

**Journal of Association of Arab Universities  
for Tourism and Hospitality (JAAUTH)**journal homepage: <http://jaauth.journals.ekb.eg/>**Assessing the Impact of Human Capital on Business Model Innovation in  
the Egyptian General Authority for Tourism Promotion****Noha Helmy Abouelazm<sup>1</sup> Mohamed Mahmoud Mostafa<sup>2</sup>**<sup>1</sup> Faculty of Tourism and Hotels, Minia University.<sup>2</sup> Faculty of Tourism and Hotels, Luxor University.**ARTICLE INFO****Abstract****Keywords:**

Human capital;  
Business model  
innovation;  
Egyptian General  
Authority for  
Tourism Promotion;  
Central Department  
for International  
Travel.

**(JAAUTH)****Vol.23 , No. 2 ,  
(2022),  
pp.302 -318.**

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.

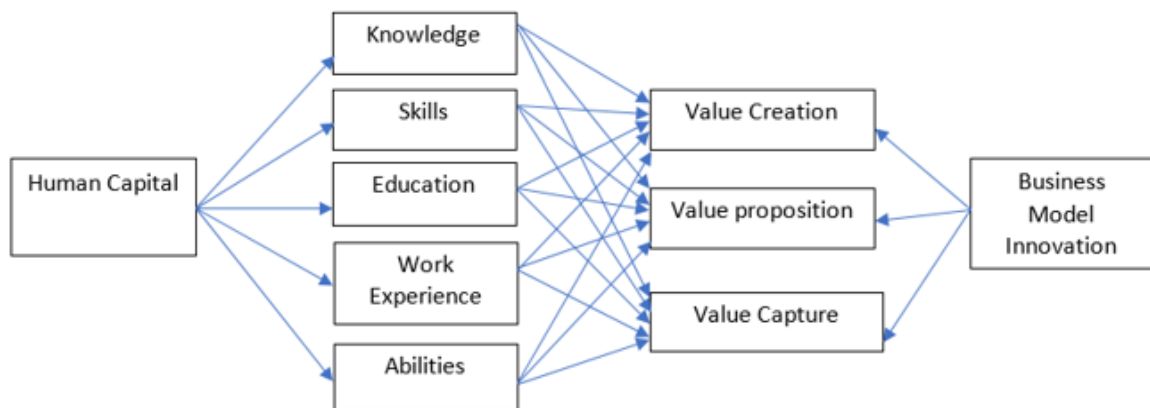
**H5b:** There is a positive association between abilities and value proposition in CDIT.

**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.



**Figure (1) Conceptual framework of the study**

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**

Variables	Cronbach's Alpha	Number of Items
KN	.702	4
SK	.857	4
ED	.750	3
EX	.802	3
AB	.802	3
VC	.929	9
VP	.802	8
VT	.916	9

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.

**Table (2) Demographic Data of Respondents**

Variables		N=36	(%)
Gender	Male	21	58.3
	Female	15	41.7
Age	31-40	13	36.1
	41-50	16	44.4
	51-60	7	19.4
Level of Education	Bachelor	23	63.8
	Masters	5	13.8
	Doctoral	4	11.1
	Diploma	4	11.1
	others	3	8.3
Profession	Manager	4	11.1
	Head of Department	3	8.3
	Employee	29	80.5
Experience	6-10	3	8.3
	11-15	8	22.2
	15-20	8	22.2
	>20	17	47.2

## 4.2 Descriptive Results

**Table (3) Mean Rating of Human Capital**

Variables	Mean	Sd
KN	3.562	.807
SK	3.055	1.102
ED	3.203	1.027
EX	3.166	.987
AB	3.435	1.176
<b>HC</b>	<b>3.28</b>	<b>1.01</b>
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**

Variables	Mean	Sd
VC	2.935	.988
VP	3.420	1.123
VT	3.336	.971
<b>BMI</b>	<b>3.23</b>	<b>1.02</b>
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).



**Table (5) Pearson correlation Analysis**

			VC	VP	VT	
Pearson (2 tailed )	KN	Correlation Coefficient	.579**	.501*	.465**	
		Sig.	.000	.001	.002	
	SK	Correlation Coefficient	.691**	.392*	.530**	
		Sig.	.000	.009	.000	
	ED	Correlation Coefficient	.529**	.297*	.519**	
		Sig.	.000	.039	.001	
	EX	Correlation Coefficient	.636**	.512**	.566**	
		Sig.	.000	.001	.000	
	AB	Correlation Coefficient	.501**	.313	.287	
		Sig.	.001	.032	.045	
	**Correlation is significant at the 0.01 level (1-tailed).					
	*Correlation is significant at the 0.05 level (1-tailed).					
KN=Knowledge, SK= Skills, ED= Education, EX= Experience, AB= Abilities, VC= Value Creation,						
VP= Value Proposition, VT= Value Capture.						

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).

**Table (6) Simple Linear Regression**

Hypothesis	R <sup>2</sup>	F	t	B	Sig.	Result
KN-VC	.330	17.181	4.11	.709	.000	Supported
KN-VP	.251	11.398	3.376	.697	.002	Supported
KN-VT	.216	9.359	.3059	.559	.004	Supported
SK-VC	.478	31.116	2.889	.620	.000	Supported
SK-VP	.153	6.162	2.482	.399	.018	Not Supported
SK-VT	.281	13.287	3.645	.467	.001	Supported
ED-VC	.280	13-228	3.637	.509	.001	Supported
ED-VP	.088	3.292	1.814	.325	.078	Not Supported
ED-VT	.269	12.529	3.541	.047	.001	Supported
EX-VC	.405	23.112	4.808	.637	.000	Supported
EX-VP	.262	12.050	3.471	.582	.001	Supported
EX-VT	.320	16.006	4.001	.556	.000	Supported
AB-VC	.251	11.404	3.377	.421	.002	Supported
AB-VP	.098	3.686	1.920	.299	.063	Not Supported
AB-VT	.082	3.05	21.747	.237	.090	Not Supported
KN=Knowledge, SK= Skills, ED= Education, EX= Experience, AB= Abilities, VC= Value Creation, VP= Value Proposition, VT= Value Capture.						

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 ( $r^2=0.478$ , 0.405%,  $P= 0.00$ , 0.000 respectively). Further, employees' experience and knowledge had the higher impact on value proposition ( $r^2= 0.262$ , 0.251%,  $P= 0.001$ , 0.002 respectively). Moreover, employees' experience and skills had the higher effects on value capture ( $r^2= 0.320$ , 0.281%,  $P= 0.000$ , 0.000 respectively). However, employees' skills, education and abilities had no significant impact on value proposition ( $r^2= 0.153$ , 0.088, 0.098,  $P= 0.018$ , 0.078, 0.063 respectively). Additionally, employees' abilities had no significant impact on value capture ( $r^2= 0.082$ ,  $p= 0.090$ ). 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,  $r^2= 0.399$ ,  $P= 0.000$ .

#### 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

- Abou Shouk, M., and Tamamm, M. (2021). Measuring the Impact of Intellectual Capital on Travel Agencies' Innovation Performance: Evidence from Egypt. *Journal of Association of Arab Universities for Tourism and Hospitality*. 21(2), 150-161.
- Adomako, S. and Frimpong, K. (2022). Human Capital, Reverse Engineering and New Venture Growth: The Moderating Role of Competitive Strategy. *Technovation*. 114, 1-10.
- Agarwal, G., Simonsson, S., Magnusson, M., Hald, K., and Johanson, A. (2022). Value-capture in Digital Servitization. *Journal of Manufacturing Technology Management*, 33(5), 986-1004.
- Apergis, N., Mustafa, G., Khan, M. (2021). Governance Thresholds and The Human Capital–Growth Nexus. *Journal of Economic Studies*, 49(7), 1181-1196.
- Armstrong, M. (2009). *Armstrong's Handbook of Human Resource Management Practice* (11<sup>th</sup> ed.). London: Kogan Page.

- 
- Aspara, J., and Tikkanen, H. (2013). Creating Novel Consumer Value Vs. Capturing Value: Strategic Emphases and Financial Performance Implications. *Journal of Business Research*, 66, 593-602.
  - Bao, H., Wang, C., and Tao, R. (2021). Examining The Effects of Governmental Networking with Environmental Turbulence on The Geographic Searching of Business Model Innovation Generations. *Journal of Knowledge Management*, 25(1), 157-174.
  - Baragde, D., and Baporikar, N. (2017). Business Innovation in Indian Software Industries. *Journal of Science and Technology Policy Management*, 8(1), 62-75.
  - Biloshapka, V., and Osiyevskyy, O. (2018). Value Creation Mechanisms of Business Models: Proposition, Targeting, Appropriation, And Delivery. *The International Journal of Entrepreneurship and Innovation*, 19(3), 166-176.
  - Bryant-Kutcher, L., Jones, D., Widener, S. (2009). Market Valuation of Intangible Resources: The Use of Strategic Human Capital. *Advances in Management Accounting*, 17, 1-42.
  - Chen, J., Liu, L. and Wang, Y. (2020). Business model innovation and growth of manufacturing SMEs: a social exchange perspective. *Journal of Manufacturing Technology Management*, 32 (2), 290-312.
  - Codini, A., Abbate, T., and Petruzzelli, A. (2022). Business Model Innovation and exaptation: A New Way of Innovating in SMEs. *Technovation*, 119, 1-16.
  - Corrales-Garay, D., Ortiz-de-Urbina-Criado, M., and Mora-Valentín, E. (2022). Understanding Open Data Business Models from Innovation and Knowledge Management Perspectives. *Business Process Management Journal*, 28(2), 532-554.
  - Dane-Nielsen, H., and Nielsen, C. (2021). Value Creation in Business Models is Based on Intellectual Capital and Only Intellectual Capital. *Journal of Business Models*, 7(2), 64-81.
  - Dankyi, A., Yusheng, K., Ankomah-Asare, E., Dankyi, J., and Addo, A. (2020). Acquisition of Human Capital for Organizational Sustainability: A BASS-SIR Forecasting Approach. *International Journal of Engineering Business Management*, 12, 1-15.
  - Dar, I. and Mishra, M. (2019). Human Capital and SMEs Internationalization: Development and Validation of a Measurement Scale. *Global Business Review*. 22, 1-17.
  - Dar, I., and Mishra, M. (2021). Human Capital and SMEs Internationalization: Development and Validation of a Measurement Scale. *Global Business Review*, 22(3), 718-734.
  - Divisekera, S., and Nguyen, V. (2018). Determinants of Innovation in Tourism Evidence from Australia. *Tourism Management*, 67, 157-167.
  - Faeni, D., Faeni, R., Riyadh, H., Yuliansyah, Y. (2022). The COVID-19 Pandemic Impact on the Global Tourism Industry SMEs: A Human Capital Development Perspective. *Review of International Business and Strategy*, Advance Online Publication. Doi: 10.1108/RIBS-08-2021-0116.
  - FitzPatrick, M., Varey, R., Grönroos, C., and Davey, J. (2015). Relationality In the Service Logic of Value Creation. *Journal of Services Marketing*, 29(6/7), 463–471.
  - Foss, N., and Saebi, T. (2017). Fifteen Years of Research on Business Model Innovation: How Far Have We Come, and Where Should We Go?. *Journal of Management*, 43(1), 200–227.
  - Fu, Y., Liu, R., Yang, J., Jiao, H., and Jin, Y. (2020). “Lean in”: The Moderating Effect of Female Ownership on The Relationship Between Human Capital and Organizational Innovation. *Journal of Intellectual Capital*, 22(4), 792-814.

- Garcia-Carbonell, N., Martin-Alcazar, F., and Sanchez-Gardey, G. (2018). Human Capital in Top Management Teams Seen Through the Lens of Senior Human Resources Managers: An Exploratory Analysis. *European Business Review*, 30(5), 571-590.
- Guo, H., Guo, A., and Ma, H. (2022). Inside The Black Box: How Business Model Innovation Contributes to Digital Start-Up Performance. *Journal of Innovation & Knowledge*, 7(2), 1-9.
- Guo, W., and Chen, M. (2021). Construction of Structural Dimensions of Organizational Human Capital Competitive Advantage. *Journal of Intellectual Capital*, 23(5), 1081-1106.
- Hair, J., Black, W., Babin, B., Anderson, R., Tatham, R., (2006). *Multivariate Data Analysis* (6th ed.), Pearson-Prentice Hall.
- Harris, C., and Brown, L. (2021). Everyone Must Help: Performance Implications of CEO And Top Management Team Human Capital and Corporate Political Activity. *Journal of Organizational Effectiveness: People and Performance*, 8(2), 190-207.
- Huang, H., Lai, M., Lin, L., and Chen, C. (2013). Overcoming Organizational Inertia to Strengthen Business Model Innovation an Open Innovation Perspective. *Journal of Organizational Change Management*, 26(6), 977-1002.
- Islam, M., and Amin, M. (2021). A Systematic Review of Human Capital and Employee Well-Being: Putting Human Capital Back on The Track. *European Journal of Training and Development*, 46(5/6), 504-534.
- Jin, Y., Ji, S., Liu, L., and Wang, W. (2021). Business Model Innovation Canvas: A Visual Business Model Innovation Model. *European Journal of Innovation Management*, 25(5), 1469-1493.
- Kafetzopoulos, D., Psomas, E., and Skalkos, D. (2020). Innovation Dimensions and Business Performance Under Environmental Uncertainty. *European Journal of Innovation Management*, 23(5), 856-876.
- Kallmuenzer, A., Baptista, R., Kraus, S., Ribeiro, A., Cheng, C., and Westhead, P. (2021). Entrepreneurs' Human Capital Resources and Tourism Firm Sales Growth: A Fuzzy-Set Qualitative Comparative Analysis. *Tourism Management Perspectives*, 38. 2-12.
- Lajili, K., Lin, L., and Rostamkalaei, A. (2020). Corporate Governance, Human Capital Resources, And Firm Performance: Exploring the Missing Links. *Journal of General Management*, 54(4), 192-205.
- Lenihan, H., McGuirk, H., and Murphy, K. (2019). Driving Innovation: Public Policy and Human Capital. *Research Policy*, 48(9), 1-12.
- Liu, C., Chang, A., Fang, Y. (2019). Network Activities as Critical Sources of Creating Capability and Competitive Advantage the Mediating Role of Innovation Capability and Human Capital. *Management Decision*, 58(3), 544-568.
- Liu, G., Pang, L., and Kong, D. (2017). Effects Of Human Capital on The Relationship Between Export and Firm Innovation. *Chinese Management Studies*, 11(2), 322-345.
- Marchiori, D., Rodrigues, R., Popadiuk, S., and Mainardes, E., (2022). The Relationship Between Human Capital, Information Technology Capability, Innovativeness and Organizational Performance: An integrated approach. *Technological Forecasting & Social Change*, 177.
- Martinez, C., Rosero, D., Thomas, T., and Mas, F. (2022). Community Supported Agriculture, Human Capital, and Community Health. *Health Promotion Practice*, 23(3), 407-415.
- Metz, I., Stamper, C., and Ng, E. (2022). Feeling Included and Excluded in Organizations: The Role of Human and Social Capital. *Journal of Business Research*, 142, 122-137.

- Mohammed, N., Sustainim, N., Islam, M., and Mohamed, N. (2021). Integrated Thinking, Earnings Manipulation and Value Creation: Malaysian Empirical Evidence. *Business Process Management Journal*, 27(4), 1179-1199.
- Mohiya, M. (2022). Unleashing Employees' Tacit Knowledge Toward Performance-Driven Culture in A Saudi Arabian Organisation. *Journal of Knowledge Management*. Advance Online Publication. Doi: 10.1108/JKM-04-2022-0263.
- Munjal, S., and Kundu, S. (2017). Exploring the Connection Between Human Capital and Innovation in the Globalising World. In S. Kundu, and S. Munjal (Eds.), *Human Capital and Innovation: Examining the Role of Globalization* (pp.1-11). London: Palgrave Macmillan UK.
- Nenonen, S., and Storbacka, K. (2014). Management of Customer Assets for Increased Value Capture in Business Markets. *Management Decision*, 52(1), 101-121.
- Onuoha, N. (2021). Does Structural Capital Count in Human Capital-Corporate Financial Performance Relationship? Evidence From Deposit Money Banks in Nigeria. *Measuring Business Excellence*, 26(4), 541-557.
- Paiola, M., Agostini, L., Grandinetti, R., and Nosella, A. (2022). The Process of Business Model Innovation Driven by IoT: Exploring the Case of Incumbent SMEs. *Industrial Marketing Management*, 103, 30-46.
- Ratnawati, E., Sukidjo., and Efendi, R. (2020). The Effect of Work Motivation and Work Experience on Employee Performance. *International Journal of Multicultural and Multireligious Understanding*, 7(8), 109-116.
- Salehi, M., Fahimi, M., Zimon, G., and Homayoun, S. (2021). The Effect of Knowledge Management on Intellectual Capital, Social Capital, And Firm Innovation. *Journal of Facilities Management*, 20(5), 732-748.
- Sarrami, S., Kordnaeij, A., Soltani, M., Yazdani, H., and Hajipour, B. (2020). Strategic Sense-Making and Value Creation in SMEs. *Utopía y Praxis Latinoamericana*, 25(6), 477-490.
- Sarwar, H., Khan, B., Nadeem, K., Aftab, J. (2016). Human Capital, HRM Practices and Organizational Performance in Pakistani Construction Organizations: The Mediating Role of Innovation. *Archives of Business Research*, 4(6), 72-82.
- Seo, H., Chung, Y., Chun, D., and Woo, H. (2014). Value Capture Mechanism: R&D Productivity Comparison of SMEs. *Management Decision*, 53(2), 318-337.
- Shahbaz, A., Song, M., Ahmad, S., and Vo, X. (2022). Does Economic Growth Stimulate Energy Consumption? The Role of Human Capital And R&D Expenditures in China. *Energy Economics*, 105.
- Shela, V., Ramayah, T., and Hazlina, A. (2021). Human Capital and Organizational Resilience in The Context of Manufacturing: A Systematic Literature Review. *Journal of Intellectual Capital*. Advance Online Publication. Doi: 10.1108/JIC-09-2021-0234.
- Shidong, L., Chupradit, S., Maneengam, A., Suksatan, W., The, C., and Ngoc, Q. (2022). The Moderating Role of Human Capital and Renewable Energy in Promoting Economic Development in G10 Economies: Evidence from CUP-FM and CUP-BC Methods. *Renewable Energy*, 189, 180-187.
- Singh, P., and Rao, M. (2017). HR Practices, Learning Culture and Human Capital: A Study on Indian Business and Professional Service Sector. *Global Business Review*, 18(3), 678-690.
- Taran, Y., Nielsen, C., Montemari, M., Thomsen, P., and Paolone, F. (2016). Business Model Configurations: A Five-V Framework to Map Out Potential Innovation Routes. *European Journal of Innovation Management*, 19(4), 492-527.
- Teece, D. (2010). Business Models, Business Strategy and Innovation. *Long Range Planning*, 43, 172-194.

- Tight, M. (2019). Human And Social Capital and Their Application in Higher Education Research. In J. Huisman and M. Tight (Eds.), *Theory and Method in Higher Education Research* (pp. 209-223). United Kingdom: Emerald Publishing.
- Timothy, V. (2022). The Effect of Top Managers' Human Capital on SME Productivity: The Mediating Role of Innovation. *Heliyon*. 8(4), 1-8.
- Tuncdogan, A., Dogan, I., and Barca, M. (2021). The Size of the Fight in the Dog: The Role of Teams' Active Human Capital Resources Within the Human Capital-Task Performance Relationship. Strategic organization, Advance Online Publication. Doi: 10.1177/14761270211001546.
- Van den Berg, H., and Kaur, V. (2022). Individual Knowledge Measurement: Organizational Knowledge Measured at the Individual Level. *Journal of Knowledge Management*, 26 (6) 1409-1437.
- Vidotto, J., Ferenhof, H., Selig, P., and Bastos, R. (2017). A Human Capital Measurement Scale. *Journal of Intellectual Capital*. 18. 316-329.
- Villanueva-Flores, M., Hernández-Roque, D., and Fernández-Alles, M., and Diaz-Fernandez, M. (2022). The International Orientation of Academic Entrepreneurship: The Role of Relational, Human and Psychological Capital. *Journal of Intellectual Capital*. Advance Online Publication. Doi: 10.1108/JIC-06-2021-0157.
- Vos, M., Volker, E., and Wamelink, H. (2019). Enhancing Value Capture by Managing Risks of Value Slippage in And Across Projects. *International Journal of Project Management*, 37, 767-783.
- Wesemann, A. (2022). The Performance Rewards of Human Capital Development in the Federal Government. *Public Personnel Management*, 51(2), 151-169.
- Windsor, D. (2017). Value Creation Theory: Literature Review and Theory Assessment. In D. Wasieleski and J. Weiber (Eds.), *Stakeholder Management: Business and Society 360* (pp. 75-100) Bingley: Emerald Publishing Limited.
- Yang, D., Wei, Z., Shi, H., and Zhao, F. (2020). Market Orientation, Strategic Flexibility and Business Model Innovation. *Journal of Business & Industrial Marketing*, 35(4), 771-784.
- Yang, Z., Pan, Y., Sun, D., and Ma, L. (2022). Human Capital and International Capital Flows: Evidence from China. *International Regional Science Review*, 45(1), 74-107.
- Yi, Y., Chen, Y., and Li, D. (2022). Stakeholder Ties, Organizational Learning, And Business Model Innovation: A Business Ecosystem Perspective. *Technovation*, 114. 1-13.
- Zane, L. (2022). Intellectual Capital and The Acquisition of Human Capital by Technology-Based New Ventures. *Journal of Intellectual Capital*. Advance Online Publication. Doi: 10.1108/JIC-04-2021-0122.

### 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.

ED2	The academic and practical qualifications of the employees provide the authority the opportunity to enter new markets.
ED3	The Authority's work system allows employees to develop their academic qualifications.
EX1	The employees' experience qualifies them to always deal with the new innovative technologies.
EX2	Our employees are experts in the work and the functions they perform.
EX3	The employees' experience qualifies the authority to deal with various tourist markets.
AB1	Our employees have the ability to work under pressure.
AB2	Our employees have the ability to develop new ideas.
AB3	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.



VT6	The Egyptian Ministry of Tourism and Antiquities is fully satisfied with what we are offering.
VT7	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.
VT8	Our department is committed to its relations with the tourism offices in the international tourist markets.
VT9	Our relationship with the tourism offices in the international tourist markets deserves maximum attention.



## تقييم تأثير رأس المال البشري على نموذج الإبداع في العمل في الهيئة المصرية العامة لتنشيط السياحة

نهى حلمي أبو العزم<sup>١</sup>  
 كلية السياحة والفنادق جامعة المنيا  
 محمد محمود مصطفى<sup>٢</sup>  
 كلية السياحة والفنادق جامعة الأقصر

المخلص	معلومات المقالة
<p>إن بيئة الأعمال تتغير وتتطور بشكل مستمر، فهي مليئة بالمتغيرات والتحديات التي تؤثر بشكل كبير على الأداء التنظيمي. أحد هذه المتغيرات هو رأس المال البشري (HC)؛ وينتمي إلى الموظفين ويتكون من معرفة الأفراد ومهاراتهم وتعليمهم وخبراتهم العملية وقدراتهم. وهناك متغير آخر ظهر في فترة التسعينيات ألا وهو نموذج الإبداع في العمل (BMI) فهو يعكس القدرة على إدارة جميع العمليات بمزيد من الإبداع، وله ثلاثة أبعاد: خلق القيمة، وعرض القيمة، والحصول على القيمة. تهدف هذه الدراسة إلى توسيع الفهم الحالي للعلاقة بين رأس المال البشري ونموذج الإبداع في العمل في صناعة السياحة وتحديد تأثير رأس المال البشري على نموذج الإبداع في العمل في الإدارة المركزية للسياحة الدولية (CDIT) في الهيئة المصرية العامة لتنشيط السياحة (EGATP) لتحقيق أهداف هذه الدراسة، اقترح الباحثون نموذجًا لاستكشاف العلاقة بين أبعاد رأس المال البشري وأبعاد نموذج الإبداع في العمل وقياس تأثير أبعاد رأس المال البشري على أبعاد نموذج الإبداع في العمل أيضًا. تم توزيع استبيان إلكتروني على العاملين في الإدارة المركزية للسياحة الدولية. بلغ عدد الاستمارات الصحيحة ٣٦ استمارة وتم تحليل البيانات باستخدام برنامج SPSS 25. أكدت النتائج العلاقة المعنوية بين الأبعاد الخمسة لرأس المال البشري والأبعاد الثلاثة لنموذج الإبداع في العمل في CDIT، علاوة على ذلك، فإن خبرة الموظفين ومهاراتهم هي أكثر العوامل تأثيرًا على خلق القيمة، عرض القيمة والحصول على القيمة.</p>	<p><b>الكلمات المفتاحية</b>  رأس المال البشري؛  نموذج الإبداع في  العمل؛ الهيئة المصرية  العامة لتنشيط السياحة؛  الإدارة المركزية  للسياحة الدولية.</p> <p><b>(JAAUTH)</b>  المجلد ٢٣، العدد ٢،  (٢٠٢٢)،  ص ٣٠٢-٣١٨.</p>