stewart's writing in 1991.

Today, the use of intangible assets has a significant impact on the success and survival of the organizations, as it creates a new field of study and research in the management. The most important intangible assets that have been studied is Intangible capital and its derivatives. Productivity and business performance of many organizations depends on effective management of Intangible capital, create value by investing in Intangible capital and focus on Intangible capital as a source of competitive advantage (Costa, 2012). So, the identification, and management of Intangible capital have particular importance. Intangible capital is all non-monetary and non-communication resources that are fully or partially controlled by the company and will create value for the company (Ross et. al, 2005).

Intangible capital has grown in the field of science and knowledge. The term Intangible capital was first introduced by John Kenneth in 1969. Before that, Peter Drucker used the 'knowledge' worker instead of it. However there is no consent on the definition of Intangible capital; accordingly, Intangible capital is processes and assets which are usually not reflected in the balance sheet. Intangible capital in the organizations is recognized as an intangible asset based on knowledge (Min lu, 2012).

In recent years with the increasing Changes in importance of science, the inability of traditional accounting systems can be seen more to measure the true value of intangible assets. So, in this study the true value of intangible assets based on knowledge will be included in the financial statements. With this in mind that assessing and considering the true value of intangible assets and knowledge in the financial forms of companies has increased more than ever, in the present study the effect of intangible capital on financial performance and market value of companies is examined using five evaluation criteria.

II. LITERATURE REVIEW

The term Intangible capital for the primary time was employed in 1969 by economic expert John Kenneth, on justify the gap between book value and market value in establishments. After that, Karl Erik Svei by Swedes comptroller thought of the shortage of reflective Intangible capital in ancient balance-sheets. In nowadays knowledge-based economy, Intangible capital is that the most vital capital in each organization and it will result on the performance of the organization all told aspects (Riahi Balkaue, 2003). Besides ancient accounting technique play a crucial role in activity and reportage intangible assets, however these ways in

today's data-based organizations during which knowledge constitutes a serious a part of its assets, cannot live the present data in them, so that they would like major changes(Anthony Rojas, 2007). The term "Intangible Capital" (IC) was initial revealed by John Kenneth diplomatist in 1969 (Hudson, 1993), however Stewart (2001a) claimed the primary use back to 1958 once he started Intangible capital study with Itami UN agency later revealed Mobilizing Invisible Assets in Japan in 1980. In general, Intangible capital means that over simply "intellect as pure intellect" however conjointly a degree of "Intangible action". In this sense, Intangible capital is not solely a static intangible intrinsically, however AN abstract method. It's the type of movement from "having" data and skills to "using" data and skills. A synthesis from living literature provides 3 interconnected constructs (Bontis, 1996; Edvinsson and Sullivan, 1996; Ross and Ross, 1997; Stewart, 1995).Amongst the 3 Human Capital (HC) contains the ability, skills, experience, and Intangible agilities of the individual workers (Bounfour, 2002; Brooking, 1996; Edvinsson and Edmund Malone, 1997; Rosset al., 1997; Stewart, 1997). Structural Capital (SC) includes processes, systems, structures, brands, Intangible property, and different intangibles that area unit in hand by the firm however don't seem on its record (Bounfour, 2002; Brooking, 1996; Edvinsson and Malone, 1997; Stewart, 1997). a 3rd construct is Social Capital (SC) that resides either at the individual or the structure level. A bigger proportion of gift analysis has examined these types of Intangible capital in isolation. However, observing any of those subcategories separately would most definitely lead to an incomplete account of an organization's Intangible capital (Brooking, 1996; Lev, 2001; Ross et al. 1997). Moreover, the property of Intangible capital isn't universal and also the evolution of Intangible capital isn't a typical trade development. It's so necessary for researchers to develop AN industry-specific measure tool. Solely sporadically examine info} collected would improve the strategic use of AN organization's data assets relate to Intangible capital, there area unit totally different definitions concerning this term and therefore there's no single and also the same definition concerning it. Some necessary definitions of Intangible capital area unit as follows: Intangible capital, is that the supply of intangible assets that always isn't mirrored within the balance-sheet (Eduinson, 1997). Intangible capital includes data, information, Intangible capital and skill which will be employed in worth creation (Stivart,1999).Intangible capital refers to the all offered data assets in a corporation through that it will assure its permanent activity also as gaining a competitive advantage(Anderson,2004). As mentioned on top of Intangible capital includes 3 elements: human, structural and relative capital. each is delineate briefly below: Human capital Human capital represents the stock of workers data in a corporation (Benetis & amp; others,

2002). Human capital forms the muse of Intangible capital and while not that Intangible capital cannot be enforced (Chen & others, 2004). While not Intangible capital, there's no innovation in merchandise, services, and industrial processes (RiahiBalkaie, 2003). In different words Intangible capital includes data, proficiency, and skills of the organization workers which will be employed in resolution structure issues. as a result of human capital belongs to the organization workers, so it are often claimed that thusrt} of capital isn't in hand by the organization and so, with the withdrawal of workers from organizations, this capital is also taken out from them. Thus, organizations request to stop capital outflow by changing it to different kinds of capital (Rus & others, 1997).

Young et al. (2009) studied a sample of Asian banks for eight countries and located that physical capital and human capital area unit the most factors that make worth for the companies. The same study was done by Ting and Lean (2009) on Malaysian companies and for nine years (1999-2007), they found through empirical observation that the indicator VAIC and a few indicators of gain were completely associated with the money sector of the Malaysia. Chan (2009) conducted a study on a sample of all corporations of the droop Seng exchange for the amount 2001 to 2005. He studied the link between the potency of the IC of those corporations and its elements (human and structural) with measures of firm performance: market valuation, come back on assets (ROA), come back on equity (ROE) and productivity measure. The results of the study showed that solely structural capital encompasses a important and positive relationship with gain measures (ROA and ROE).

Abeysekera (2011) examine the result of current-period Intangible capital revealing on earnings and current annual stock come back throughout a civil-war amount. His study finds that corporations don't embrace the present amount Intangible capital revealing within the current stock come back and also the increase within the current-period Intangible capital revealing activity haven't any influence on earnings enclosed within the current stock come back. Future accounting-based earnings, if per the present era, against this area unit enclosed within the current stock come back. The findings offer insights into the Intangible capital revealing observe and its influence on stock come back during a civil-war setting.

Wagiciengo and Belal (2012) investigate concerning Intangible capital disclosures by South African corporations. The most purpose of their study is to look at the extent and nature of Intangible capital disclosures in 'Top 20' South African corporations over a five years amount (2002-2006). The results show that Intangible capital disclosures in Republic of South Africa have enlarged over the five years study amount with bound companies reportage significantly over others.

Out of the 3 broad classes of Intangible capital disclosures human capital seems to be the foremost well-liked one. This finding stands in sharp distinction to the previous studies during this space wherever external capital was found to be most well-liked class.

III. VALUATION OF INTANGIBLE CAPITAL

According to management literature, it's impracticable to manage one thing that cannot be measured and reported. There are already several tries to live and report Intangible capital, however they're in their primary phases, thus there's an extended thanks to bring home the bacon their appropriate positions. To the present purpose, over thirty ways are introduced for activity Intangible capital which will be divided into four general classes. A. Direct Intangible capital practices: these ways predict dollar worth of Intangible capital through distinguishing their elements. As Intangible capital elements area unit known, they'll be evaluated endlessly and directly. They'll management the ultimate worth of the organization Intangible capital through a mix (Taliyang, 2011) in excess. By dividing the ensuing annual financial gain in excess to the corporate monetary value of capital, the worth of company Intangible capital is calculable. D- ways of score (credit) card: during this technique totally different elements of intangible assets area unit known and for every of those indicators area unit provided and or they're displayed in corresponding graphs. The ways of score (credit) card area unit the same as direct Intangible capital assets however the distinction is that in these ways there's no estimation of real worth of non-tangible assets. The investment {market worth|market price|value}: This technique focuses on shrewd the distinction between company market value and value of shares and it classified the calculated distinction as non-tangible assets or Intangible capital. as an example, if current worth of shares during a company within the exchange is adequate ten million dollar and its value of shares equals to 1 billion bucks, then dollar worth of Intangible capital of the corporate are adequate nine billion bucks. C- The come back of assets technique: during this method, average financial gain before company tax during a definite amount is split on the common of the worth of physical assets within the same amount. Then the ensuing variety is compared with the common of the come back of trade assets. If the ensuing distinction is zero or negative, the corporate has no Intangible capital surplus to average of trade and it's assumed that its Intangible capital equals to zero. However if the ensuing distinction is positive, it's assumed that the corporate has Intangible capital surplus to the common of trade and it's positive. The distinction (positive) is increased to the common of physical assets worth of the corporate within the same amount to work out the common annual financial gain.

Observing the inflated significance of IC in price creation, Pulic (2000, 2002) developed a helpful measure tool particularly the Valued other Intangible constant (VAICTM). Not like ancient accounting that focuses on business news, Pulic (2000) was curious about the motive force {of price|useful|valuable|important |of import} creation and expressed that there are 2 key resources for other value creation: capital utilized (consists of physical and money capital) and Intangible capital (consists of human and structural capital). VAIC has received attention from each teachers associated in apply for it provides an example for peer researchers to create on. for instance, Chang (2007) takes R & amp; D and Intangible property into thought to boost informative power in his pilot study of engineering sector. The result ends up in the present study and a changed VAICTM is projected to incorporate a brand new Intangible capital element, Innovation Capital. though there are criticisms on the constraints of VAIC (Andriessen, 2004), an outsized range of analysers still adopted VAIC in their research (Chen, et al., 2005; Chang 2007; Kamath, 2007; 2008; Chan, 2009). A main reason is that VAIC uses knowledge from money statements and minimize potential knowledge sound judgment from victimization alternative instruments. A basic tenant for VAICTM is to look at resource potency in making price for the corporations. A principle is to calculate the worth other (VA) of a firm by subtracting input from output, excluding labor expenses from input. In money terms, it's given as in (1) (S. Chang, 2011)

$$(1) : VA = \text{gram} - \text{sgaExp.} + \text{LExp.} = \text{in operation financial gain} + \text{LExp}$$

Where VA is price added; gram is gross margin; sgaExp: mercantilism, general, and administrative expenses; LExp : labor expenses that Pulic (2000b) calls human capital. In keeping with him, the worth of human capital (HC) and structural capital (SC) is delineated by the labor expenses and therefore the distinction between VA and HC. From this description, HC and SC are denoted as follows:

$$(2): HC = \text{LExp}$$

$$(3): SC = VA - HC$$

HC denotes human capital, SC for structural capital; Pulic states that human capital and structural capital are reciprocal. The less the contribution of human capital, the additional structural capital is enclosed. Consecutive step is to assess social capital, and in keeping with Pulic's VAIC model, social capital is calculated by the capital utilized that equals the value of net assets of the firm.

IV. HYPOTHESIS FORMULATION

The present paper makes an attempt to enrich the Intangible capital literature, thus, hypothesising as:

Hypothesis 1 : There is significant effect of Intangible capital on financial performance.

Hypothesis 2 : There is significant effect of Intangible capital on Return on equity and Return on assets.

Hypothesis 3 : There is significant effect of Intangible capital on Growth Revenues **Hypothesis 4**: There is significant effect of Intangible capital on Created shareholder's value

Hypothesis 5 : There is significant effect of Intangible capital on the ratio of market value to book value.

V. THE RESEARCH METHODOLOGY

An broad literature survey was done to observe a methodology for carrying out this study. Finally, the VAIC approach was allocated for present study adopted from Pulic (2000) (38).

a) Sample and Data Selection

The data were collected through secondary sources. The six-year amount of study was taken from the annual years 2007-2012, the cause for selecting this era was that the information needed for the study were on the market for these years. Applied mathematics society is chosen from firms within the Amman exchange in industries and numerous teams. The sample systematic technique has been chosen. The conditions are:

1. Firms that result in their yr at the tip of March annually.
2. Firms that in years 2007-2012 haven't modified their monetary amount.
3. Firms that there's access to their monetary info and different needed info.
4. Firms that are listed in tend Exchange before 2006.
5. To not be among the Banks and credit and monetary investment establishments..
6. Throughout the amount firms shouldn't be losses.
7. Firms that their stop image don't have quite six month inaction within the analysis amount.

With the appliance of on top of limitations, forty nine firms listed in Amman exchange from industries (pharmaceuticals, electrical machinery, vehicles and components, machinery and instrumentation, basic metals, food except sugar, different non-metallic minerals, chemicals, wood product, metal product, computers , cement, ceramic Hg) has been chosen.

b) Variable definition

The model: The model projected here by Pulic9 is predicated on the model adopted of VAIC that has been antecedently utilised to different similar studies6, 11-13. during a much-cited contribution to the literature, corporations are divided to four sections (based on dividing ancient sector) together with producing and raw materials (15 firms), industrial and services (24 firms), food and beverages (12 firms) and menage product and

private (28 firms). Within the study of Dimitrios Maditinos¹⁴, this model was explained as following:

c) *Independent variables*

This study includes four freelance variables¹⁵: i. VACA, indicator of import other potency of capital utilized, ii. VAHU, indicator of import other potency of human capital, iii. STVA, indicator of import other potency of structural capital, iv. VAIC, the composite total of the 3 separate indicators as price of intangible capital. The primary step towards the calculation of the on top of variables is to calculate price other (VA). VA is calculated in keeping with the methodology projected by Maditinos¹⁶. Second, capital utilized (CE); human capital (HU) and structural capital (SC) ar being calculated: $Ce = \text{Total assets} - \text{intangible assets}$ $HU = \text{Total investment on workers (salary, wages, etc)}$ $SC = VA - HU$ Finally, VAIC and its 3 parts ar being calculated: $VACA = VA / Ce$, $VAHU = VA / HU$, $STVA = SC / VA$, $VAIC = VACA + VAHU + STVA$ the employment of the on top of activity methodology is argued to produce sure advantages², 11,17-20: i. it's simple to calculate. ii. it's consistent. iii. It provides standardized measures, thus, permitting comparison between industries and countries. iv. knowledge ar provided by monetary statements that ar additional reliable than questionnaires, since, they're typically audited by skilled public accountants.

d) *Dependent variables*

This study includes 2 dependent variables: i. Market-to-book price ratios, ii. monetary performance. The market-to-book price quantitative relation is just calculated by dividing the value|value} (MV) with the value (BV) of common stocks: $MV = \text{variety of shares} * \text{Stock price at the tip of the year}$.

$BV^* = \text{Stockholders' equity} - \text{Paid in capital of most popular stocks}$ $MBV = MV / BV$ (1) wherever, MBV is that the market-to-book price quantitative relation as 1st variable quantity. (*In all cases, that goodwill was

enclosed within the value of an organization of the sample, the desired subtraction was conducted). The monetary performance is measured with the employment of 3 indicators: come on equity (ROE): $ROE = \text{profits} / \text{Shareholder's Equity}$, ROE measures organizations profitableness by revealing what proportion profit an organization generates with the money shareholders have invested with. come on assets (ROA): $ROA = \text{profits} / \text{Total Assets}$, ROA is associate indicator of however profitable an organization is in relevance its total assets. It offers an inspiration on however economical the management uses assets to come up with earnings. Growth revenues (GR): $GR = [(\text{Current year \& apos; s revenues} / \text{Last year \& apos; s revenues}) - 1] * 100$ percent GR is that the most ancient live that indicates the expansion of a company. Here, we have a tendency to use GR for monetary performance as second variable quantity. Therefore, during this analysis, models ar as following:

$$MBV = VACA + VAHU + STVA + VAIC \quad (2)$$

$$GR = VACA + VAHU + STVA + VAIC \quad (3)$$

VI. RESULTS AND DISCUSSION

a) *Hypothesis test results*

Hypothesis 1: There is significant effect of Intangible capital on financial performance.

According to the results of regression model about the primary main hypothesis recommended in table (1), the significance level of datum F all told four regression models is quite accepted significance level (0.05%)and thus total regression model is important for them. Considering the amount of the constant (P-Value) of estimated variables within the models shows that the calculable variables don't have significance level lower than (0.05%) therefore don't have any result on financial performance.

Table 1 : The first main hypothesis test results

Variable	Coefficient	statistic t	Overall regression model			
			Statistic F	P-value	D-W	Determination Coefficient And modified Determination coefficient
VAIC	0.003	0.105	0.011	0.916	1.846	$R^2=0.000$ $AdjR^2=-0.004$
VACA	0.003	0.063	0.004	0.95	1.844	$R^2=0.000$ $AdjR^2=-0.004$
VAHU	-0.008	-0.212	0.045	0.832	1.843	$R^2=0.000$ $AdjR^2=-0.004$
STVA	-0.059	-0.639	0.408	0.523	1.837	$R^2=0.002$ $AdjR^2=-0.002$

The first hypothesis take a look at results show that among four calculable variables, none of them have a significant result on monetary performance of

company. These results aren't in line with results by ((Chen chow (2005), bench tan and colleagues (2007), Bentis (1998)).

Hypothesis 2: There is significant effect of Intangible capital on Return on equity and Return on assets.

According to the regression model results about second main hypothesis that's conferred in table(2), the significance level of datum F within the 3 regression models associated with (VAIC,VACA,VAHU) is a smaller amount than accepted significance level (0.05%) and total regression model is meaning for them. Significance

level of regression model of (STVA) is quite accepted significance level (0.05%) and its regression model is significant. Considering the importance level (P-Value) of calculable variables within the models shows that from four calculable variables, 3 variables (VAIC, VACA, VAHU) with significance level under (0.05) have effect on assets come and equity come.

Table 2 : The Second hypothesis test results

Variable	Coefficient	Statistic t	Overall regression model			
			Statistic F	P-value	D-W	Determination Coefficient And modified Determination coefficient
VAIC	0.015	0.206	0.042	0.837	1.563	$R^2=0.000$ $AdjR^2=-0.004$
VACA	-0.027	-0.501	0.251	0.617	1.563	$R^2=0.001$ $AdjR^2=-0.003$
VAHU	0.059	1.214	1.473	0.226	1.551	$R^2=0.006$ $AdjR^2=0.002$
STVA	-0.011	-0.094	0.009	0.926	1.559	$R^2=0.000$ $AdjR^2=-0.004$

The second main hypothesis results show that from four calculable variables within the model, there's a positive and vital result between the corporate assets come with intangible property, constant of other price of employed capital and constant of other price of human capital.

Hypothesis 3: There is significant effect of Intangible capital on Growth Revenues

According to take a look at results of the regression model for third hypothesis that's painted in table (3),significance level of datum F within the regression model associated with (STVA) is under accepted significance level (0.05%) and general regression model is meaning for it. Significance level of regression model for(VAIC, VACA, and VAHU) is quite accepted significance level (0.05%) and regression model is significant for them. Considering the constant of significance level (P-Value) of variables within the models shows that from four calculable variables, the variable (STVA) with significance level under (0.05%) has an effect on earnings rate of growth.

The third hypothesis take a look at results show that from four calculable variables within the model, the constant of added price of structural capital incorporates a positive and vital result on assets growth, however different parts of intangible capital constant of other price indicates no vital result on financial gain growth. The results show that regardless of the structural capital of company is higher, it'll have positive result on assets rate of growth. With concerning Operational definition of variables structural capital or in different worlds, client capital the created added price is completely different from other price created by intangible capital of company. Therefore any reduction or increase in human capital can lead to a amendment in constant of other price of structural capital. Low human capital caused to extend in other price constant of structural capital, thus results in company's revenue growth that reflects the positive result of structural capital on company's revenue growth.

Table 3 : The Third hypothesis test results

variable	Coefficient	Statistic t	Overall regression model			
			Statistic F	P-value	D-W	Determination Coefficient And modified Determination coefficient
VAIC	0.163	1.802	3.248	0.043	1.812	$R^2=0.013$ $AdjR^2=0.009$
VACA	0.497	8.277	68.506	0.000	1.707	$R^2=0.220$ $AdjR^2=0.217$

VAHU	0.129	2.13	4.535	0.034	1.804	R ² =0.018 AdjR ² =0.014
STVA	-0.009	-0.06	0.004	0.952	1.818	R ² =0.000 AdjR ² =-0.004

Hypothesis 4: There is significant effect of Intangible capital on Created shareholder's value

According to take a look at results of the regression model for fourth hypothesis that's painted in table (4), significance level of datum F within the regression model (VACA) is under accepted significance level (0.05%) and regression model for its meaning. significance Level of regression model (STVA, VAIC, and

VAHU) is quite accepted significance level (0.05%) and regression model is important for it. Considering the constant of significance level (P-Value) of variables within the models shows that from four estimated variables, the variable (VACA) with significance level under (0.05%) has a sway on created price for each share.

Table 4 : The Fourth hypothesis test results

variable	Coefficient	statistic t	Overall regression model			
			Statistic F	P-value	D-W	Determination Coefficient And modified Determination coefficient
VAIC	0.103	1.164	1.355	0.246	1.937	R ² =0.006 AdjR ² =0.001
VACA	-0.054	-0.818	0.669	0.414	1.961	R ² =0.003 AdjR ² =-0.001
VAHU	0.054	0.913	0.833	0.362	1.938	R ² =0.003 AdjR ² =0.000
STVA	0.286	1.913	3.741	0.047	1.929	R ² =0.015 AdjR ² =-0.011

The fourth hypothesis take a look at results show that from four calculable variables within the model, the constant of added price of utilized capital incorporates a negative and vital result on created price for shareholders, however mother parts of intangible capital constant of other price don't have result on created price for shareholder. The results show that by increase of constant of other price of utilized capital (low operational assets of company or increasing the other price distributed to interest groups) the created price for shareholders decreases.

Hypothesis 5: There is significant effect of Intangible capital on the ratio of market value to book value.

According to the results of regression model concerning the fifth hypothesis conferred within the table (5), the significant level of datum F all told four regression models is quite excepted significance level (0.05%) andm whole regression model is important. Considering the constant of significance level of the (P-Value) of estimated variables within the models shows that the calculable variables don't have significance level lower than (0.05) so don't have any result on the company's value to value (MTB).

Table 5 : The Fifth hypothesis test results.

Variable	Coefficient	Statistic T	Overall regression model			
			Statistic F	P-value	D-W	Determination Coefficient And modified Determination coefficient
VAIC	-0.060	-0.262	0.071	0.790	1.497	R ² =0.000 AdjR ² =-0.004
VACA	-0.333	-1.987	3.948	0.048	1.538	R ² =0.016 AdjR ² =-0.012
VAHU	-0.086	-0.562	0.316	0.575	1.499	R ² =0.001 AdjR ² =-0.003
STVA	-0.236	-0.621	0.385	0.535	1.492	R ² =0.002 AdjR ² =-0.003

Effect of intangible capital performance on the quantitative relation of value to value wasn't confirmed. The inefficiency of capital markets will be the rationale for rejecting the hypothesis. The results and findings of this study are in line with some similar studies, and are in conflict with some others. For instance, although some researchers (Najib Ullah (2005) - subgenus Chen et al. (2005) - Palic (2000)) emphasize on the role of intangible capital in explaining the distinction between value and value of firms, this analysis is in line with another analysis (Hong subgenus Chen (2009) (1 & 2) - Bank Fyrr and Stein (2003)) didn't realize any reason on the relationship between intangible capital and value.

VII. CONCLUSION

The goal of this paper was to test the existence of long run relationship between intangible capital and its effects on firms' market value and financial performance in Jordan. After the measurement model of intangible capital and its components using a value-added intangible capital (VAIC) submitted by Pulic model, Their effects on five performance indicators defined in this study including return on equity, return on assets, growth revenues, Created shareholders value and the ratio of market value to book value per share were analyzed by means of regression. It can be recommended to pay attention and focus more on intangible capital in organizations and understanding the importance and impact of this factor on the overall performance of the organization and positive effects on the process of value creation in organizations as a factor influencing the performance of financial organizations. Since in the research model, human capital is a key factor in determining the role of intangible capital, providing a competitive environment in the order to determine the salary levels of employees, it increases the large amounts research model.

REFERENCES RÉFÉRENCES REFERENCIAS

1. Edvinsson L. and Malone M.S., *Intangible Capital: Realizing Your Company's True Value by Finding Its Hidden Brainpower*, Harper Business, New York, (1997).
2. Bontis N., *Intangible capital: an exploratory study that develops measures and models*, *Management Decision*, 36 (2), 63-76 (1998).
3. Argyris C. and Scho'n D.A., *Organizational Learning: A Theory of Action Perspective*, Addison-Wesley, Boston, (1978).
4. Senge P.M., *The Fifth Discipline: The Art and Practice of the Learning Organization*, Doubleday Currency, New York, (1990).
5. Pulic A., *VAIC – an accounting tool for IC management*, *International Journal of Technology Management*, 20 (5-7), 702-14 (2000a).
6. Firer S. and Williams S.M., *Intangible capital and traditional measures of corporate performance*, *Journal of Intangible Capital*, 4 (3), 348-60 (2003).
7. Firer S. and Stainbank L., *Testing the relationship between intangible capital and a company's performance: evidence from South Africa*, *Meditari Accountancy Research*, 11 (1), 25-44 (2003).
8. Pesaran H.M., Shin Y. and Smith J.R., *Bounds testing approaches to the analysis of relationships*, *Journal of Applied Econometrics*, 16 (3), 289–326 (2001).
9. Marr B., *What is intangible capital?* in L. A. Joia (Ed.), *Strategies for information technology and intangible capital*, Idea Group Pub., Hershey, PA, 1-9 (2007).
10. Jardon C. and Martos M., *Capital intelectual y resultados empresariales en la cadena de la madera de Obera (Argentina)*, *Estudios De Economía Aplicada*, 26 (3), 141-64 (2008).
11. Petty R. and Guthrie J., *Intangible capital literature review – measurement, reporting and management*, *Journal of Intangible Capital*, 1(2), 155-176 (2000).
12. Bontis N., Keow W. and Richardson S., *Intangible capital and business performance in Malaysian industries*, *Journal of Intangible Capital*, 1 (1), 85-100 (2000).
13. Chen M., Cheng S. and Hwang Y., *An empirical investigation of the relationship between intangible capital and firms' market value and financial performance*, *Journal of Intangible Capital*, 6 (2), 159-176 (2005).
14. Tan H., Plowman D. and Hancock P., *The evolving research on intangible capital*, *Journal of Intangible Capital*, 9 (4), 585-608 (2008).
15. Kamath G.B., *The intangible capital performance of Indian banking sector*, *Journal of Intangible Capital*, 8 (1), 96-123 (2007).
16. Anvari Rostami A.A. and Seraji H., *Valuing Intangible Capital (IC) and studying the relationship between firms IC values with their share market prices: An empirical evidence from the Tehran Stock Exchange (TSE)*, *Thelranian Accounting and Auditing Review*, 12 (39), 49-62 (2005).
17. Rezaie F., Hemati H. and Kargar Shamlou B., *Intangible capital and value-based performance and intangible capital*, *Accounting Research*, (7), 52-71 (2010).
18. Williams M., *Are intangible capital performance and disclosure practice related?* *Journal of Intangible Capital*, 2 (3), 192-203 (2001).
19. Maditinos D., Chatzoudes D., Tsairidis C. and Theriou G., *The impact of intangible capital on firms market value and financial performance*, *Journal of Intangible Capital*, 12 (1), 132-151 (2011).
20. Seragi, H., A. Anvari Rostami, 2005. *Survey the effect of intangible capital on the market value of*

companies listed in Tehran Stock Exchange.
Accounting and Auditing Studies, 39 (7): 49-62.

21. Sveiby, K., 2000. "Intangible capital and knowledge management", available at: www.sveiby.com.au/BookContents.html (accessed 2 June 2009).





This page is intentionally left blank