Assessing the Impact of Human Capital on Business Model Innovation in the Egyptian General Authority for Tourism Promotion

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Abstract

The business environment is constantly changing and evolving. It is full of variables and challenges that significantly influence the organizational performance. Human capital (HC) is one of these variables; it belongs to employees and consists of individuals’ knowledge, skills, education, working experience, and abilities. Another variable that emerged in the 1990s is business model innovation (BMI); it reflects the ability to manage all operations with more creativity, it has three dimensions: value creation, value proposition, and value capture. This study aims to broaden the current understanding of the relationship between HC and BMI in the tourism industry and to identify the impact of HC on BMI in the Central Department for International Tourism (CDIT) in the Egyptian General Authority for Tourism Promotion (EGATP) particularly. To achieve the objectives of the study, the researchers proposed a model to explore the relationship between HC dimensions and BMI dimensions and to measure the impact of HC dimensions on BMI dimensions as well. An online questionnaire was distributed to the employees of the CDIT. The number of valid questionnaire forms is 36. The data was analyzed using SPSS 25. The results confirmed the significant relationship between the five dimensions of HC and the three dimensions of BMI in CDIT. Additionally, employees’ experience and skills are the most influencing factors on value creation, value proposition and value capture.

1. Introduction

Knowledge based economy is characterized by the great reliance on knowledge assets. Intellectual capital is considered one of the most critical knowledge assets for organizations. It is divided into three dimensions; human capital, structural capital, and relational capital (Zane, 2022).

Theorists have presented their first conceptualizations of HC six decades ago. According to the theory of HC, providing individuals with opportunities to develop and exploit their abilities, skills, and knowledge results in higher performance for individuals and their societies (Guo and Chen, 2021; Tight, 2019). In line with this, HC is an accumulated process; its real value is not limited to what employees have, but what they can offer their organizations to gain competitive advantage. Further, in recent decades, the management
literature focused on terms such as; top talent, skilled managers, and top executives to illustrate the competitiveness of HC (Islam and Amin, 2021).

Since the late 1990s, business environment challenges such as technology and globalization have forced organizations to rely on business models as key drivers for achieving competitive advantage and generating revenues. Consequently, managers realized the critical importance of incorporating innovation into traditional business models in order to keep up with changes in customer preferences and the business environment (Corrales-Garay et al., 2022; Jin et al., 2021; Taran et al., 2016; Huang et al., 2013).

Based on the prior literature, it is asserted that HC in organizations strengthens their ability to regularly acquire, exchange, and apply knowledge to maintain their position in intensely competitive environments. Moreover, innovation in several aspects, such as dealing with customers, marketing, and new products, needs the outcome of HC significantly, which makes HC and innovation inseparable elements for success (Fu et al., 2020).

This study aims to extend the current understanding of the relationship between HC and BMI in the tourism industry. HC has increasingly become one of the critical intellectual resources in enhancing firms’ success. However, more work needs to be done to enrich the knowledge of this link from a tourism perspective. Many researchers (Salehi et al., 2021; Fu et al., 2020; Liu et al., 2019; Liu et al., 2017; Sarwar et al., 2016) have studied HC from various aspects, yet, few Abou Shouk and Tamam (2021) and Divisekera and Nguyen (2018) have analyzed HC as one of the influencing factors on BMI in travel agencies but without focusing on its dimensions. This study intends to bridge these gaps, hence; it adopted a model to illustrate the significant components of HC (knowledge, skills, education, working experience, and abilities) which have been neglected in previous studies, and how it affects the three main components of BMI (value creation, value proposition, and value capture). Consequently, the main objectives of this study summarized as follows:

1. Illustrating the relationship between HC dimensions and BMI dimensions in CDIT.
2. Exploring the impact of HC dimensions on BMI dimensions in CDIT.

1. Literature review

2.1 Human Capital

The global economy has witnessed significant changes due to globalization and technological challenges. These changes resulted in the appearance of other types of capital other than physical capital, such as HC (Yang et al., 2022). Metz et al. (2022) argued that HC became an interest for researchers from different fields because of its impact on economy, psychology, and human resources management.

HC could be studied through two major perspectives. The first one is macro-HC research that addressed the impact of HC investment on the national and regional level, in contrast, micro-HC research demonstrates the impact of individuals’ HC investment within their organizations (Fu et al., 2020).

Based on the above illustration, the literature presented a large number of HC indicators. However, plenty of researchers agreed that HC refers to individuals’ knowledge, skills, education, working experience, and abilities (Martinez et al., 2022; Shidong et al., 2022; Villanueva-Flores et al., 2022; Wesemann, 2022; Dar and Mishra, 2021; Shela et al., 2021; Lajili et al., 2020). Moreover, HC exists in two forms. The first form is general HC which represents all its indicators that could be easily shared and used in achieving several tasks, while specific HC refers to its all indicators that could be used exclusively in specific industry, or an organization or to achieve specific tasks within organizations (Timothy, 2022; Kallmuenzer et al., 2021).
In detail, individuals’ knowledge exists in two forms; tacit and explicit knowledge. The first one represents the knowledge embedded in employees’ minds. It is difficult to share and transfer from one person to another. On the contrary, explicit knowledge refers to what can people learn from tangible sources of information such as documents and databases. Tacit knowledge composes the majority of employees’ knowledge within organizations (Mohiya, 2022). Skills and abilities refer to employees’ talents and special characteristics that enable them to perform their roles at the best level. Education represents employees’ scientific qualifications enriching their abilities to do their jobs (Armstrong, 2009). Finally, working experience includes several elements that accumulate through time for employees and differ from one employee to another according to his personality. These elements are; self-confidence, disciplined behavior at work, ability to understand work instructions and execute them effectively (Ratnawati et al., 2020).

Furthermore, HC is considered a valuable intangible resource for each organization that competitors cannot imitate for several reasons. Each organization requires different levels of skills, knowledge, and abilities from its employees and managers have different levels of impact on developing employees’ HC. Likewise, HC is generated at the individual level; it belongs to employees and is accumulated to form the overall HC of the organization. This process differs from one organization to another, which makes HC a unique resource (Harris and Brown, 2021; Tuncdogan et al., 2021; Munjal and Kundu, 2017; Bryant-Kutcher et al., 2009).

Additionally, HC can be shared within the same organization. The more accessibility employees have to others’ HC, the longer they will be eager to stay (Dankyi et al., 2020). In a similar vein, it is critical for organizations to manage and exploit its HC efficiently because prior studies provided evidence that large amounts of HC could result in problems in case of poor management of this valuable resource (Garcia-Carbonell et al., 2018).

In this context, Lenihan et al. (2019) agreed with Singh and Rao (2017) that human resources management practices have a significant role in supporting and managing HC. Practices such as; training, hiring, evaluating, promoting, rewarding and punishment affects employees’ motivations and attitudes towards their jobs. Thus, the appropriate actions and practices of human resources management pave the way for developing HC and guaranteeing the best employment of HC to achieve competitive advantage.

Regarding the importance of investment in HC of organizations. It could be summarized in the following points:

1. It guarantees the sustainable development of employees’ HC which encourages them to use their HC to achieve organizational goals (Guo and Chen, 2021).
2. It enables managers to adapt business models to challenges and offer high quality products that have the ability to compete with industry peers (Faeni et al., 2022).
3. It enhances employees’ absorption of new technological advances, improves innovation and preserves the competitive position of organizations. Moreover, investment in HC increases employees’ productivity resulting in better economic outcomes (Marchiori et al., 2022; Shahbaz et al., 2022; Apergis et al., 2021; Onuoha, 2021).

2.2 Business model innovation

The concept of business model has emerged with the internet revolution, which has started in the 1990s. Researchers argued about identifying a specific definition of the business model concept. However, most definitions highlighted that business model is an unstable concept that reflects how organizations use logic to manage its operations, develop new products and
services presented to customers to maximize profits (Jin et al., 2021; Yang et al., 2020; Taran et al., 2016).

In addition, Kafetzopoulos et al. (2020) agreed with Baragde and Baporikar (2017) that organizations should rely on applying innovation to their business models to survive in highly competitive markets. Innovation is about turning remarkable ideas into new products or services, developing the old ones, capture new opportunities or apply a new management approach. With this in mind, the concept of BMI has appeared recently to enable organizations to keep up with continuous challenges. It means transforming traditional business model to a new creative one which contributes to providing customers with value through new methods, cost reduction, increasing profits, creating new products and services (Corrales-Garay et al., 2022; Bao et al., 2021; Huang et al., 2013).

Furthermore, the vast majority of prior studies agreed upon three dimensions of BMI which are; creating, delivering, and capturing value (Codini et al., 2022; Guo et al., 2022; Yi, et al., 2022; Paiola et al., 2022; Foss and Saebi, 2017; Teece, 2010).

Regarding value creation, it is considered to be the cornerstone of innovation business model because it is the final result of all business activities (Dane-Nielsen and Nielsen, 2019). Each organization evaluates its ability to create value according to different perspectives, which are financial and non-financial measurements (Mohammed et al., 2021).

In other words, value creation is a voluntary process between two partners willing to benefit from each other. Organizations that adapt new strategies, and manage its resources to provide its customers with new products and services are the first partner. The expected benefit for organizations is maximizing its profits through value capture and preserving its competitive position in markets. The second partner are customers with different preferences who are provided with fulfillment of their needs and wants (Sarrami et al., 2020; Windsor, 2017; FitzPatrick et al., 2015).

In terms of value proposition, it is the most critical element of BMI because it consists of well-organized activities to deliver the value for customers. These activities guide the organization to penetrate markets and reach its customers effectively. Likewise, value proposition is about the needed steps and actions to transform ideas in value creation process into products and services with the minimum possible costs to maximize value capture (Biloshapka and Osiyevskyy, 2018).

Concerning value capture, it refers to how organizations secure the generated profits from value creation and use these profits to create more value in the future (Agarwal et al., 2022). Managers should consider two critical factors that significantly affect value capture. First, anticipating customer behavior, their willingness to buy the organizations’ products and services, and their intentions to deal with competitors. Second, risk calculation in terms of new competitors and changing customer preferences (Vos et al., 2019).

Furthermore, organizations rely on several elements to protect and develop value capture, such as; patents, establishing research and development departments, developing brand awareness and marketing efforts. All the previous elements focus on the customer decision (Seo et al., 2014; Aspara and Tikkanen, 2013). Consequently, Nenonen and Storbacka (2014) suggested that the key driver to a successful value capture is to build a customers’ database that includes their profiles. Each profile consists of their needs, wants, frequency of buying, and all information needed for the organization to attract new customers and retain the old ones.
2.3 Relationship between Human Capital and Business Model Innovation

According to previous studies, on the one hand, only two studies were applied on the tourism sector. First, Divisekera and Nguyen (2018) discussed innovation processes within Australian tourism enterprises. In their study, they considered HC as an input for innovation processes; results demonstrated that HC is the second significant factor for service innovation after collaboration for innovation. Second, Abou Shouk and Tamamm (2021) assessed the impact of intellectual capital on the innovation performance of Egyptian travel agencies; the study confirmed the significant positive effect of HC as one of the intellectual capital components on the business model innovation in Egyptian travel agencies.

On the other hand, plenty of studies were conducted in other sectors, such as; construction companies in Pakistan, Chinese enterprises, Iranian manufacturing companies, and cultural and creative industry (CCI) managers in Taiwan (Salehi et al., 2021; Fu et al., 2020; Liu et al., 2019; Liu et al., 2017; Sarwar et al., 2016).

Studies by Liu et al., (2019); Liu et al., (2017); Sarwar et al., (2016) dealt with HC and innovation as mediator variables in different situations. The study of Sarwar et al., (2016) confirmed the mediation role of innovation between independent variables (HC & HRM practices) and organizational performance in the construction industry of Pakistan. The study of Liu et al. (2017) exhibited different levels of mediating and moderating effects of HC on the relationship between export and innovation in Chinese enterprises. Moreover, the study of Liu et al. (2019) illustrated HC mediates the relationship between social capital and innovation capability in cultural and creative industry (CCI) managers in Taiwan.

Furthermore, Salehi et al., (2021); Fu et al., (2020) dealt with HC as an independent variable and innovation as the dependent variable. The study of Fu et al., (2020) highlighted the positive significant impact of HC dimensions on process innovation in Chinese enterprises. In line with this, the study of Salehi et al., (2021) showed that intellectual capital has a significant impact on innovation in Iranian companies.

Based on the prior research, this study made the following assumption: since HC and BMI have a significant relationship, the dimensions of the two variables should also have a significant relationship. Hence, the researchers proposed a model (figure 1) to analyze this association and determine which of HC dimensions have the highest impact on BMI. To verify these objectives, the study tested the following hypotheses:

H1a: There is a positive association between knowledge and value creation in CDIT.
H1b: There is a positive association between knowledge and value proposition in CDIT.
H1c: There is a positive association between knowledge and value capture in CDIT.
H2a: There is a positive association between skills and value creation in CDIT.
H2b: There is a positive association between skills and value proposition in CDIT.
H2c: There is a positive association between skills and value capture in CDIT.
H3a: There is a positive association between education and value creation in CDIT.
H3b: There is a positive association between education and value proposition in CDIT.
H3c: There is a positive association between education and value capture in CDIT.
H4a: There is a positive association between work experience and value creation in CDIT.
H4b: There is a positive association between work experience and value proposition in CDIT.
H4c: There is a positive association between work experience and value capture in CDIT.

H5a: There is a positive association between abilities and value creation in CDIT.

H5b: There is a positive association between abilities and value proposition in CDIT.

H5c: There is a positive association between abilities and value capture in CDIT.

2. Research Methodology

3.1 Sample and data collection

In order to achieve the objectives of the present study, a research study was carried out in the Central Department for International Tourism (CDIT) in EGATP using a structured questionnaire.

The targeted population was the managers and the employees of the CDIT in EGATP. The researchers chose the CDIT after reviewing the organizational structure of EGATP. CDIT is one of the foremost crucial sectors within the tourism industry in Egypt; it is the sector that deals with the foreign tourist markets and conduct market research. Further, it is responsible for promoting Egypt as a tourist destination in different markets with diverse needs. Despite its significance, no studies shed light on its development, the characteristics of its employees, and whether or not the business model is innovative.

The data was collected through October 2022. Thirty-six forms were sent online to the entire population, and all the 36 forms were filled out and submitted, yielding a response rate of 100%.

3.2. Measurement items

The questionnaire is divided into three main sections, which are as follows: First, questions asking about demographic information (age, gender, education, profession, and years of experience). The second section includes HC dimensions; and the third includes BMI dimensions.

Items for measuring the two variables (HC and BMI) were adapted from previous studies and modified to match the theme of the current study. Items for measuring the HC adapted from Van et al., 2022; Adomako & Frimpong, 2022; Dar & Mishra, 2019, and Vidotto et al., 2017. The total number of HC measuring items was 14 items. However, 26 items were
adopted from (Chen et al., 2020) to assess the business model innovation. Finally, all 40 scale items were anchored in a five-point Likert scale.

Cronbach’s Alpha was used as an examination indicator to determine the reliability of the scale. The results show the good stability of the values of the scale, where all the values of the stability coefficients are above (0.70) (see table 1).

Table 1: Cronbach’s Alpha for the study scale

<table>
<thead>
<tr>
<th>Variables</th>
<th>Cronbach’s Alpha</th>
<th>Number of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>KN</td>
<td>.702</td>
<td>4</td>
</tr>
<tr>
<td>SK</td>
<td>.857</td>
<td>4</td>
</tr>
<tr>
<td>ED</td>
<td>.750</td>
<td>3</td>
</tr>
<tr>
<td>EX</td>
<td>.802</td>
<td>3</td>
</tr>
<tr>
<td>AB</td>
<td>.802</td>
<td>3</td>
</tr>
<tr>
<td>VC</td>
<td>.929</td>
<td>9</td>
</tr>
<tr>
<td>VP</td>
<td>.802</td>
<td>8</td>
</tr>
<tr>
<td>VT</td>
<td>.916</td>
<td>9</td>
</tr>
</tbody>
</table>

KN=Knowledge, SK=Skills, ED=Education, EX=Experience, AB=Abilities, VC=Value Creation, VP=Value Proposition, VT=Value Capture.

3.3 Data analysis

To achieve the objectives of this study, the researchers employed Statistical Tools of Statistical Package for the Social Science (SPSS 25). The statistics techniques used in data analysis include frequencies, percentages, means, standard deviation, Pearson correlation, and simple linear regression.

3. Results

4.1 Demographic Data

As depicted in table (2), (58.3%) of respondents were males, however, (41.7%) were females. In this sample, the majority of the respondents (44.4%) were in the age category of (41-50) years, followed by the age category of (31-40) years (36.1%), and finally, the age category (31-40) years (19.4%). Regarding education, the majority of respondents (63.8%) had bachelor’s degree, (13.8%) had master’s degree, (11.1%) had Ph.D, and (8.3%) had diploma. With regard to their profession, the majority of respondents (80.5%) were employers, (11.1%) were managers, and (8.3%) were heads of department. According to the CDIT Employees’ experience, almost half of the respondents (47.2%) had more than 20 years of experience, (22%) had 15-20 years of experience, (22%) had 11-15 years of experience, and (8.3%) had 6-10 years of experience.
4.2 Descriptive Results

Table (3) Mean Rating of Human Capital

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>Sd</th>
</tr>
</thead>
<tbody>
<tr>
<td>KN</td>
<td>3.562</td>
<td>.807</td>
</tr>
<tr>
<td>SK</td>
<td>3.055</td>
<td>1.102</td>
</tr>
<tr>
<td>ED</td>
<td>3.203</td>
<td>1.027</td>
</tr>
<tr>
<td>EX</td>
<td>3.166</td>
<td>.987</td>
</tr>
<tr>
<td>AB</td>
<td>3.435</td>
<td>1.176</td>
</tr>
<tr>
<td>HC</td>
<td>3.28</td>
<td>1.01</td>
</tr>
</tbody>
</table>

KN=Knowledge, SK= Skills, ED= Education, EX= Experience, AB= Abilities, HC= Human Capital.

The data in table (3) shows the mean and standard deviation scores of HC dimensions. For knowledge, the mean was (3.562) with a standard deviation of (.807); for abilities, the mean was (3.435) with a standard deviation of (1.176); for education, the mean was (3.203) with a standard deviation of (1.027); for experience, the mean was (3.166) with a standard deviation of (.987); and for skills the mean was (3.005) with a standard deviation of (1.102).

Table (4) Mean Rating of Business Model Innovation

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>Sd</th>
</tr>
</thead>
<tbody>
<tr>
<td>VC</td>
<td>2.935</td>
<td>.988</td>
</tr>
<tr>
<td>VP</td>
<td>3.420</td>
<td>1.123</td>
</tr>
<tr>
<td>VT</td>
<td>3.336</td>
<td>.971</td>
</tr>
<tr>
<td>BMI</td>
<td>3.23</td>
<td>1.02</td>
</tr>
</tbody>
</table>

VC= Value Creation, VP= Value Proposition, VT= Value Capture, BMI= Business Model Innovation.

The data in table (4) illustrates the mean and standard deviation scores of BMI dimensions. For value proposition the mean was (3.420) with a standard deviation of (1.123), for value capture the mean was (3.336) with a standard deviation of (.971), and for value creation the mean was (2.935) with a standard deviation of (.988).

4.3 Pearson Correlation Analysis

Pearson correlation was used to measure the correlation between the variables of this study (see table 5).
The results in table (5) indicate that there are significant positive correlations between the dimensions of HC and the dimensions of BMI. Moreover, the majority of the correlations are significant at (0.01) level. The highest correlation value was between employees’ experience and the three dimensions of the BMI (value creation, value capture, value proposition) (r= 0.636, 0.566, 0.512, P= 0.000, 0.000, 0.001 respectively), followed by employees’ skills, knowledge, education, and finally their abilities.

As per these results, there was no multicollinearity problem in this study. According to Hair et al. (2006), multicollinearity occurs if the (r) value between each pair of independent variables in Pearson’s correlation exceeds (0.90).

4.4 Simple Linear Regression

The main objective of this study is to identify the impact of the five dimensions of HC (knowledge, skills, education, experience, and abilities) on the three dimensions of BMI (value creation, value proposition, and value capture) in CDIT. To achieve this objective, simple linear regression analysis was used (see table 6).
The results in table (6) revealed that the majority of HC dimensions have a significant positive impact on BMI dimensions. As shown, employees’ skills and experience calculated the higher impact on value creation (r²=0.478, 0.405%, P= 0.00, 0.000 respectively). Further, employees’ experience and knowledge had the higher impact on value proposition (r²= 0.262, 0.251%, P= 0.001, 0.002 respectively). Moreover, employees’ experience and skills had the higher effects on value capture (r²= 0.320, 0.281%, P= 0.000, 0.000 respectively). However, employees’ skills, education and abilities had no significant impact on value proposition (r²= 0.153, 0.088, 0.098, P= 0.018, 0.078, 0.063 respectively). Additionally, employees’ abilities had no significant impact on value capture (r²= 0.082, p= 0.090). Consequently, all the hypotheses of this study were supported except H2b, H3b, H5b, and H5c. Ultimately, the results also confirmed that HC has a significant positive impact on BMI, r²= 0.399, P= 0.000.

4. Discussion

The findings demonstrated the impact of HC on BMI in the CDIT in the EGATP. Moreover, it verified the significant impact of HC dimensions on each of the BMI dimensions.

First, the demographic data showed how experienced and well educated the CDIT employees are, which consequently affects the BMI. Moreover, the mean ratings of the HC dimensions are close, demonstrating how crucial and complementary are all the dimensions (knowledge, skills, education, experience, and abilities) to each other. Additionally, the mean ratings of the BMI dimensions are close as well, illustrating how the business model in the CDIT is innovative within all its aspects (value creation, value proposition, and value capture).

Second, the results indicated that there are significant positive correlations between the dimensions of HC and the dimensions of BMI. Moreover, the majority of the correlations are significant at (0.01) level. Noteworthy that the highest correlation value was between employees’ experience and the three dimensions of the BMI, followed by employees’ skills, employees’ knowledge, employees’ education, and finally, the employees’ abilities.

Third, the results also revealed that most of HC dimensions have a significant positive impact on BMI dimensions. Moreover, the results demonstrated which of the HC dimensions have the highest impact on BMI. (88.3%) of the value creation process in CDIT is affected by the employees’ skills and experience, respondents showed that the CDIT managers are very keen in employing competencies who can adapt to changing market requirements and in improving their own internal business as well.

Fourth, (51.3%) of the value proposition in CDIT is affected by employees’ experience and knowledge; respondents confirmed that they are emphasizing innovative and modern promotional materials to increase their international tourist markets retention. Moreover, they are utilizing new distribution channels for their products and services; they also stated that the constant changes of these channels led to improved efficiency of CDIT functions. Ultimately, they are constantly searching for new tourism segments and new markets.

Fifth, (60.1%) of the value capture process is affected by employees’ experience and skills. Respondents declared that CDIT is enjoying a high degree of integrity and complete satisfaction from the tourism offices in the international tourist markets with regard to the provided content. They also clarified how committed and respective CDIT is to its relations with the tourism offices in the international tourist markets.

Consequently, CDIT managers should maintain and maximize employees' competencies by prioritizing the employees’ continual training, keeping the well-experienced and skilled
employees, and recruiting the high-level talented ones. Managers should also assign duties based on employers’ skills and efficiency. Ultimately, CDIT managers should develop employee incentive system and an innovative work environment.

Finally, the results also confirmed that HC has a significant positive impact on BMI, \( r^2 = 0.399, P= 0.000 \). Noteworthy that the results of this study agreed with the previous studies’ results (Abou Shouk and Tamamm, 2021; Salehi et al., 2021; Fu et al., 2020; Liu et al., 2019; Divisekera and Nguyen, 2018; Liu et al., 2017; Sarwar et al., 2016) that confirmed the significant impact of HC on BMI in different fields.

5. Conclusion and implications
The findings of this study contribute to the literature by empirically examining the effects of the five dimensions of HC (knowledge, skills, education, experience, and abilities) on the three dimensions of BMI (value creation, value proposition, and value capture). Further, it provided an empirical proof to CDIT managers that having strong HC, who are distinguished by their experience and skills, knowledge, education, and abilities, is associated with a more substantial potential to increase the CDIT BMI and consequently its overall performance. More importantly, the results confirmed that Employees’ experience and skills play an essential role in the BMI in the CDIT. Furthermore, the results also highlighted how crucial and complementary the five dimensions of HC are to each other in order to maintain the BMI.

Additionally, this study contributes by offering some implications to the CDIT managers; first, they should increase employees’ perception towards BMI. Second, managers of CDIT should prudently manage and invest in their HC to strengthen the CDIT business model innovation. Third, managers should sustain technological innovation and make ongoing investments to improve resource utilization efficiency and adoption. Fourth, CDIT managers should shift their focus from evaluating and quantifying HC to developing and efficiently utilizing it.

6. Limitations and future research
The current study relied solely on the questionnaire survey for data collection, future research could adopt other methods, such as the interview for more detailed and in-depth data. The present study investigated the relationship between the dimensions of HC and the dimensions of BMI, researchers in the future could search out the challenges and difficulties that might affect the BMI in CDIT. Further, other sectors of the tourism industry could be studied in future studies.

References


/https://jaauth.journals.ekb.eg

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Appendix (1) HC Dimensions

| KN1 | The information provided in the documents enables me to do my work better. |
| KN2 | I rely on my skills and my personal vision to accomplish my work in the Authority. |
| KN3 | The authority's work system allows knowledge exchange between individuals on a personal basis. |
| KN4 | The Authority relies on electronic means in exchanging knowledge between individuals. |
| SK1 | The employees of the CDIT have the highest level of required work skills. |
| SK2 | The skills of the CDIT employees qualify them to solve work problems easily. |
| SK3 | The SDIT employees have leadership skills. |
| ED1 | Employees with the highest academic and practical qualifications in the Authority can seize opportunities in various markets. |
The academic and practical qualifications of the employees provide the authority the opportunity to enter new markets.

The Authority's work system allows employees to develop their academic qualifications.

The employees’ experience qualifies them to always deal with the new innovative technologies.

Our employees are experts in the work and the functions they perform.

The employees’ experience qualifies the authority to deal with various tourist markets.

Our employees have the ability to work under pressure.

Our employees have the ability to develop new ideas.

Our employees have the ability to learn and absorb all that is new in the labor market.

### Appendix (2) BMI Dimensions

| VC1 | Our employees constantly receive training in order to develop new competencies. |
| VC2 | We constantly reflect on which new competencies need to be established in order to adapt to changing market requirements. |
| VC3 | We keep our technical resources up-to-date. |
| VC4 | We regularly utilize new technical opportunities in order to extend our product and service portfolio. |
| VC5 | We regularly utilize opportunities that arise from the integration of new partners into our processes. |
| VC6 | We regularly evaluate the potential benefits of outsourcing. |
| VC7 | We are recently able to significantly improve our internal business. |
| VC8 | We use innovative methods while presenting its work. |
| VC9 | Existing processes are regularly assessed and significantly changed if needed. |
| VP1 | The advertising activities provided by our department are very innovative compared to what is offered by the other competing tourism markets. |
| VP2 | In our advertising materials, we regularly focus on the needs and desires of new tourism markets that have not been previously met by competing tourism countries. |
| VP3 | Our department is constantly searching for new tourism segments and markets. |
| VP4 | We regularly take opportunities that arise in new or growing markets. |
| VP5 | We regularly utilize new distribution channels for our products and services. |
| VP6 | Constant changes of our channels have led to improved efficiency of our channel functions. |
| VP7 | We emphasize innovative and modern promotional materials to increase our international tourist markets retention |
| VP8 | We recently took many actions in order to strengthen our relationships with the tourism offices in the international tourist markets. |
| CT1 | We have recently developed new tourism revenue opportunities. |
| VT2 | Our department is increasingly providing integrated services in order to achieve long-term financial returns. |
| VT3 | Our department is always interested in considering the pricing strategies for our advertising campaigns. |
| VT4 | We are always looking for strategies to reduce the cost of the advertising campaigns. |
| VT5 | Tourism offices in the international tourist markets trust that our department always offers them the best and most suitable options that match their tourists’ needs. |
The Egyptian Ministry of Tourism and Antiquities is fully satisfied with what we are offering.

Our department enjoys a high degree of integrity and complete satisfaction from the tourism offices in the international tourist markets with regard to the content it provides.

Our department is committed to its relations with the tourism offices in the international tourist markets.

Our relationship with the tourism offices in the international tourist markets deserves maximum attention.

| VT6 | The Egyptian Ministry of Tourism and Antiquities is fully satisfied with what we are offering. |
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