



Mansoura University
Faculty of Tourism and Hotels

**Identifying the influence of intellectual
capital on business performance in five-
star hotels in Egypt**

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Abstract

Taking into consideration the role of intellectual capital in the hotel industry, the current study aims to identify the impact of intellectual capital on business performance. Data collected from 77 hotel managers in five-star hotels in Egypt through a structured questionnaire and the hypotheses were analyzed through SPSS software. Results indicated that, intellectual capital including three components namely; human capital, relational capital and structural capital has a strong and positive influence on business performance. Indeed, such findings contribute in providing implications for both hotels' managers and the board members of directors on the part of enhancing the implementation of intellectual capital and reaching the desired business performance.

Keywords: Intellectual capital, performance, five-star hotels, Egypt

1. Introduction

Today's business environment entails high level of competition and is characterized by diversity of its business activities, specifically in the field of tourism and hospitality industry. Hence, a lot of intention has been paid to the enhancement of the role of innovative patterns in running the organizations (Langvinienea and Daunoraviþinjto, 2015). Indeed, considering the perfect methods that allow organizations to achieve their goals and attain their objectives, the role of intellectual capital as a mechanism for striking a balance between achieving profitability and gaining quality should be highlighted (Alhassan and Asare,

2016). In this regard, intellectual capital can be considered as a concept that ensures strengthening the relationship between tangible and intangible capabilities of the organizations in order to create valuable products (Sardo et al., 2018).

More comprehensively, many organizations, specifically in the field of hospitality industry aim to gain high levels of business performance through applying the concept of intellectual capital (Smriti and Das, 2017). Actually, the essence of business performance is about achieving high standards of service quality that enable them to gain high profitability and reputation (Liu, 2017). Equally important, business performance refers to gaining market value and good reputation, in parallel with the ability to overcome any challenges posed by the external business environment (Obeidat et al., 2017). As a result, implementing intellectual capital elements can enhance the organization's ability to achieve high levels of innovation policies and business performance (Momani and Nour, 2019).

Clearly, this study intends to identify the main elements of intellectual capital that may facilitate the organization's ability to achieve high levels of business performance in five-star hotels in Egypt. Also, the practices of intellectual capital such as human capital, structural capital and relational capital can be investigated to discover the level of their existence in Egyptian luxury hotels. Moreover, the main indicators of business performance can be highlighted in order to identify the extent by which they are positioned in five-star hotels in Egypt. As a result, creating a linkage between intellectual capital and business performance

enables organizations to gain the ability to handle business issues and gain sustainable competitive advantage (Amin and Aslam, 2017).

2. Literature review and hypotheses development

2.1 The concept of intellectual capital

First of all, intellectual capital can be considered as a combination of intangible assets or resources, such as knowledge, know-how, professional skills and expertise, customer relationships, information, databases, organizational structures, innovations, social values, faith and honesty (Sherif and Elsayed, 2016). Clearly, intellectual capital is attributed to the success of any organization. It allows all organizations to make the perfect decisions in order to achieve the organizational goals. Intellectual capital can be used to create organizational values and provide a competitive edge to organization (Buenechea-Elberdin, 2017). Also, Intellectual capital entails specific issues such as intellectual material, knowledge, information, intellectual property and experience. These issues can be used for creating wealth and contribute to value creation in the organization (Li et al., 2019).

According to Kamath (2015) intellectual capital can be defined as the accumulation of knowledge that resides within the organization at a particular moment in time. It also includes all those resources that are based on knowledge and cannot be found in traditional financial

reports (Hamdan, 2018). Further, intellectual capital represents a concept that is related the accrual of all knowledge, skills, and expertise possessed by employees, which greatly contribute to the attainment of competitive advantages (Elango and Dhandapani, 2020). Moreover, Momani et al. (2020) stated that intellectual capital can be characterized as a collection of comprehensive capabilities of an organization by which facilitates deploying its knowledge resources with respect to adding values and creating strategic visions.

With respect the components that constitute the concept of intellectual capital there are specific studies such as Herremans et al., (2011); Mention and Bontis (2013); Matricano (2016); Wee and Chua (2016); Buenechea-Elberdin (2017) which indicated that the essence of intellectual capital is about human capital, structural capital and relational capital. Moreover, intellectual capital represented in human, relational and structural capital represents a multi-dimensional concept. This concept leads to gaining knowledge and experience. It also facilitates gaining practical capabilities in order to create value (Ulum et al., 2017). Also, specific outcomes such as creating value and gaining competitive advantage can be extracted from intellectual capital represented in human, structural and relational capital (Hamdan, 2018).

2.2.1 Human capital

According to Inkinen (2015) human capital can be defined as a set of skills which an employee acquires on the work during the training and education activities. These activities

can enhance the understanding employees and it will help to increase their worth in the market (Inkinen et al., 2017). Further, human capital is embedded in people, such as knowledge, skills, abilities and expertise. Indeed, human capital is one of the dimensions of intellectual capital known as the largest and most important intangible asset in the organization. Human capital refers to processes associated with education, training and other career plans to increase the level of knowledge, skills, abilities, values and social assets of an employee, which will result in employee satisfaction and performance improvement and will ultimately affect the performance of the company (McDowell et al., 2018).

In this regard, Kianto et al. (2010) clarified that human capital in the hotel industry entails key elements represented in practical knowledge, technical expertise, creativity, education and attitude, competence, experience and motivation. Moreover, Zeglat and Zigan (2014) stated that hospitality organizations that are interested in creating valuable service products must highlight the importance of human capital considering represented in several aspects. These aspects include employee competence, attitudes and innovativeness which are about the essence of intellectual capital. However, the human capital of tacit nature is complicated to extort and to enforce, so this matter makes it hard to capture (Adeola, 2016).

2.2.2 Relational Capital

According to Buenechea-Elberdin (2017) relational capital consists of all the business relationships an organization has

with its different stakeholders, which can either be formalized, such as partnering and distribution arrangements, or non-formalized, such as relationships with customers, investors, competitors or suppliers (Dzenopoljac et al., 2017). In this regard, relational capital entails relationships with external stakeholders such as clients, suppliers and partners. It consists of several elements that exist in the relationships with creditors, clients, suppliers as well as the perceptions that these stakeholders have of the company. Similarly, relational capital is about all resources that are related to external business environment such as customers and suppliers (Mendi et al., 2020).

In a related context, in the field of hotel industry, the relational capital, refers to the sum of assets that organize and manage relationships with the environment. This investment includes the hotel's relationships with customers, shareholders, suppliers, competitors, government, public institutions and society (Edvinsson, 2013). In the same vein, Battisti et al. (2015) indicated that concepts such as commercial power, environmental activities, relationships with internal and external stakeholders as well as the relationship between the community and business agents are also reflected on relational capital in hospitality organization.

2.2.3 Structural Capital

According to Maji and Goswami (2016) structural capital is the ability of an organization or enterprise to meet routine business processes and structures that supports the employees to produce optimal intellectual performance and

business performance as a whole. It includes all the non-human storehouses of knowledge in organizations e.g. the organization's operational systems, processes manufacturing, organizational culture, management philosophy and all forms intellectual property-owned enterprises (Bayraktaroglu et al., 2019). In essence, structural capital can be characterized as non-human knowledge reserves in an organization which includes databases, organizational charts, process instructions, strategies, and anything that gives the organization a value more than the tangible assets (Masoomzadeh et al., 2020).

In the hotel industry, structural capital is created through tasks such as room operations and food and beverage operations (Bontis et al., 2015). In a related context, Liu and Fang (2018) indicated that culture, business processes and IT are significant parts of structural capital in a hospitality organizations. Indeed, Dabrowski et al. (2019) clarified that hospitality organizations with strong structural capital will have a supportive culture that allows individual to try new things, to learn, and to fail. Structural capital is the critical link that allows intellectual capital to be measured at the organizational level of analysis.

2.3 The concept of business performance

According to Tomal and Jones (2015) the concept of business performance revolves around the organization's ability to implement their operational activities effectively. These activities include specific criteria such as management style, customer relationship management and

the quality of the service provided. Further, business performance represents the final outcome of effective utilization of resources and dynamic capabilities in a way that enhances the organization's ability to keep up with the external business environment. It also represents measuring the extent by which the predetermined plans have been executed and goals have been achieved. It also encompasses taking the appropriate corrective actions against any deviation exists (Chepkwony, 2016).

Indeed, business performance is about an indicator that represents the position by which specific establishment is settled, taking into consideration all the organizational outcomes. These outcomes entail all financial and non-financial results (Ahmed et al., 2018). In essence, Ciftcia et al. (2019) stated that business performance is about a set of performance management and analytic processes that enables the management of an organization's performance to achieve one or more pre-selected goals. Noteworthy, the essence of business performance is about gaining commercial effectiveness which enable organizations to achieve their objectives and expected results (Ali et al., 2020).

2.4 The relationship between intellectual capital and business performance

In particular, Agostini and Nosella (2017) stated that, intellectual capital has crucial role in establishing effective procedural framework, encouraging cooperation among all individuals in the organization and in raising organizational performance. More comprehensively, Hussinki et al. (2017) clarified that, intellectual capital components enable organizations to get perfect organizational outcomes such as raising the efficiency of research and development activities, gaining strategic human resources management and attaining valuable service products. The aforementioned outcomes are indicators of excellent business performance. Also, following the components of intellectual capital enable organizations to strike a balance between implementing corporate strategies and gaining the required performance (Cisneros and Hernandez-Perlines, 2018).

Moreover, Strobl and Kronenberg (2016) indicated that the components of intellectual capital allow organizations in the field of hospitality industry to increase their business profits and raise profitability of their hotel operations. More comprehensively, intellectual capital can be recognized as a crucial strategic asset that provides hotels with a competitive edge and sustainable growth in the competitive business environments (Shamim et al., 2017). In essence, it is possible to achieve the improvement of intellectual capital by eliminating deficiencies in education development, eliminating social prejudice on vocational education, improving skills of hotel employees and gaining

vernment support (Zach and Hill, 2017). As a result, the following hypothesis can be formulated:

H1: Intellectual capital positively influences business performance in five-star hotels in Egypt.

H1a Human capital positively influences business performance in five-star hotels in Egypt.

H1b Relational capital positively influences business performance in five-star hotels in Egypt.

H1c Structural capital positively influences business performance in five-star hotels in Egypt.

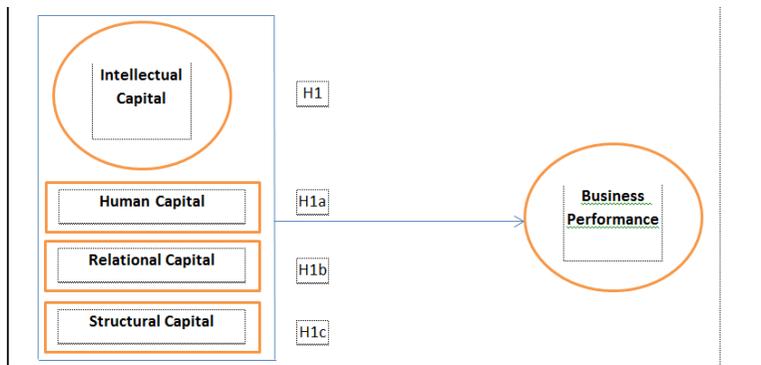


Figure 1. The research framework

3 Methodology

3.1 Population and Sampling

The population of this study entailed general managers, executive managers, resident managers and other managerial positions in five-star hotels in Egypt. The techniques of simple random sampling were applied in this study in order to survey the majority of five-star hotels in Egypt. 92 five-star hotels in Egypt were selected as a representative sample which represents 60% of the entire population. In essence, the researcher considered gaining precise representation of the whole tourist destinations of Egypt in order to facilitate the generalization of the study results.

3.2 Data Collection

The data were gathered through using structured questionnaire. In order to ensure the validity of the questionnaire, the researcher placed a huge attention to the concept of piloting the questionnaire. As a result, the researcher got in connection with a group of hotels managers in order to answer the questionnaire, provide comments towards its questions, give a whole impression about the questionnaire as a total and rank the importance of each item in the questionnaire. As a result, this stage enabled the researcher to make modifications on the

questionnaire as a whole including deleting unnecessary items, modifying vague questions and using easy terminology. In essence, 92 five-star hotels in Egypt were selected as a representative sample which is about 60% of the entire population. There were 77 usable responses collected which represent a response rate of 80 %.

3.3 Measures

In order to measure the practices of intellectual capital the questionnaire of Zeglat and Zigan (2014) were applied entailing 20 items were introduced for measuring human capital, 25 items for measuring relational capital and 16 items were used for measuring structural capital. Noteworthy, the principles of Bontis (1998), Bontis et al. (2000) and Cabrita and Bontis (2008) were developed by Zeglat and Zigan (2014) while measuring the components of intellectual capital. In this regard, the items of business performance were measured through using the scale of Engstrom et al. (2003), Gil- Padilla and Espino-Rodriguez (2008), Harris and Mongiello, (2001) and Zeglat and Zigan (2014). Noteworthy, the items of the questionnaire were formulated on the basis of Likert scale. This scale extends from (1= Strongly disagree) to (5= Strongly agree). Additionally, general information such as educational background, position, experience and number of the hotel rooms were embedded in the questionnaire.

4. Analyses and Results

4.1. Sample Characteristics

The sample indicated that there were different respondents involved in this study as shown in Table 2. The highest percentages of respondents came from males (88%), the majority (92%) got a bachelor degree while 8% of them had master or doctorate degree. There were three groups represented the positions of the respondents as follows; general managers (55%), resident manager (35%), and other managerial positions (10%). Respondents were asked about gaining any academic course in management development programs, Most of them (87%) answered "Yes" while 13% answered "No" did not. Also, the sample involved hotels with different sizes as shown in table 2.

Table 1. Characteristics of the Hotels and Respondents

Respondents' Characteristics	Number	%	Number of rooms	Number	%
Gender			>100	0	0
▪ Male	68	88	100-199	6	8
▪ Female	9	12	200-299	40	52
Educational Background			300-399	16	21
▪ High school	0	0	400-499	7	9
▪ Bachelor degree	71	92	<500	8	10
▪ Master degree	5	7			
▪ Doctorate degree	1	1			
▪ Others	0	0			
Position					
▪ General manager	42	55			
▪ Resident manager	27	35			
▪ Other managerial positions	8	10			

**Management
Courses**

▪ Yes	67	87
▪ No	10	13

4.2. Descriptive statistics

Descriptive statistics of the study variables are clarified in table 1. The component of “Structural Capital” recorded the highest mean of 4.18 while the component of “Relational Capital” recorded the lowest mean of 4.11. On the other side, “Business Performance” recorded a mean of 4.03 which represents high levels of existence.

Table 2. Summary of Descriptive Statistics

Variables	Dimensions	Mean	S.D.
Intellectual Capital	1-Human Capital	4.14	0.21
	2-Relational Capital	4.11	0.17
	3-Structural Capital	4.18	0.24
Business performance	Business Performance	4.03	0.32

4.3. Testing hypotheses and Discussions

The data gathered was analyzed through using SPSS statistical program in order to test the hypotheses. In order to identify the extent by which there is a relationship between the independent variable and dependent multiple regression analysis was used and the results were introduced in table 3 and table 4.

Table 3. Regression of Intellectual Capital against Business Performance – Goodness- of- fit

Model	R	R Square	Adjusted R Square	Std. Error of Estimate
Intellectual capital	0.496a	.246	.236	.27684
Human Capital	0.478a	.236	.244	.23263
Relational Capital	0.507a	.257	.247	.27481
Structural Capital	0.567a	.322	.313	.26256

Regarding to hypothesis 1as a total, results indicated intellectual capital had an impact on business performance as it accounted for 24.6% percent of its variability (R square = 0.246). The individual regression results in Table 4 indicate statistically significant positive linear relationship between intellectual capital and business performance ($\beta = 0.913$, P-value = 0.000) which reveals that the components of intellectual capital have an impact on business performance. Hence, H1 is accepted. These results are in agreement with the study of Bontis et al. (2015) who indicated that, adopting the concept of intellectual capital is related to successful organizational outcomes such as improving value-creation activities, developing growth strategies and spreading successful corporate culture. Additionally, Sardo et al. (2018) added that intellectual capital participates in enhancing business performance represented in operational systems, business processes, information technology and strategic plans in hospitality organizations .

Table 4. Regression Coefficients (Individual significance) Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)					
Intellectual Capital	.913	.185	.496	4.945	.000
Human Capital	.617	.132	.479	4.536	.002
Relational Capital	.933	.183	.507	5.091	.000
Structural Capital	.748	.125	.567	5.963	.000

Regarding hypothesis 1a findings indicated that, human capital influenced business performance as it accounted for 23.6% percent of the variability of change in the hotels performance (R square = 0.236). The individual regression results in Table 4 reveal statistically significant positive linear relationship between strategy formulation and innovation ($\beta = 0.617$, P-value = 0.002) which indicates that business performance is influenced by the components of intellectual capital. As a result, H1a is accepted. These findings are in consistent with the study of Ognjanovic

(2016) indicated that, when the hotels are investing in developing the skills of their employees and human capital through providing effective training programs and educational activities, they can gain the required business performance. Also, Davey et al. (2017) clarified that, empowering and motivating employees can be considered the essence of human capital which leads to raising performance and increasing revenues.

With respect to hypothesis 1b the study results showed that relational capital had explanatory power on business performance as it accounted for 25.7% percent of its variability ($R^2 = 0.257$). Further, the individual regression results in Table 4 show that there is a statistically significant positive linear relationship between relational capital and business performance ($\beta = 0.933$, $P\text{-value} = 0.000$) which refers to the notion that relational capital has an impact on business performance. As a result, H1b is accepted. These findings are supported by the study of Hsu et al. (2015) who concluded that, hospitality organizations must enhance their relationship with several business environment including relationships with customers, shareholders, suppliers, competitors, government, public institutions and society in order to achieve higher profitability and good business performance. Similarly, Li et al. (2018) indicated that, hotels must maintain regular contact with the sector associations at both domestic and non-domestic level in order to share sector's information and improve business performance.

Regarding hypothesis 1c results indicated that, business performance is influenced by structural capital as it

accounted for 32.2% percent of the variability of change in the hotels performance (R square = 0.322). Moreover, the individual regression results in Table 4 reveal statistically significant positive linear relationship between structural capital and business performance ($\beta = 0.748$, P-value = 0.000) which means that business performance are influenced by the components of intellectual capital. As a result, H1c is accepted. These findings are in consistent with the study of Dabrowski et al. (2019) who indicated that, the aspects of structural capital including databases, organizational charts, process instructions, and strategies can play a vital role in raising business performance. Further, the organization's ability to generate innovative business ideas and spreading the culture of success as a corner stone of structural capital is the basis for gaining profitability and intended business performance (Ginesti, 2019).

5. Implications

The findings of this study present insightful recommendations regarding the relationship between intellectual capital and business performance. Many interested individuals including academics, investors, members of the board and managers can greatly take advantage of these recommendations. With respect to the main hypothesis that addressed the relationship between intellectual capital as a total and business performance, it was supported. In this regard, the hotels' managers must specific action plan that contains guidelines for implementing intellectual capital activities. This plan leads to achieving productivity and uniqueness in providing the

hotels service products which is reflected in reaching high levels of business performance and raising innovativeness.

Regarding the first sub-hypothesis that tackled the connection between human capital and business performance, the sub-hypothesis was supported. In essence, a great emphasis must be placed on the role of employees in implementing strategies of the hotel. Hotel managers must take advantage of the employee's competences and put them into action. Business planners in the hotel must also work in parallel with the department of research and development in order to formulate effective business development ideas. These ideas facilitate implementing the strategies of organizational learning that enable hotels to improve the skills of their human capital specifically for employees.

With respect to the second sub-hypothesis that handled the relationship between relational capital and business performance, it was supported. So, the research shed the light on the notion that hotel managers must encourage the activities that aim to develop the relationship between customers and hotels' brand. These activities include implementing the requirements of customer satisfaction, introducing valuable distribution channels and providing effective loyalty programs. On the other hand, hotels' management must develop corporate strategies that enhance the hotels' ability to sustain good relationships with commercial partners. Also hotels' management must formulate effective business plans that aim to enhance the

relationships with several stakeholders such as tourism promotion organizations, government, local community, competitors, creditors, special interest groups, the media and other hospitality organizations.

Finally, regarding the third sub-hypothesis that addressed the relationship between structural capital and business performance, it was also supported. Hence, hotels' managers develop effective organizational culture and several management philosophies that aim to enhance the operational systems periodically. They also have to control all managerial activities smoothly in order to improve their organizational policies. Specific actions such as restructuring the organizational hierarchy must be done smoothly in light of effective feedback mechanisms. Also hotels' managers must formulate effective functional strategies that enhance business processes and develop all functional activities specifically in the field of information systems.

6. Limitations & Future Research

The study entailed specific limitations represented in adopting the approach of cross-sectional research design which allows gathering data regarding the study variables during the time of conducting the study. Consequently, there was no chance to attain repeated observations and connections regarding the study variables. As a result, a

longitudinal study could be useful. Furthermore, this study addressed variables that are relevant to the corporate level of the hotels. Therefore, general managers, executive managers, resident managers and other senior managers in all five-star in Egypt were exclusively involved in giving answers to the study questionnaire, while other managerial positions were excluded such as middle-level managers and supervisors. Finally, due to time and financial constraints, the researcher did not have the ability to survey all five-star hotels in Egypt and just a representative sample was implemented.

Several insights can be extracted from this research which can inspire researchers to conduct a lot of researches in the future such as; investigating the concept of intellectual capital from the perspective of 3-star hotels, 4-star hotels and other independent hotels in order to identify new and innovative organizational activities in these categories. Moreover, researchers are also encouraged to study the moderating role of specific managerial concepts such as strategic management between the components of intellectual capital and business performance. Further, the role of benchmarking in implementing best practices of intellectual capital can be examined in the future. Through following the principles of benchmarking, hotels can gain the knowledge that is related to reaching strategic objectives. Finally, the drivers of applying intellectual capital components have to be highlighted by researchers.

These divers include applying strategic management techniques and adopting managerial concepts like open-book management.

7. Conclusion

This research placed an emphasis on the impact of intellectual capital on business performance by which applying intellectual capital enhances the ability of raising business performance in five-star hotels. In essence, the findings clarified that, intellectual capital influences business performance in the surveyed hotels. Furthermore, the findings indicated that all the components of intellectual capital entailing human capital, relational capital and structural capital have a great influence on the issues of business performance. From the perspective of the researcher, members of the board and senior managers must highlight the interrelated relationship between intellectual capital and business performance which leads to high levels of organizational excellence. Moreover, the concept of organizational development must be circulated among all members of the hotels in order to facilitate implementing intellectual capital and reach all predetermined strategic objectives.

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