Volume 17 Issue 13
Originally issued as A5

Global Journal of Management and Business Research: a Administration and Management
Volume 17 Issue 5 Version 1.0 Year 2017
Type: Double Blind Peer Reviewed International Research Journal
Publisher: Global Journals Inc. (USA)
Online ISSN: 2249-4588 & Print ISSN: 0975-5853

The Impact of Intellectual Capital Dimensions on Organizational Performance of Public Hospitals in Jordan

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Abstract- The purpose of this study was to explore the impact of intellectual capital (IC) dimensions on organizational performance (OP). IC, in this study, conceptualized as a variables comprises three main dimensions: human capital (HC), structural capital (SC), and relational capital (RC). The sample of the study consisted of 500 employees randomly selected from five public hospitals in the northern region of Jordan. Data were collected by a questionnaire developed base on the literature of intellectual capital and organizational performance. The number of questionnaires returned was 473 questionnaires. The questionnaire used in the study included 20 items, each of the variables was measured using 5 items anchored on five-point Likert scale. HC was measured by items related to employees' knowledge, skills, experiences, education, motivation, commitment, creativity and innovation. SC items concerned organizational efficiency and effectiveness, procedures, culture, product or service-oriented innovation, and intangibles such as patents, image and trade secrets.

Keywords: *intellectual capital, organizational performance.*

GJMBR-A Classification: *JEL Code: M19*

THE IMPACT OF INTELLECTUAL CAPITAL DIMENSIONS ON ORGANIZATIONAL PERFORMANCE OF PUBLIC HOSPITALS IN JORDAN

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Abstract- The purpose of this study was to explore the impact of intellectual capital (IC) dimensions on organizational performance (OP). IC, in this study, conceptualized as a variables comprises three main dimensions: human capital (HC), structural capital (SC), and relational capital (RC). The sample of the study consisted of 500 employees randomly selected from five public hospitals in the northern region of Jordan. Data were collected by a questionnaire developed base on the literature of intellectual capital and organizational performance. The number of questionnaires returned was 473 questionnaires. The questionnaire used in the study included 20 items, each of the variables was measured using 5 items anchored on five-point Likert scale. HC was measured by items related to employees' knowledge, skills, experiences, education, motivation, commitment, creativity and innovation. SC items concerned organizational efficiency and effectiveness, procedures, culture, product or service-oriented innovation, and intangibles such as patents, image and trade secrets. While, RC items included organizational relationships with stakeholders, agreements, customer contribution and satisfaction. Finally, OP was measured using indicators concerned customer, employee development, individual and job fit. IMB SPSS-V.23 was used to analyze the collected data. The results supported the three hypotheses suggested in the study. That is, HC, SC, and RC were significantly influence OP. In agreement with prior studies, this study found a significant impact of IC dimensions on OP. the difference is that the current study is conducted in healthcare sector, particularly, in public hospitals. public hospitals are recommended to invest in their intellectual capital in order to improve OP. Future studies is required in more public hospitals in the kingdom in order to ensure generalizability of the findings.

Keywords: intellectual capital, organizational performance.

I. Introduction

Going over organizations of different sizes, industries as well as countries with a clear-sighted view brings to light that the efficient and effective exploitation of tangible assets only is far from enough the endeavor capital needed to effectuate fine organizational performance. Variegated drivers were recommended in a vast bundle of organizational literature to ameliorate OP. However, many organizations are still shunning instead of running after those recommendations.

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Similar standpoints found in the literature signified the importance of both physical and intellectual assets for organizations to enhance OP (Wanjala, 2013). Even though the historical regard of the economic assets as a foremost measure of OP, new trends were emerged and justified using the intellectual assets as a complementary indicator of OP (Hudgins, 2014). Instances of these trends embody the remarkable gap between book value and market value of the organization (Chen et al., 2005 and Curado et al., 2014) in favor of market value (Smriti and Das, 2017), which signifiesthat the added value is devolved upon latent assets or, in other words, intangible or intellectual assets. Such intellectuals are more difficult to imitate than tangibles (Ghatak, 2013), on top of the nature of these intangibles as rare (Pucci et al., 2015) and hard to substitute assets (Amin et al., 2014).

Hence, one vein of the literature called organizations upon to pay more attention to intellectual capital as a well-established mean used to induce better levels of OP (Wang and Chang, 2005; Shiu, 2006; Bramhandkar et al., 2007; Cabrita and Bontis, 2008; Yang and Lin, 2009; Zéghal and Maaloul, 2010; Khalique et al., 2011a; Wu et al., 2012; Sumedrea, 2013; Al-Musali and Ismail, 2014; Nuryaman, 2015; Gogan et al., 2016 and Koc, 2017).

More than one view of ICwere detected in the literature. One general view took it as invaluable knowledge generating value to the organization (Hashim et al., 2015). A more specific view rated IC as a multi-dimensional concept made up of accumulated capitals pertaining human, structural and relational assets that furnish the organization with essential competencies required to make its objectives real (Awan and Saeed, 2015 and Chein, 2013). A third view of the concept considered a combined perspective embraced the aforesaid views. It defined IC as a collection of knowledge sources that exist in the organization's people, structure and customers and can be processed into value (Wu and Sivalogathasan, 2013; Noordin and Mohtar, 2013 and Joshi et al., 2013). It was acknowledged that IC covers abundant components related to these three bins of IC. Examples of these components are similar to organizational knowledge, culture, and innovation (Janosevic et al., 2013a), organizational technology, capabilities, and relationships (Badrabadi and Akbarpour, 2013), organizational

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strategies and organizational structure (Janosevic et al., 2013b).

Despite the absence of consensus on one clear-cut definition of IC (Ozkan et al., 2016 and Koc, 2017), the concept was operationalized with a common voice as a structure encompasses three principals: human capital, structural capital, and relational or customer capital (Stewart, 1997; Bontis et al., 2000; Sharabati et al., 2010; Khalique et al., 2011b; Mention, 2012; Al-Dujaili, 2012; Chang and Lee, 2012; Joshi et al., 2013; Ogbo et al., 2013; Saeed et al., 2013; Curado et al., 2014; Mumtaz and Abbas, 2014; Taie, 2014; Hermawan et al., 2015 and Lee et al., 2015). Other parts of IC were reported in the literature, i.e. renewal capital, trust capital and entrepreneurial capital (Kianto et al., 2014), innovation capital (Chen et al., 2004) and process capital (Lin, 2015). One study (Wang and Chang, 2005) divided structural capital into innovation and process capital.

IC has been figured up as a main source of the competitive advantage of organizations (Smriti and Das, 2017; Saeed et al., 2013; Ogbo et al., 2013and Seleim et al., 2007) and sustainable organizational performance (Mondal and Ghosh, 2012). A well contribution of IC to OP in particular was cited in sundry empirical studies carried out in different industries and countries similar to information technology industry in Taiwan (Wang and Chang, 2005); software companies in Egypt (Seleim et al., 2007), pharmaceutical companies in USA (Bramhandkar et al., 2007), financial service sector in Portugal (Cabrita and Bontis, 2008); high-tech, traditional and service sectors in UK (Zéghal and Maaloul, 2010); electronics manufacturing sector in Pakistan (Khalique et al., 2011a); banks in Kuwait (Abdulsalam et al., 2011); banks in India (Mondal and Ghosh, 2012), banks in Nigeria (Ogbo et al., 2013), universities in Jordan and Pakistan (Sharabati et al., 2013 and Awan and Saeed, 2014), Oil and Gas companies in Pakistan (Kharal et al., 2014), banks in Saudi Arabia (Al-Musali and Ismail, 2014), insurance companies in USA (Hudgins, 2014); technology-based firms in Colombia (Aramburu et al., 2015); public manufacturing companies in Indonesia (Nuryaman, 2015); drinking water distribution companies in Romania (Gogan et al., 2016) and tourism and automobile industry in Turkey (Koc, 2017). In agreement with the above-listed research, the main aim of the present study is to explore the influence of IC on OP. However, the contribution of this study followed clearly from IC and OP operationalization, the sample and the model of the study, as well as the setting where the study took place.

The study is structured as follows. The following section contains a review of the related literature, from which study hypotheses were drawn. The same section presents examples of definitions of the study variables and dimensions of IC and sub-dimensions of human capital, structural capital, and relational capital. The third section shows the methodology used in the study. It comprises sample of the study, measures used to assess the study variables, as well as data collection. Section four demonstrates data analysis and results. Section five sets forth discussion of the results and implications concluded. Finally, section six sets down limitations and future research directions provided by the study.

II. Literature Review and Hypotheses Development

a) Definition of intellectual capital

IC has been defined from different perspectives as can be seen in Table 1. In 2008, The Organization for Economic Co-operation and Development (OECD) defined IC as an economic value proceeded from two types of intangibles which are organizational and human capitals. Wang and Chang (2005) indicated that IC is a key component engenders organization's value. Zéghal and Maaloul (2010) classified IC as the entire accessible knowledge can be utilized by the organization to create value. Conceptually, Wu et al. (2012) regarded IC as a set of organization-related abilities integrated with three types of capitals; human, structural and relational capital. Nuryaman (2015) defined IC as a main component of the organization market value since which composed of the economic capital plus the intellectual capital of the organization. According to the author, IC represents a difference between book value and replacement assets of an organization.

Pursuant to these definitions, IC was defined in this study as an integral part of the market value of an organization along with its economic capital, embodies all intangibles related to the organization itself such as management, procedures, trademarks, image, reputation, patents, culture, strategies, to the people of the organization such as knowledge, skills, experience, education, creativity, innovation, commitment, and engagement, and to the organizational relationship, either within the organization or with external stakeholders like customers and suppliers.

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Table 1: Examples of IC definitions

Authors	Definitions
OECD (2000)	Economic value results for organizational and human capitals.
Wang and Chang (2005)	A key component of an organization's value.
Zéghal and Maaloul (2010)	The entire accessible knowledge used by an organization to create value.
Wu et al. (2012)	A set of organization-related abilities integrated with three types of capitals; human, structural and relational capital
Nuryaman (2015)	A major component of an organization's market value

b) Dimensions of intellectual capital

IC, in general, has been conceptualized in the literature as a construct comprised three main dimensions: human capital, structural (organizational)capital, and relational (customer or social) capital. Table 2 shows examples of authors' conceptualizations of IC. Following the general categorization of this variable (Cabrita and Bontis, 2008; Yang and Lin, 2009; Khalique et al., 2011a; Sumedrea, 2013; Nuryaman, 2015 and Gogan et al., 2016), this study considered three dimensions of IC: human capital, structural capital and relational capital. In fact, other components of IC, such as innovation and process capital, was regarded by this study as tacit components of IC dimensions. For example innovation capital can be placed back to the human or structural parts of IC, while process capital can be reinstated in structural capital.

Table 2: Examples of IC dimensions

Authors	Dimensions
Wang and Chang (2005)	Human capital, customer capital, innovation capital, and process capital.
Cabrita and Bontis (2008)	Human capital, structural capital, and relational capital
Yang and Lin (2009) Wu and Sivalogathasan (2013)	Human capital, organizational (structural) capital, and relational (social) capital
Khalique et al. (2011a)	Human capital, structural capital, and customer capital
Sumedrea (2013) Wanjala (2013)	Human capital, structural capital, and customer (external) capital
Nuryaman (2015)	Human capital, structural capital, and customer capital
Gogan et al. (2016)	Human capital, structural capital, and relational capital

i. *Sub-dimensions of human capital*

Human capital(HC), as a key element of IC, has been defined as a collection of employee characteristics and abilities revealed in forms of knowledge, skills, experiences, education, creativity, commitment, innovation, life and business-related attitudes, and motivation, etc. (Wang and Chang, 2005; Yang and Lin, 2009; Sumedrea, 2013; Wanjala, 2013; Nuryaman, 2015 and Koc, 2017). According to Wanjala (2013), HC is considered the major part of intellectual capital. Examples of these characteristics and abilities or sub-dimensions of HC are shown in Table 3.

Table 3: Examples of HC sub-dimensions

Authors	Sub-dimensions of HC
Wang and Chang (2005)	Employee education
Yang and Lin (2009)	Employee knowledge, skills and experience.
Sumedrea (2013)	Employee motivation and commitment
Nuryaman (2015)	Intellectual ability, creativity and innovation
Koc (2017)	Technical knowledge, job evaluation, creativity, team work, initiatives, problem-solving, analytical and conceptual thinking.

ii. *Sub-dimensions of structural capital*

Structural capital (SC) refers to organization-based intangible assets like efficiency, effectiveness, innovativeness, culture, knowledge, strategies, procedures, patents, trade secrets, information and network systems etc. (Cabrita and Bontis, 2008;Yang and Lin, 2009;Sumedrea, 2013;Nuryaman, 2015 and Koc, 2017).Lee et al. (2015) added problem-solving and value creation as vital sub-dimensions of SC. Table 4 shows examples of HC sub-dimensions.

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Table 4: Examples of HC sub-dimensions

Authors	Sub-dimensions of SC
Yang and Lin (2009)	Process effectiveness, knowledge integrating and sharing
Sumedrea (2013)	Databases, organizational procedures, trademarks, organizational strategies related infrastructure.
Lee et al. (2015)	Problem-solving and value creation procedures.
Nuryaman (2015)	Hardware and software infrastructure, products and services innovations.
Koc (2017)	Management philosophy, organizational culture, information and network systems, patents and copyrights, and trade secrets.

iii. *Sub-dimensions of RC*

Relational capital (RC), social or customer capital as called in some studies, incorporates all organizational relationships, either internal relationships between the management and employees or among employees themselves, or external relationships with stakeholders such as customers, suppliers (Nuryaman, 2015), research and development institutions as well as government (Mumtaz and Abbas, 2014). Moreover, RC includes all relationship-based outcomes like customer satisfaction (Khalique et al., 2011a), customer loyalty, organizational agreements (Koc, 2017), distribution channels, number of key customers (Wang and Chang, 2005). Mumtaz and Abbas (2014) attached other parts such as knowledge related to promotions and advertising practices (Table 5).

Table 5: Examples of RC sub-dimensions

Authors	Sub-dimensions of RC
Wang and Chang (2005)	Contribution of customers to growth in sales
Cabrita and Bontis (2008)	Relationships with stakeholders
Yang and Lin (2009)	Internal relationships among individuals within the organization and external relationships between the organization and other organizations.
Amiri et al. (2010) cited in Khalique et al. (2011a)	Customer loyalty and satisfaction.
Nuryaman (2015)	Relationships with internal and external parties
Koc (2017)	Brands, business name, distribution channels, license and franchising agreements, customer loyalty.

c) *Definition of organizational performance*

The literature of OP is loaded with definitions with this construct. Definitions of OP reported by Awan and Saeed (2015) indicated that OP represents the result of employees' task-oriented activities. In their definition of OP, Badrabadi and Akbarpour (2013) described OP as a result of the organizational processes execution and organizational goals achievement that embodies all success-related concepts. Lee at al. (2015) defined OP as an indication of the organization's competency to achieve its strategic goals and compete.

d) *Dimensions of organizational performance*

Dimensions of OP in the literature can be divided into: financial and non-financial measures. Kaplan and Norton (1996) cited in Wu et al. (2012) called organizations to take financial and non-financial measures into their consideration to assess OP.Badrabadi and Akbarpour (2013) measured OP using financial performance and knowledge performance. Chang and Lee (2012); Lee at al. (2015) and Elfar et al. (2017) conceptualized OP using financial (return on equity and earnings per share) and non-financial measures (customers, internal processes, learning and growth).

i. *Prior studies on the influence of intellectual capital on organizational performance*

Research on the relationship between IC and OP can be categorized into two types: research investigated the influence of IC as a whole construct on OP (Zéghal and Maaloul, 2010; Wu et al., 2012; Badrabadi and Akbarpour, 2013; Amin et al., 2014and Arifin, 2016), and research explored the influence of each of IC dimensions on OP. The main focus of the present study is the influence of IC dimensions on OP. Lin (2015) used market value to measure OP. In a study conducted by Pucci et al. (2015) to explore the relationship between IC and OP, OP was measured using return on investment, return on assets, return on sales, capital turnover, and return on equity. In a study of Egyptian firms (Seleim et al., 2007), OP was evaluated by export density of software companies.

e) *Human capital and OP*

Cabrita and Bontis (2008) used a sample consisted of 253 participants selected from 53 banks in order to collect the required data to examine interactions among IC dimensions and OP. The results found significant interactions between the dimensions of IC, human capital, structural capital, and relational capital. In a word, the study concluded that IC together significantly

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impact OP. Particularly, human capital directly and indirectly affects OP. The same result was echoed in many prior studies (Yang and Lin, 2009; Ghatak, 2013; Awan and Saeed, 2014 and Gogan et al., 2016). Wang and Chang (2005) investigated the relationship between IC, measured by human capital, customer capital, innovation capital, and process capital and OP and found an indirect influence of human capital on OP. In contrast, the impact of human capital on OP found by Khalique et al. (2011a) and Hashim et al. (2015) was insignificant. Based on these studies, the study supposed that:

H1: human capital has a significant impact on organizational memory.

f) Structural capital and OP

Gogan et al. (2016) studies relationships among human capital, structural capital, relational capital and organizational performance and found a significant association between the structural capital of IC and OP. According to Yang and Lin (2009), Khalique et al. (2011a), Ghatak (2013) and Awan and Saeed (2015) structural capital has a significant influence on OP. On the other hand, Hashim et al. (2015) concluded a non-significant impact of structural capital on OP. Based on these results, the study hypothesized that:

H2: structural capital has a significant impact on organizational performance.

g) Relational capital and OP

It was revealed by many studies that relational capital has a significant impact on OP (Wang and Chang, 2005).The results of Yang and Lin (2009) showed that relational capital mediates the relationship between human resource practices and OP. That is, relational capital has an association with OP. Chen et al. (2014) studied the relationship between IC and new product development. Specifically, they estimated the effects of human capital and organizational capital on customer capital which in turn affect the performance in terms of new product development. Their results showed that customer (relational) capital mediates the relationship between human capital and organizational capital and new product performance. In fact, many studies confirmed the positive impact of relational capital on OP (Ghatak, 2013 and Awan and Saeed, 2015). Based on these results, the study suggested that:

H3: capital has a significant impact on organizational performance.

III. Methodology

a) Study tool, sample and data collection

A questionnaire was developed based on the literature. IC dimensions were measured adopting items from previous studies (Wang and Chang, 2005; Cabrita and Bontis, 2008; Yang and Lin, 2009; Zéghal and Maaloul, 2010; Khalique et al., 2011a; Sumedrea, 2013; Ghatak, 2013; Mumtaz and Abbas, 2014; Lee et al., 2015; Awan and Saeed, 2015; Nuryaman, 2015; Hashim et al., 2015; Gogan et al., 2016 and Koc, 2017). OP was evaluated based on previous studies (Pett and wolf, 2007; Badrabadi and Akbarpour, 2013; Yidiz and Karakas, 2012; Abdullahi et al., 2015 and Elfar et al., 2017). It included 20 items, each of the variables (HC, SC, RC, and OP) was measured using 5 items. Items of HC covered employees' knowledge, skills, experiences, education, motivation, commitment, creativity and innovation. SC items referred to organizational efficiency and effectiveness, procedures, culture, product or service-oriented innovation, and intangibles such as patents, image and trade secrets. On the other hand, RC items included organizational relationships with stakeholders, agreements, customer contribution and satisfaction. Finally, OP was measured using indicators concerned customer, employee development, individual and job fit, and knowledge performance. All items were measured using a five-point Likert scale ranged from 1 (strongly disagree) to 5 (strongly agree). A total of 500 employees were randomly selected from public hospitals operating in the northern region of Jordan. Exactly, 473 questionnaires were returned and used for statistical analysis.

b) Reliability and validity

Reliability of the study tool was measured using Cronbach's alpha (α). The results of reliability illustrated in Table 6 showed that the alpha values of HC, SC, RC, and OP were above 0.7 (Hashim et al., 2015) to confirm the reliability of the questionnaire used in this study. The Average Variance Extracted (AVE) was used to evaluate the validity. The results of AVE confirmed that the items of each variable were correlates to the theoretical foundation of that variable. AVE values considered acceptable if these value is greater than 0.5 (Hair et al., 2011).

Table 6: Results of reliability and validity

Variables	Items	Mean (SD)	Alpha *	AVE **
Human capital (HC)	1-5	4.23 (0.587)	0.774	0.69
Structural capital (SC)	6-10	3.86 (0.780)	0.814	0.70
Relational capital (RC)	11-15	4.01 (1.010)	0.798	0.71
Organizational performance (OP)	16-20	3.97 (0.851)	0.836	0.68
* Acceptance level of alpha: alpha > 0.70 ** Acceptance value of AVE: AVE > 0.5				

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c) Model of the study and statistical methods used

The model of the study is shown in Figure 1. It includes three main independent variables; human capital, structural capital, and relational capital.

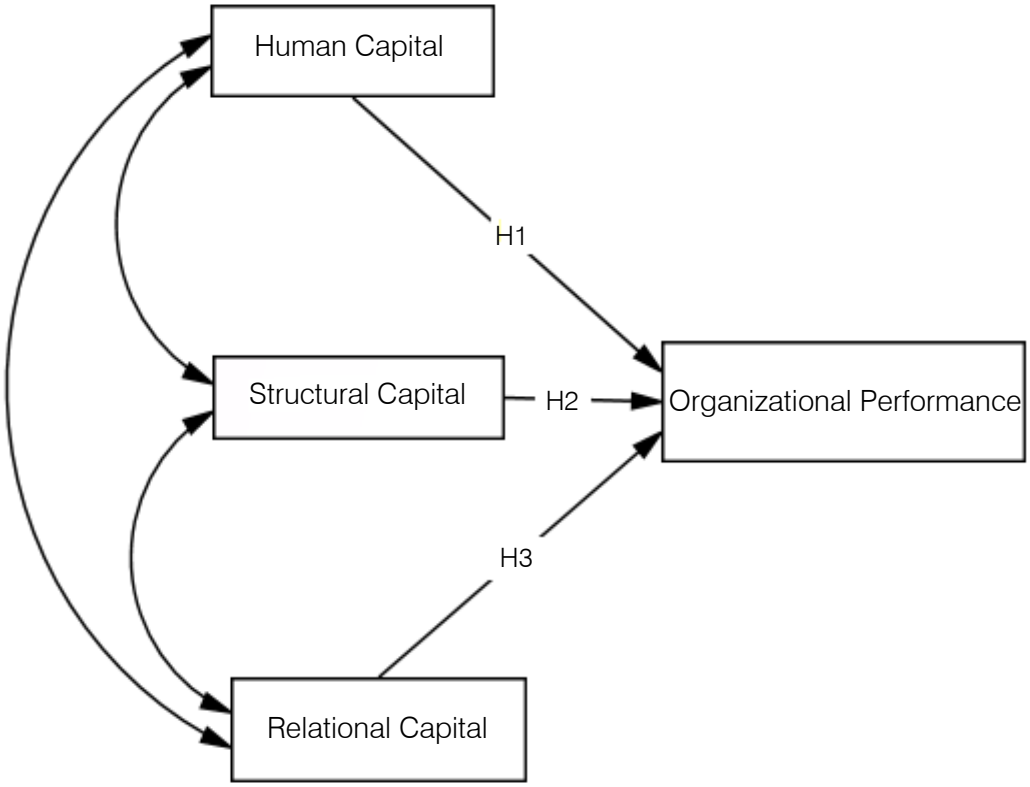

Figure 1: The conceptual model of the study

H1 concerned the relationship between human capital and organizational performance, H2 related to the relationship between structural capital and organizational performance, while H3 pertained the relationship between relational capital and organizational performance. IBM SPSS package-V23 was used to test the hypotheses; multiple regression analysis conducted to estimate the standardized coefficients. Correlations among independent variables and the dependent variable were identified by Pearson Coefficients.

IV. Data Analysis and Results

a) Correlation matrix

The results shown in Table 7showed significant correlations among independent variables (HC, SC, and RC) and dependent variable (OP). HC is significantly correlates to SC and RC (r = 0.579, 0.668. Sig. = 0.001, respectively) and to OP (r = 0.496, Sig. = 0.000). SC is significantly related to both RC (r = 0.643, Sig. = 0.002) and OP (r = 0.428, Sig. = 0.000). Moreover, RC is significantly associated with OP (r = 0.399, Sig. = 0.001).

Table 7: Results of correlation analysis

Variables	HC	SC	RC	OP
Human capital (HC)	-			
Structural capital (SC)	0.579 **	-		
Relational capital (RC)	0.668 **	0.643 **	-	
Organizational performance (OP)	0.496 **	0.428 **	0.399 **	-
** Correlation is significant at the 0.01 level (2-tailed).				

b) Regression prior assumption: Multicollinearity

Collinearity statistics, i.e., tolerance and variance inflation factor (VIF) were calculated to check the assumption of multicollinearity. The results (Table 8) indicated that HC, SC, and RC have tolerance values greater than 0.1 and VIF value less than 10, which means that multicollinearity was not overreached (Hashim et al., 2015).

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Table 8: Results of Collinearity coefficients

Model	Tolerance *	VIF **
Human capital (HC)	0.331	3.120
Structural capital (SC)	0.284	4.016
Relational capital (RC)	0.294	4.770
* Tolerance is accepted at value > 0.1 ** VIF is accepted at value < 10		

c) *Multiple regression analysis*

The results of the study, as shown in Table 9, indicated that all predictors of intellectual capital explained 76.1% of the variance in OP as expressed by R square (R^2 = 0.761). Human capital has a significant impact on OP (Std. beta = 0.274, t = 11.314, Sig. value = 0.000) that is, hypothesis H1 was accepted. Furthermore, structural capital has a significant impact on OP (Std. beta = 0.287, t = 9.112, Sig. value = 0.000). this result means that H2 was supported. Finally, the results pointed out a significant impact of relational capital on OP (Std. beta = 0.239, t = 7.845, Sig. value = 0.000). The results showed that structural capital has the largest beta value (0.287), followed by human capital (0.274), in comparison with relational capital (0.239).

Table 9: Results of multiple regression analysis

Model	Standardized Coefficients - Beta	t	Sig.
Human capital	0.274	11.314	0.000
Structural capital	0.287	9.112	0.000
Relational capital	0.239	7.845	0.001
Dependent variable: organizational performance R^2: 0.761 Df (total): 471 F: 63.59, Sig.: 0.000			

The results shown in Table 9 is also depicted in Figure 2.

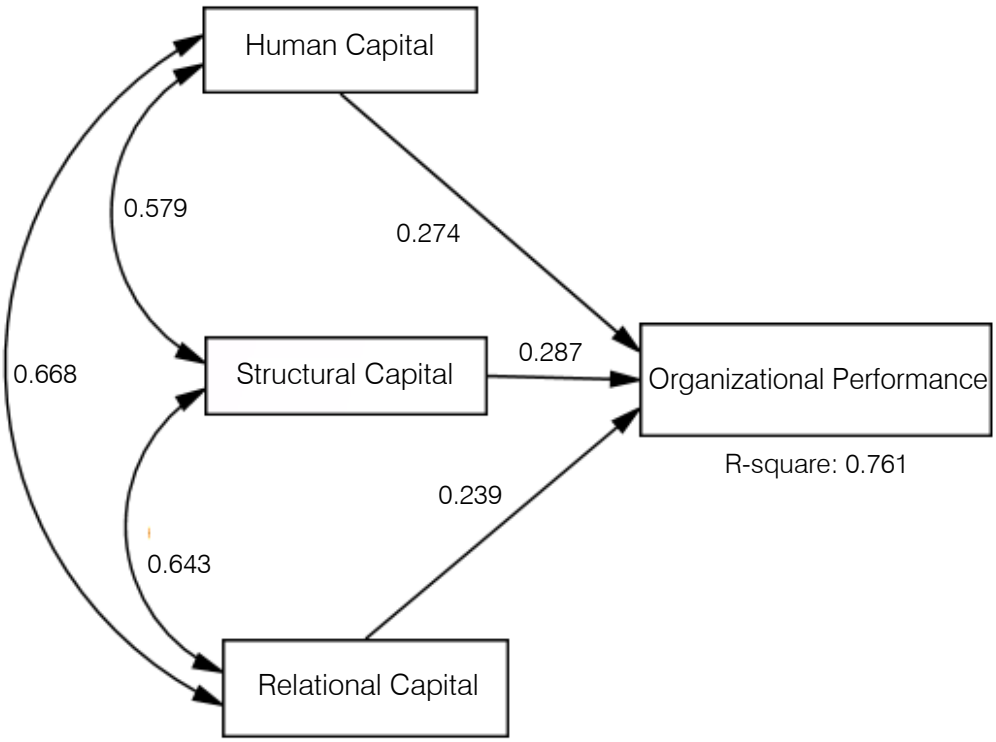

Figure 2: The final model of the study

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V. Discussion

Exploring the extent to which each of IC dimensions significantly has an impact of organizational performance was the main purpose of this study. Expressly, this study sought to determine the impact of human capital, structural capital, and relational capital on organizational performance. The results obtained by the study confirmed that these three dimensions have significant influences on organizational performance. The significant impact of human capital on organizational performance was supported by the current data. Similar result was found by many prior studies. Yang and Lin (2009) found that human capital mediates the relationship between human resource management practices and organizational performance. According to Bontis and Fitz-enz (2002), human capital plays a critical role in the enhancement of organizations' profitability. Nuryaman (2015) indicated that human capital components such as individuals' capabilities and commitment enhance the organizational efficiency and productivity, which in turn affects the organization's ability to generate profit. The results of this study in relation to the impact of structural capital on OP were in line with results of numerous previous studies. The components of structural capital like organizational strategies, structure, and culture help the organization to achieve its organizational objectives (Nuryaman, 2015). In agreement with numerous studies, the results confirmed that relational capital significantly predicted organizational performance (Yang and Lin, 2009 and Wu et al., 2012). Inconsistent with Hashim et al. (2015), the present study found a significant influence of human capital and structural capital on organizational performance. In general, many positive outcomes of intellectual capital found in the literature in correlation to OP (Wu and Sivalogathasan, 2013 and Wanjala, 2013). Smriti and Das (2017) concluded that IC is a predictor of organization's profitability not organization's productivity or market value.

VI. Conclusion, Recommendations and Limitations

The results showed that intellectual capital dimensions, human capital, structural capital, and relational capital play a significant role in improving hospitals performance. That is, the intellectual capital is no less important than the economic capital. Based on these results, the study give advice to organizations in general, specially hospitals to pay more attention to their intellectual capital using their human resource practices like training and development programs, staffing, and motivation with a focus on people knowledge, skills, experiences, innovation, creativity, and job evaluation, individual and job fit, problem-solving, organizational structure, supporting infrastructure, and long-term effective relationships with customers, suppliers, and other stakeholders. However, the results of this study were drawn based on cross-sectional data. Future research should conduct a longitudinal study to explore the influence of IC on OP in a given period of time. Additionally, the results were revealed base on a sample consisted of participants selected from hospitals. It is recommended to study the impact of IC as a whole construct, or its dimensions on OP using samples from different sectors.

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