



Factors Influencing Customer Value Co-Creation in Hotels: Customer Perspective

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ABSTRACT

Hotels strive to co-create value with customers to understand their needs and introduce innovative products. Value co-creation brings about many benefits not only for businesses but also for customers. Given the importance of value co-creation in the hotel business, it is imperative to investigate and determine the factors that affect it. Also, this study examines the impact of three different types of predictors (i.e., employee, customer, and company factors) on customer value co-creation (CVC). For attaining these objectives, data was collected using questionnaires from a convenience sample of 400 customers in 10 five-star hotels in Cairo. However, valid questionnaire forms received from customers were 244, with a response rate of 61 per cent. Descriptive analysis, correlation analysis, Mann-Whitney and Kruskal-Wallis tests, and multiple regression analysis were used to analyze the data. In terms of research results, the three types of independent factors were found to positively affect CVC. Moreover, value co-creation was significantly influenced by two elements of individual characteristics (i.e., age and educational level). Therefore, results suggested that hotels should maintain employees' current level of EI and empathy. Furthermore, hotels should involve customers more in value co-creation activities. Moreover, hotels must not only continue to provide customer education and organizational support, but also must increase these resources.

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1. Introduction

This research includes four variables, one of them (i.e., CVC) is a dependent variable, while the other three are independent variables, i.e., hotel employee resources (consisting of two dimensions), customer resources (consisting of four dimensions), and company resources (consisting of two dimensions).

Value co-creation is a thoughtful and comprehensive management strategy that can influence different participants to collaborate with each other to achieve mutually significant results (Xiao et al., 2020). The successful value co-creation process in hotels relies

considerably on the role of the customer as well as three types of resources that greatly contribute to the process, which are employee, customer, and company resources (Mostafa, 2020).

Value co-creation can be a cost-effective way for both hotels and customers to realize many benefits (González-Mansilla et al., 2019). As regards hotels, the implementation of value co-creation activities helps in achieving many brand goals, e.g., increasing brand awareness (Choi et al., 2016); several internal benefits (e.g., reducing business risk); and external

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positive outcomes, such as improving hotel's image and reputation (Yen et al., 2020).

In terms of customers, value co-creation also brings numerous benefits, such as increasing customer loyalty and satisfaction (Liu and Jo, 2020). Therefore, it is essential to increase the activities of value co-creation in hotels and pay attention to three types of factors affecting it, which are hotel employee resources, customer resources, and company resources.

Firstly, the hotel employee resources include two capabilities influencing value co-creation: EI and empathy. The first capability is very necessary for specific jobs with important social components, for example, the job of frontline hotel employees (Darvishmotevali et al., 2018; Choi et al., 2019). This job necessitates that hotel employees have many emotional skills to enable them to deal with high emotional labour demands (Kwon et al., 2019). The second capability (empathy) is very vital to the interaction between the hotel employee and the customer (Lina et al., 2019).

Secondly, the customer resources should be examined for successful value co-creation (Pralhad and Ramaswamy, 2013; Lei et al., 2019). These resources include four capabilities influencing value co-creation, i.e. self-efficacy, bridging social capital, customer knowledge, and customer expertise. Today's hotel customers can perform different concrete tasks and activities related to the value co-creation process in hotels. They can exploit their various own resources as well as hotel company resources to participate in the value co-creation process (Ghatak, 2020).

Finally, the hotel company resources include customer education and perceived company support. The first factor achieves several benefits for hotels, such as increased customers' trust, commitment, repurchase, and loyalty (Alves et al., 2016). The second factor, for example, brings about clients' readiness to keep a social exchange relationship with the hotel company, which results in better value co-creation (Tuan et al., 2019). Despite the importance of CVC, several researchers emphasized that there is still a lack of research on this topic in the general management literature (Park and Ha, 2016; Harkison, 2018). Also, in the field of hospitality, CVC has not received sufficient research attention although it has become increasingly important in the tourism and hospitality industries (Campos et al., 2018; Assiouras et al., 2019). Furthermore, no studies have combined the three different types of factors (customer, company, and employee resources) which can influence CVC

(González-Mansilla et al., 2019; Boadi et al., 2020; Liu and Jo, 2020). Moreover, there are few studies investigating how employee resources (such as frontline hotel employees' EI and empathy) affect CVC (Shulgaa and Busserb, 2020). Thus, it has been suggested that factors affecting CVC behaviours in hotels should be examined (Roy et al., 2020; Teng and Tsai, 2020). Therefore, in contrast to prior research which focused only on one or two types of resources, this research integrated these three types of factors to examine how they influence CVC, thus bridging research gaps in previous studies.

The aim of value co-creation activities in hotels is to improve value and experience for clients. The hotel industry needs to recognize the process of value co-creation and devise practical ways and means to perform it (Liu and Jo, 2020). Hotel companies also need to know what encourages clients to initiate value co-creation behaviour and use that knowledge (Chathoth et al., 2020). Thus, it is very important to investigate the factors that create value, underlying the mutual interaction that results in customer and employee participation (González-Mansilla et al., 2019). These factors motivating customers to engage in value co-creation activities include employees' emotional intelligence and empathy. However, controlling workers' emotions for work purposes can lead to numerous negative consequences, for example, emotional exhaustion (Chen et al., 2019), job stress, and burnout. This issue presents a critical challenge for hospitality practitioners and frontline personnel who repeatedly deal with such negative outcomes (Kwon et al., 2019).

Accordingly, this study examines the factors influencing CVC in five-star hotels. To accomplish this overall aim, this study is focused on four specific objectives: (a) to explore the customers' viewpoints regarding hotel employees' EI and empathy, the two hotel company resources (i.e. perceived company support and education), as well as the two dimensions of CVC (i.e. participation and citizenship); (b) to assess the customers' role regarding value co-creation process; (c) to investigate the impact of hotel employees' abilities, customer resources, and hotel company resources on CVC; and (d) to develop a model that identifies the factors related to a hotel employee, customer, and hotel company influencing CVC.

2. Literature Review

Value co-creation concept carries on receiving utmost attention among academics and practitioners because

it is of critical importance for organizations (Frempong et al., 2020). Value co-creation refers to an interactive, creative, and social process including a wide range of activities (e.g. joint thinking, design, and development of new product) carried out by several parties (such as organizations, employees, customers, suppliers, competitors, and others), who are involved in direct interactions in order to generate superior value and to achieve a common goal, which is to make all parties consumers and creators of value (Boadi et al., 2020; Casais et al., 2020)

2.1 Customer value co-creation dimensions

Value co-creation comprises two types of behaviour: (1) customer participation behaviour and (2) customer citizenship behaviour (Yi and Gong, 2013). The first type is considered crucial for the standard performance of the service personnel, but the second type is supplementary to this process and creates a high-level value for the company (Lina et al., 2019).

2.1.1 Customer participation behaviour

Customer participation behaviour refers to the cooperation and active involvement of customers in the process of creating value after an invitation from the company. This behaviour must occur for the success of value co-creation (Jamie et al., 2019). Customer participation behaviour is composed of four dimensions (Shulgaa and Busserb, 2020).

(a) Information seeking—searching for information by clients, which helps them to understand service requirements and decreases uncertainty concerning value co-creation with employees (Vinicius et al., 2020).

(b) Information sharing—customer willingness to present sufficient basic information to service employees so that they can initiate the service that fulfils customers' personal needs (Hsiao et al., 2015; Ramin et al., 2020).

(c) Responsible behaviour customers understand their duties and responsibilities as well as their readiness to help, adhere to rules and policies, and accept advice from employees (Tuan et al., 2019).

(d) Personal interaction—interpersonal communication between clients and employees, for example, courtesy, friendliness, and respect (Tuan et al., 2019; Jan et al., 2020).

2.1.2 Customer citizenship behaviour

Customer citizenship behaviour is a voluntary behaviour that is beneficial for the organization because it enhances value through actions towards other customers, employees, and/or organizations (Yi

and Gong, 2013). Customers' citizenship behaviour involves four dimensions (Minjung et al., 2020).

(a) Feedback—guidance and suggestions provided by customers to employees for enhancing the service creation process (Tuan et al., 2019; Kumju, and Bora, 2019).

(b) Advocacy—recommending the organization by customers to others, e.g., friends or family (Assiouras et al., 2019).

(c) Helping—taking the initiative by customers to assist other customers (Assiouras et al., 2019).

(d) Tolerance—customer willingness to keep the relationship with the organization regardless of service failure (Assiouras et al., 2019; Minjung et al., 2020).

2.2 Factors influencing customer value co-creation

Prior research has shown that there are three main types of factors affecting value co-creation: (1) employee resources; (2) customer resources; and (3) company resources (e.g., Agrawal and Rahman, 2015; Mansillaa et al., 2019).

2.2.1 Employee resources

Frontline employees, who are in direct contact with customers, play a vital role in the success of value co-creation in service organizations. This is because they have deep customer insights and regular face-to-face or voice-to-voice contacts with customers. Also, they can assist in co-creating value at an interpersonal level (Karatepe, 2013). In addition, frontline employees can exploit their own resources (e.g., abilities) to improve the quality of their personal interactions with customers which are essential for value co-creation in organizations (Pralhad and Ramaswamy, 2013; Hsieh, 2016; Achilleas and Sertan, 2020). These resources include employees' EI and empathy (Núria et al., 2020).

2.2.2 Employee emotional intelligence

Employees' EI is defined as their general ability to accurately recognize, understand, and manage their emotions and those of others in a specific interpersonal interaction as well as their capacity to use emotions in various situations (Darvishmotevali et al., 2018; Duleep et al., 2018). EI is very important for customers and organizations. First, emotionally intelligent employees are more likely to do the following: show positive behaviours, which are acknowledged by clients; maintain strong interpersonal relationships with customers; discourage unwanted conditions in customers; react more professionally to customers' emotional demands while performing service (Choi et al., 2019); act in ways that

stimulate positive emotional experiences; and display the required emotions that please customers (Gebregergis et al., 2020).

Second, general EI is a critical factor in achieving success for organizations. EI is an imperative antecedent of job-related attitudes, e.g., job satisfaction (Khosravi et al., 2020). In addition, it positively influences work-related outcomes, for example, innovation and voluntary tasks (Furnham and Taylor, 2020). It also brings about high creative performance among employees (Hajisabbagh et al., 2020). Accordingly, technical competencies only do not make frontline employees creative and productive, as they also need EI (Fernández-Gómez et al., 2018; Boadi et al., 2020).

2.2.3 Employee empathy

Empathy refers to an imaginative process that facilitates understanding or feeling of what another person is experiencing, i.e., the capacity to place oneself in another person's position (Espejo-Siles et al., 2020; Liem et al., 2020). Empathy enhances customers' attitudes and frontline employees' performance. Therefore, it successfully contributes to a long-term relationship with customers (Lina et al., 2019). Additionally, employee empathy is considered a crucial predictor of ethical and prosocial behaviours (Liem et al., 2020).

Therefore, according to the norm of reciprocity theory (which assumes that individuals are supposed to help those who have helped them (Gouldner, 1960) and the social exchange theory (which supposes that employees are required to pay back the favour after benefiting from others) (Blau, 1964) employees' EI and empathy result in positive customer behaviours and creates high levels of customer relationship quality, which will motivate customers to participate more in co-creating value with frontline employees. This is also supported by previous research, for example, frontline employees' abilities (e.g., EI and empathy) were found to be important predictors of value co-creation (Annamaria and Maureen, 2019). Thus, the following hypotheses are made:

H1: Employees' EI positively influences CVC.

H2: Employees' empathy positively influences CVC.

2.3 Customer resources

Contemporary customers, who are sophisticated and knowledgeable, want to contribute significantly to the creation of their experience (Im and Qu, 2017; Frempong et al., 2020; Liem et al., 2020). Thus, it is necessary to consider the customers' resources and to

examine which of them are essential for successful value co-creation. Based on the previous studies of value co-creation, this study selected four vital customer abilities affecting value co-creation: (a) self-efficacy, (b) bridging social capital, (c) customer knowledge, and (d) customer expertise.

2.3.1 Self-efficacy

Self-efficacy is not immutable but develops with an increase in a person's experience, learning, and interactions with others. Self-efficacy motivates individuals to perform specific behaviours and enables them to understand the tasks required. Efficacious persons have more confidence in their capabilities, and consequently, tend to use their best efforts to manage challenging situations (Kamal and Daoud, 2019; Chen and Cheng, 2020). They opt to prove their abilities in discovering and leveraging challenges in the surrounding environment (Chan, 2020). Moreover, the value co-creation activities that customers put into practice are a function of levels of self-efficacy, among other factors (Qiu et al., 2020). Also, customers with a high level of self-efficacy can entirely exploit the service experience by utilizing their abilities; therefore, they are likely to obtain a superior value (Kamal and Daoud, 2020).

2.3.2 Bridging social capital

Social capital is defined as a collection of resources possessed by an individual or group due to the fact of belonging to a social network or other social structures (Yoon, 2018; Han, 2018). A basic distinction can be made between two types of social capital: bonding social capital which refers to social ties linking community members together in homogeneous social networks, for example, family and friends, and the bridging social capital which is described as social connections between individuals in heterogeneous social networks, but they may still offer beneficial and new information and points of view (Han, 2018; Brown and Michinov, 2019).

Social capital has several benefits. Customers with high levels of social capital help to create better value since they have more knowledge, creativity, and productivity (Castillo, 2019). Also, it was found that bridging social capital significantly influences value co-creation (Lin and Chiang, 2019; Ceci and Masciarelli, 2019). In addition, it was recommended that companies must create online communities among loyal clients to enhance their co-creation of value (Wu et al., 2019).

2.3.3 Customer knowledge

Customer knowledge of organization is the degree to which the customer is informed and experienced with it (Merz et al., 2018). Customer knowledge assists organizations in developing new products and brands and customer-to-customer support (Nora, 2019; Xie et al., 2019). It is anticipated to directly affect consumer behaviour. In addition, well-informed clients may have the capability of assessing service offerings due to their effectual cognitive structure. Therefore, knowledge is likely to reduce risk and enables customers to gain greater control if they participate in the activities of value co-creation (Johansson et al., 2019). In support of this view, previous research (e.g., Xie et al., 2020, Vecchio et al., 2020) found that knowledge was found to be the customer-related driver of value co-creation.

2.3.4 Customer expertise

Clients' expertise refers to the ability of customers to carry out product/service-related tasks efficiently. It also involves their accumulated knowledge, which is gained through experience regarding a particular product/service, about the way the product should work as well as a general perception of average competitors' performance (Zhang, et al., 2019).

Expert clients are likely to feel more confident in judging service outcomes and requesting explanations from frontline employees when making decisions because they possess an adequate amount of experience (Alves et al., 2016). Customers with a high level of expertise can deal with complex and new information. In addition, it was confirmed that clients' expertise and skill bring about a high level of participation in service production (Zhang et al., 2019; Myunghee et al., 2020). Therefore, these hypotheses are set out:

H3: Customer self-efficacy positively influences CVC.

H4: Customer bridging social capital positively influences CVC.

H5: Customer knowledge positively influences CVC.

H6: Customer expertise positively influences CVC

2.4 Company resources

It is essential to take into account company resources and to examine which of them are essential for value co-creation. For example, there are two very important company factors influencing value co-creation: (a) customer education and (b) perceived company support (Jinyoung and Hailin, 2017; Frempong et al., 2020)

2.4.1 Customer education

Customer education refers to a company's role in endowing customers with information, abilities, and skills through training and education and consequently increasing their opportunity for value co-creation. There are several ways for educating customers, including formal orientation programs, written texts, explanations, and personal advice (Nora, 2019). It was found that customer education has a strong direct impact on value co-creation (Ji and Kale, 2020)

2.4.2 Perceived company support

Different forms of support provided by the hotel companies include honest interpersonal treatment, service recovery, empathetic service, and fulfilment of special requests (Vardaman et al., 2016). Perceived company support is achieved when customers believe that their contributions and interests are being valued by the organization (Kurtessis et al., 2017). Value co-creation depends on bi-directional communication and interaction between the company and the customer, thus bringing about successful value co-creation activity (Liu and Jo, 2020). Additionally, perceived company support was found to positively influence CVC (Ji and Kale, 2020; Liu and Jo, 2020). Therefore, these two hypotheses are set out:

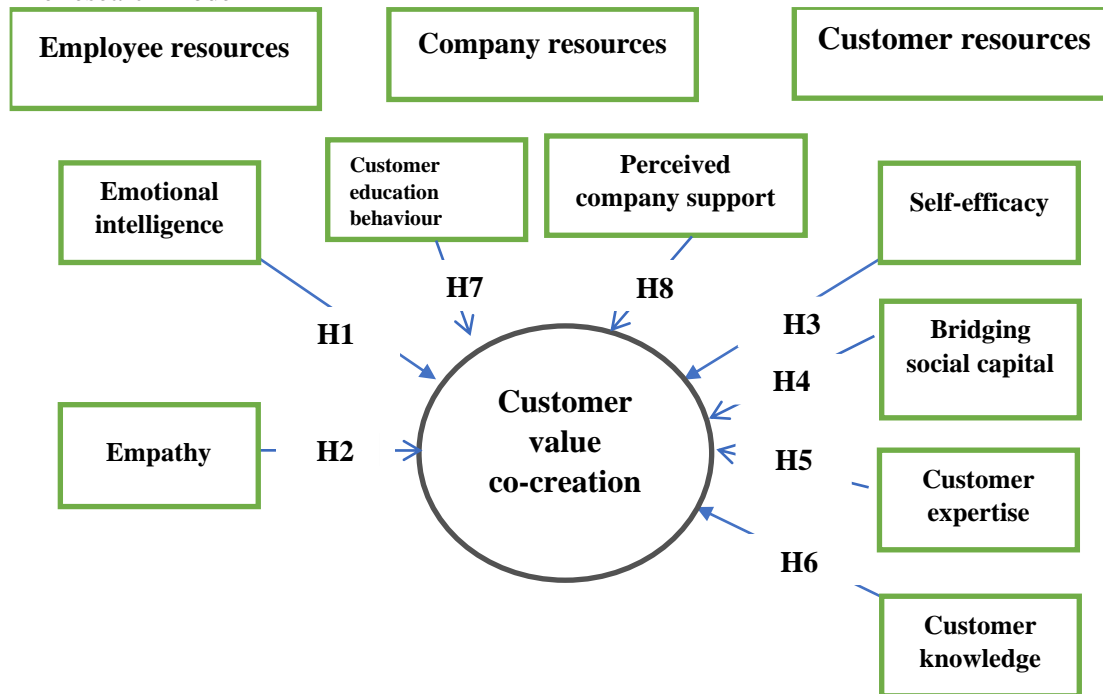
H7: Customer education positively influences CVC.

H8: Perceived company support positively influences CVC.

Based on the literature review and the abovementioned hypotheses proposed, this research proposes the following model as shown in figure 1.

Figure 1

The research model



3. Methodology

Based on the literature review, this research was designed to measure four variables in hotels which are three independent variables (i.e., customer resources, company resources, and employee resources) and one dependent variable (CVC).

3.1 Measurement and instrument

A questionnaire form of five main sections was designed for the purpose of this research. The first section (demographics) consisted of 3 items (i.e., gender; age; educational level). The second section (employee resources) included two main parts. The first part (EI) involved six items (Boadi et al., 2020). The second part (empathy) involved four items (Furnham and Taylor, 2020).

The third section (customer resources) comprised four main components: self-efficacy (5 items); bridging social capital (7 items) (Alves et al., 2016); customer knowledge (3 items) (Im and Qu, 2017); and customer expertise (6 items) (Lin and Chiang, 2019; Vecchio et al., 2020). The fourth section (company resources) was composed of two main divisions: perceived company support (3 items) (Im and Qu, 2017) and customer education (4 items) (Alves et al., 2016). The final section (CVC) consisted of two main divisions: customer participation behaviour (4 parts) and

customer citizenship behaviour (4 parts) (Hsiao et al., 2015). A five-point Likert scale was used in the last four sections of the survey (1 = strongly disagree and 5 = strongly agree).

3.2 Population and sample

The population of interest for this research was customers of all five-star hotels (34 hotels) in Cairo in Egypt (Egyptian Hotel Association, 2019). The main reason for choosing this category of hotels is that the concept of value co-creation is applied, therefore it can be measured. In addition, when the study is applied to five-star hotels, the study results will be apparent and can then be conducted in the other hotel categories (i.e., three or four-star hotels). Moreover, customers at these hotels are involved in a higher level of mutual interaction with frontline employees (e.g., food service staff) and the physical environment compared to the other categories of hotels.

After contacting and visiting the 34 five-star hotels in Cairo to request permission to distribute the questionnaire to their customers, only 10 of the 34 hotels accepted this request. The number of customers of these ten five-star hotels was unlimited, so the sample size of customers is computed according to the formula described by (Freund and Wilson, 1997) as follows:

$$n = \frac{(Z_{\alpha/2})^2 p (1-p)}{(d)^2}$$

Where n is the required sample size; z is the value of standardized normal variant corresponding to the level of the significance; α is the probability of type 1 error; p is estimated prevalence, and d is the rate of errors in population.

Through the previous equation, it was possible to select a convenience sample of 400 customers from the ten hotels. The questionnaire forms were equally distributed to these 10 hotels (40 per hotel) during the period from 9-2019 to 11-2019. A total of 244 valid forms were retrieved, with a response rate of 61 per cent which is acceptable (Baruch and Holtom, 2008; Fincham, 2008).

3.3 Statistical analysis

Data analysis depended on using Statistical Package for the Social Sciences (SPSS) version 25. Mean scores and standard deviations are calculated for all variables in the study. Additionally, Mann-Whitney and Kruskal-Wallis tests were used at a significance level of 5% to examine the differences among respondents' demographics (gender, age, educational level) with regard to the variable of CVC. In addition, the Pearson correlation coefficient was used at a significance level of 5% to find the relationships among variables. Furthermore, regression analysis was used in this research to investigate the influence of factors related to company, customer, and employee on CVC.

3.3 Validity and reliability of the study instrument

To confirm the validity of the questionnaire and check whether it rang true for the respondents or not, face validity was established by collecting the opinions of 10 customers in two five-star hotels in Cairo regarding the four variables of the study. Moreover, the tool was

pre-tested for its validity by handing it out to 5 managers and 2 professors in the hotel studies department. Depending on the feedback and suggestions gathered from the pre-test, the necessary improvements were made, and some errors were corrected.

Moreover, the scale validity includes the collection of empirical evidence regarding its use (Pallant, 2007). All the scales in the questionnaire were used and investigated by prior scholars. For instance, the EI scale was used by many previous scholars (e.g. Boadi et al., 2020).

This study uses the coefficient of Cronbach's alpha to compute the reliability. Cronbach's coefficient alpha indicates greater reliability if its value exceeds .7 (Pallant, 2007). In this research, all the values of Cronbach's coefficient alpha were above .7 which indicated that the instrument was reliable

4. Findings

4.1 Demographic profile of respondents

Table 1 summarizes the demographics of the respondents. The majority of respondents were male (80.5%), from the age of 35 to 55 years (74%) and had a bachelor's degree (97%).

4.1.1 Differences among customers' demographics in terms of CVC

As shown in table 1, CVC was significantly influenced by two elements of individual characteristics (i.e., age and educational level). These results are in agreement with those of prior studies (such as Vega-Vázquez et al., 2013). On the other hand, value co-creation was not significantly influenced by the third element, i.e., gender ($p = .1$), even though the mean rank of male (67) was more than the mean rank of female (55). This finding is inconsistent with the study of Vega-Vázquez et al. (2013) who found that gender has a positive influence on CVC (see table 1)1:

Table 1

The differences among demographics regarding CVC.

Demographics			CVC	
			Mean rank	Sig.
Gender	Male	80.5%	67	0.1
	Female	19.5%	55	
Age	18-less than 35 years	48%	66	0.000
	35-55 years	74%	78	
	More than 55 years	38%	16	
Educational level	High school	2.5%	45	0.000
	High education	97%	94	
	Postgraduate	0.5%	34	

Correlation is significant at the 0.05 level (2-tailed)

4.2 Descriptive analyses of employee, customer, company, and CVC factors

Table 2 illustrates the descriptive analysis regarding employee factors. The results showed that the total mean score of employee resources was 4.55, indicating that these resources were well perceived by their emotions.

customers. In addition, it could be noticed that employee-related factors contain two main parts: EI (Mean = 4.4) and empathy (Mean = 4.7). These results showed that all EI elements had average scores above four, indicating that hotel employees have high levels of EI, which means that they are very able to accurately appraise the emotions of others and regulate

Table 2

A descriptive analysis of employee resources items

	Mean	SD	Cronbach's alpha
Employee resources	4.55		
A. Emotional intelligence	4.4		
EI ₁ : He is a good observer of others' emotions	4.6	.42	0.86
EI ₂ : He is quite capable of controlling his own emotions	4.5	.36	0.86
EI ₃ : He has a good understanding of the emotions of people around him	4.4	.39	0.77
EI ₄ : He is able to control his temper and handle difficulties rationally	4.3	.34	0.78
EI ₅ : He can always calm down quickly when he is very angry	4.3	.34	0.78
EI ₆ : He is sensitive to the feelings and emotions of others	4.2	.35	0.78
B. Empathy	4.7		
E ₁ : Hotel employees understand guest specific needs	4.8	.36	0.72
E ₂ : Hotel employees show positive attitudes when receiving feedback from guests	4.8	.38	0.88
E ₃ : Hotel employees provide guests with individual attention	4.6	.38	0.78
E ₄ : Hotel employees provide complementary services to their guests	4.6	.37	0.89

Similarly, the results in table 2 were emphasized by many previous scholars (e.g., Lee et al., 2011; Darvishmotevali et al., 2018; Kwon et al., 2019). In addition, the findings indicated that all four items of employees' empathy had average scores above 4.5, indicating that they were all found to be very acceptable by customers.

Table 3 illustrates the descriptive analysis regarding customer factors. The total mean score of customer-related factors was 4.35, indicating that these factors were well perceived by customers. It is clear from these results that the previous four vital customer capabilities that influence value co-creation were high. These findings concur with previous research (e.g., Im and Qu, 2017).

Table3

A descriptive analysis of customer resources items

	Mean	SD	Cronbach's alpha
Customer resources	4.35		
a. Customer expertise	4.5		
CE ₁ : I understand the limitations of this service	4.7	.22	0.84
CE ₂ : I have a good level of knowledge on service operation	4.6	.45	0.88
CE ₃ : I feel confident about the means of applying this service	4.5	.31	0.90
CE ₄ : I know what is expected of me in service utilization	4.5	.34	0.83
CE ₅ : I understand well all the different aspects to the service provision process	4.4	.30	0.80
CE ₆ : I understand the benefits of this service	4.3	.35	0.85
b. Customer knowledge	4.4		
CK ₁ : I know a lot about the food production and service delivery process at this hotel	4.6	.42	0.86
CK ₂ : I know a lot about how to judge the quality of food and service in this hotel	4.4	.41	0.90
CK ₃ : Compared with an average person, I think I know more about the food production and service delivery process at this hotel	4.2	.35	0.82
c. Self-efficacy	4.3		

SE₁: When I am confronted by a problem, I am generally able to find diverse and different solutions	4.5	.41	0.86
SE₂: I remain calm even when facing difficulties because I can trust in my capacity to deal with situations	4.4	.43	0.85
SE₃: If I try enough, I am always able to resolve difficult problems	4.3	.44	0.83
SE₄: It is easy for me to put my intentions into practice and attain my objectives	4.1	.39	0.81
SE₅: I am confident that I can deal efficiently with unexpected events	4	.40	0.81
d. Bridging social capital	4.2		
BSC₁: Interacting with other persons either online or offline makes me want to try new things	4.6	.40	0.86
BSC₂: Interacting with other persons either online or offline makes me feel part of a broader community	4.4	.35	0.75
BSC₄: Interacting with other persons either online or offline triggers my interest in what other people think	4.1	.40	0.81
BSC₅: Speaking with other persons either online or offline makes me curious about other parts of the world	4	.40	0.81
BSC₆: Interacting with other persons either online or offline makes me feel linked to a more global world vision	4	.35	0.86
BSC₇: Interacting with other persons either online or offline reminds me just how many people are connected worldwide	4	.38	0.78

Table 4 illustrates the descriptive analysis regarding company factors. The total mean score of company-related factors was 4.45, indicating that these factors were perceived well by customers. Furthermore, the tabulated data indicated that the two company-related factors (perceived company and support customer education) had means of 4.6 and 4.3, respectively.

These findings showed that the two investigated factors were accepted to a great degree by customers. In addition, the findings related to perceived company support were emphasized by previous scholars (e.g. Vardaman et al., 2016; Im and Qu, 2017; Liu and Jo, 2020).

Table 4

A descriptive analysis of company resources

	Mean	SD	Cronbach's alpha
Company resources	4.45		
a. Perceived company support	4.6		
PS₁: If I have specific needs and wants, the hotel will strongly consider my needs and wants.	4.7	.30	0.85
PS₂: If I have a special request, this hotel would be willing to help me.	4.7	.30	0.85
PS₃: If I have a certain opinion, this hotel will care about my opinion.	4.4	.40	0.83
b. Customer education	4.3		
CE₁: The company clarifies to me all the pros and cons of the service.	4.6	.21	0.84
CE₂: The company clearly explains to me the more complicated issues surrounding the service	4.3	.40	0.88
CE₃: The company supplies me with all the information I need	4.2	.35	0.9
CE₄: The company keeps me informed about new service features	4.1	.35	0.86

Table 5 illustrates the descriptive analysis regarding CVC dimensions. The results clearly stated that the total mean score of CVC was 4.5. Moreover, the tabulated data also indicated that CVC dimensions

(i.e., customer participation behaviour and customer citizenship behaviour) reported 4.4 and 4.6, respectively.

Table 5

A descriptive analysis of CVC items

	Mean	SD	Cronbach's alpha
Customer value co-creation	4.5		
A. Customer participation behaviour	4.4		
Information sharing (IS)	4.5		

IS1: I clearly explained what I wanted the employee to do.	4.7	0.36	0.78
IS3: I answered all the employees' service-related questions.	4.6	0.55	0.89
IS2: I gave the employee proper information.	4.5	0.42	0.77
IS4: I provided necessary information so that the employee could perform his or her duties.	4.3	0.52	0.75
Responsible behaviour (RB)	4.5		
RB1: I performed all the tasks that are required.	4.8	0.35	0.89
RB2: I fulfilled responsibilities to the business.	4.6	0.57	0.88
RB3: I adequately completed all the expected behaviours.	4.4	0.39	0.87
RB4: I followed the employee's directives or orders.	4.3	0.48	0.87
Information seeking (IN)	4.4		
IN1: I have paid attention to how others behave to use this service well.	4.6	0.38	0.89
IN2: I have asked others for information on what this service offers.	4.5	0.42	0.88
IN3: I have searched for information on where this service is located.	4.2	0.44	0.87
Personal interaction (PI)	4.3		
PI1: I was polite to the employee.	4.7	0.39	0.88
PI2: I was kind to the employee.	4.3	0.40	0.86
PI3: I was courteous to the employee.	4.2	0.35	0.79
PI4: I was friendly to the employee.	4.1	0.51	0.75
PI5: I didn't act rudely to the employee.	4	0.38	0.75
B. Customer citizenship behaviour	4.6		
Advocacy (A)	4.7		
A1: I said positive things about the hotel and the employee to others.	4.8	0.38	0.75
A2: I recommended the hotel and the employee to others.	4.7	0.39	0.86
A3: I encouraged friends and relatives to use the hotel.	4.6	0.44	0.78
Feedback (F)	4.6		
F1: When I receive good service from the employee, I comment about it	4.8	0.40	0.86
F2: When I experience a problem, I let the employee know about it.	4.6	0.44	0.78
F3: If I have a useful idea on how to improve service, I let the employee know.	4.4	0.41	0.75
Helping (H)	4.5		
H1: I assist other customers if they need my help.	4.8	0.36	0.75
H3: I teach other customers to use the service correctly.	4.8	0.48	0.78
H2: I help other customers if they seem to have problems.	4.4	0.45	0.86
H4: I give advice to other customers.	4.2	0.47	0.77
Tolerance (T)	4.4		
T1: If service is not delivered as expected, I would be willing to put up with it.	4.5	0.41	0.76
T3: If I have to wait longer than I normally expected to receive the service, I would be willing to adapt.	4.4	0.29	0.79
T2: If the employee makes a mistake during service delivery, I would be willing to be patient.	4.3	0.33	0.76

In addition, it is clear from table 5 that all the four dimensions of customer participation behaviour: (a) information sharing (Mean=4.5); (b) responsible behaviour (Mean=4.5); (c) information seeking (Mean=4.4); and (d) personal interaction (Mean=4.3) achieved average scores above four, indicating that customers were actively involved in value co-creation activities.

These findings showed that customers contribute positively to the organizations by performing such extra-role behaviours. Additionally, the results in table

5 are consistent with previous research (e.g., Hsiao et al., 2015; Khanagha et al., 2017; Wong and Lai, 2019; Liu and Huang, 2020) which found that customers actively participated in value co-creation processes.

4.3 Relationship between employee resources, customer resources, company resources, and CVC

To show the relationship between CVC and the other variables of the study, a correlation was measured. The results clearly revealed that there were strong positive relationships between CVC and all other variables (see tables 6-8).

Table 6

Correlation between employee resources and CVC

		Emotional intelligence	CVC
Emotional intelligence	Pearson correlation	1	0.79
	Sig. (2-tailed)		0.000
	N	244	244
CVC	Pearson correlation	0.79	1

	Sig. (2-tailed) N	0.000 244	244
		Empathy	CVC
Empathy	Pearson correlation Sig. (2-tailed) N	1 0.000 244	0.87 0.000 244
CVC	Pearson correlation Sig. (2-tailed) N	0.87 0.000 244	1 244

**Correlation is significant at the 0.05 level (2-tailed).

As shown in table 6, the results clearly revealed that there are strong positive relationships between CVC and the two factors of employee resources: EI (r= 0.79,

Sig. <0.000) and empathy (r= 0.87, Sig. <0.000), respectively. This means that if these two factors increase, CVC will increase.

Table 7

Correlation between customer resources and CVC

		Customer expertise	CVC
Customer expertise	Pearson correlation Sig. (2-tailed) N	1 244	0.86 0.000 244
CVC	Pearson correlation Sig. (2-tailed) N	0.86 0.000 244	1 244
		Customer knowledge	CVC
Customer knowledge	Pearson correlation Sig. (2-tailed) N	1 244	0.81 0.000 244
CVC	Pearson correlation Sig. (2-tailed) N	0.81 0.000 244	1 244
		Customer self-efficacy	CVC
Customer self-efficacy	Pearson correlation Sig. (2-tailed) N	1 244	0.75 0.000 244
CVC	Pearson correlation Sig. (2-tailed) N	0.75 0.000 244	1 244
		Bridging social capital	CVC
Bridging social capital	Pearson correlation Sig. (2-tailed) N	1 244	0.73 0.000 244
CVC	Pearson correlation Sig. (2-tailed) N	0.73 0.000 244	1 244

**Correlation is significant at the 0.05 level (2-tailed).

Additionally, it is clear from table 7 that there are strong positive relationships between CVC and the customer-related factors: customer expertise (r= 0.86, Sig. <0.000), customer knowledge (r= 0.81, Sig.

<0.000), self-efficacy (r= 0.75, Sig. <0.000), bridging social capital (r= 0.73, Sig. <0.000), and respectively. This means that if customer resources increase, CVC will increase.

Table 8

Correlation between company resources and CVC

		Perceived company support	CVC
Perceived company support	Pearson correlation Sig. (2-tailed)	1	0.85 0.000

	<i>N</i>	244	244
CVC	Pearson correlation	0.85	1
	Sig. (2-tailed)	0.000	
	<i>N</i>	420	244
		Customer education	CVC
Customer education	Pearson correlation	1	0.80
	Sig. (2-tailed)		0.000
	<i>N</i>	244	244
CVC	Pearson correlation	0.80	1
	Sig. (2-tailed)	0.000	
	<i>N</i>	244	244

**Correlation is significant at the 0.05 level (2-tailed).

Moreover, it is clear from table 8 that there are strong positive relationships between CVC and the two company-related factors: perceived company support ($r= 0.85$, Sig. <0.000) and customer education ($r= 0.80$, Sig. <0.000). This means that if company resources increase, CVC will increase.

4.4 Regression results of employee resources, customer resources, and company resources with CVC

The first regression analysis was used to assess the degree of influence of the two employee-related

factors (i.e. Employees’ EI and empathy) on CVC based on the previously mentioned correlation, as shown in table 9. Concerning employees’ EI, it was found to be positively influence CVC (R-square=.80, P-value=.000). As regards to employees’ empathy, it was also found to positively affect CVC (R-square=.89, P-value=.000). The current results are supported by the two social theories, i.e. the social exchange theory (Blau, 1964) and the norm of reciprocity theory (Gouldner, 1960).

Table 9

Employee resources influencing CVC

EI	Un-standardized coefficients			Sig.	Model statistics
	B	Std. Error	R-square	.000	
Constant	.012*	.0001	.80	.000	<i>F: 14.0001</i>
CVC	0.005*	.00013		.000	
Empathy	Un-standardized coefficients			Sig.	Model statistics
	B	Std. Error	R-square	.000	
Constant	.011**	.0003	.89	.000	<i>F: 13.0135</i>
CVC	.0011**	.00004		.000	

*Regression equation can be formed as EI = .012 +.005 CVC

**Regression equation can be formed as empathy = .011 +.0011 CVC

In addition, the findings in table 9 concur with other studies (e.g. Frempong et al., 2020). Therefore, hypotheses 1 and 2 predicted that employee-related factors would have a positive impact on CVC. These

two hypotheses are supported. The findings showed that frontline employees with higher levels of EI and empathy have the ability to motivate customers to participate more in co-creating value.

Table 10

Customer resources influencing CVC

Customer expertise	Un-standardized coefficients			Sig.	Model statistics
	B	Std. Error	R-square	0.000	
Constant	0.0002***	0.003	0.90	0.000	<i>F: 12.0421</i>
CVC	0.035***	0.001		0.000	
Customer knowledge	Un-standardized coefficients			Sig.	Model statistics
	B	Std. Error	R-square	0.000	
Constant	0.0001****	0.041	0.84	0.000	<i>F: 11.0451</i>
CVC	0.002****	0.011		0.000	
Self-efficacy	Un-standardized coefficients			Sig.	Model statistics
	B	Std. Error	R-square	0.000	

Constant	0.005*	0.013	.78	0.000	F: 13.0001
CVC	0.015*	0.005		0.000	
Bridging social capital	Un-standardized coefficients			Sig.	Model statistics
	B	Std. Error	R-square	0.000	F: 13.0111
Constant	0.005**	0.010	.85	0.000	
CVC	0.023**	0.001		0.000	

*Regression equation can be formed as self-efficacy=.005+.015 CVC
 **Regression equation can be formed as bridging social capital=.005+ .023 CVC
 ***Regression equation can be formed as customer expertise=.0002+.035 CVC
 ****Regression equation can be formed as customer knowledge=.0001+.002 CVC

The second regression analysis (see table 10) was used to assess the effect of the customer resources on CVC based on the previously mentioned correlation results, it was found to be significantly influenced by the four customer-related factors: customer expertise (R-square=.90, P-value=.000); customer knowledge (R-square=.84, P-value=.000); self-efficacy (R-square=.78, P-value=.000) and bridging social capital (R-square=.85, P-value=.000), respectively. These findings are in agreement with previously published results which showed that customer expertise (e.g., Alves et al., 2016); knowledge (e.g., Auh et al., 2007); self-efficacy (e.g., Im and Qu, 2017); and bridging social capital (e.g., Yoon, 2018) were found to be customer-related drivers of value co-creation.

It was expected that the four customer-related factors (i.e., self-efficacy; bridging social capital; customer knowledge; customer expertise) would have a positive effect on CVC. Therefore, hypotheses 3, 4, 5, and 6 were supported. From the regression results, it could be noticed that customer expertise had the highest impact on value co-creation. The third regression analysis (see table 11) was conducted to identify which company-related factors (i.e., customer education and perceived company support) affect CVC, as shown in table 11. When assessing the degree of influence of each factor on CVC based on the previous correlation results, it was found to be positively affected by perceived company support (R-square=.9, P-value=.000) and customer education (R-square=.8, P-value=.000), respectively. Therefore, hypotheses 7 and 8 were supported.

Table 11
 Company resources influencing CVC

Perceived company support	Un-standardized coefficients			Sig.	Model statistics
	B	Std. Error	R-square	0.000	F: 11.0452
Constant	0.006**	0.013	.9	0.000	
CVC	0.011**	0.005		0.000	
Customer education	Un-standardized coefficients			Sig.	Model statistics
	B	Std. Error	R-square	0.000	F: 10.0845
Constant	0.001*	0.011	0.8	0.000	
CVC	0.013*	0.012		0.000	

*Regression equation can be formed as customer education= .001+.013 CVC
 **Regression equation can be formed as perceived company support=.006+.011 CVC

The results in table 11 correspond with the previous studies which found that perceived company support (e.g., Grisse mann and Stokburger-Sauer, 2012; Ji and Kale, 2020; Liu and Jo, 2020) and customer education (e.g., Alves et al., 2016) positively influences CVC. Based on the previous regression results, a model has been developed (see figure 2). As shown in this figure, there are three important interpretations: (1) all the three different types of factors positively affect CVC; (2) empathy had a higher positive impact on CVC than EI; (3) customer expertise had a higher positive impact on CVC than other customer-related factors; (4)

perceived company support had a higher positive impact on CVC than customer education.

5. Conclusion and implications

The study aimed at investigating the influence of factors related to employees, customers, and the company on CVC. The descriptive results indicated that all factors influencing CVC were well perceived by customers and that customers actively engage in value creation activities. In addition, the findings have confirmed that there are positive effects of the three types of factors on CVC. As well, two demographic characteristics (i.e., age; educational level) were found to be significantly related to CVC. Thus, these

findings contributed to a broader understanding of the concept of value co-creation in hotels. Accordingly, the present study contributed to the current knowledge base by enriching the value of co-creation literature. Moreover, the research on value co-creation was also expanded to include Egyptian hotels. This expansion is essential for achieving a deeper understanding of value co-creation. Furthermore, depending upon the related literature review and the findings obtained, certain recommendations can be suggested:

(1) Concerning employees, hotel management should keep in mind the employee-related factors influencing CVC. In order for hotels to maintain a high level of CVC, hotels should maintain the employees' level of EI and empathy, and even work to increase these two factors by designing employee training programs. In addition, it is recommended that hotels should utilize recruitment and selection tools (such as personality

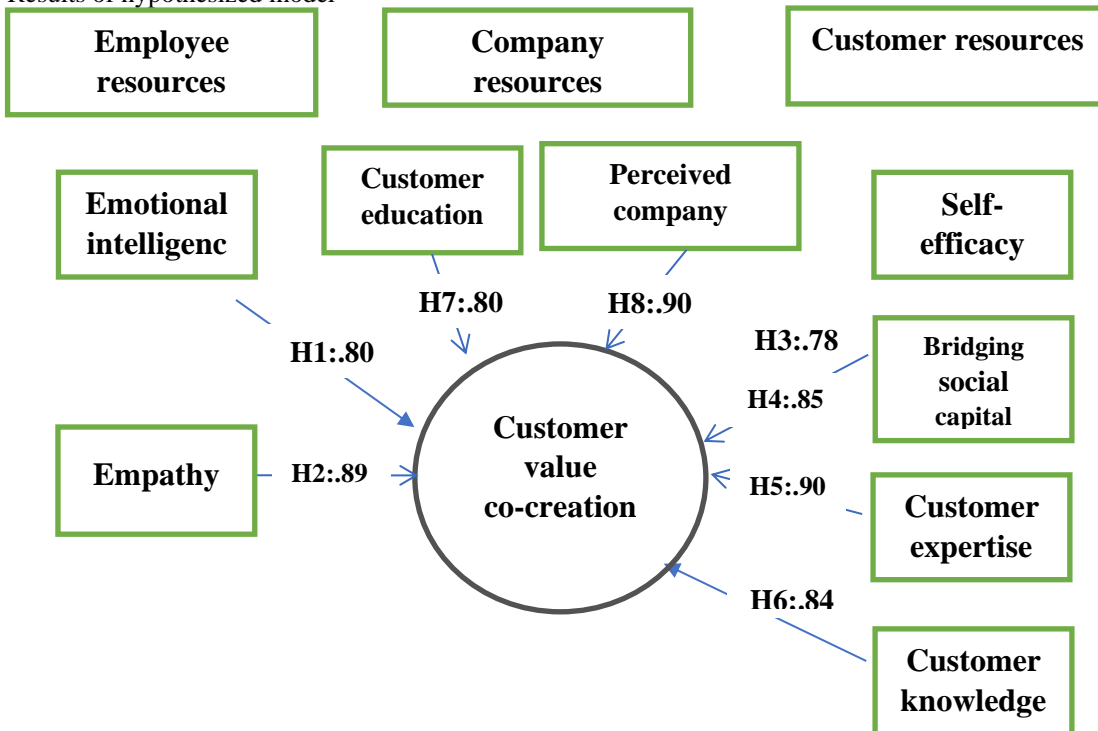
tests) when recruiting or promoting employees internally, to evaluate whether applicants have the necessary skills of EI and empathy.

(2) As regards customers, hotels should maintain their current customers and attract more of such types of customers because they possess high levels of self-efficacy, social capital, knowledge, and expertise that enable them to participate more in co-creating value. To achieve this, hotel management should involve customers more in co-creating value in all the hotels' activities related to the service and the product and motivate them through various marketing activities.

(3) As for company resources, hotels must not only continue to provide the resources (such as customer education and organizational support), which customers need for co-creating value but also should add other resources, such as social resources (e.g. relationship with customers)

Figure 2

Results of hypothesized model



6. Limitations and avenues for future research

Several limitations of this study along with its avenues for future research should be noted. First, this research measured only the role of customers in the value co-creation process. In future studies measuring the extent to which employees in Egyptian hotels participate in value co-creation activities would be

useful. Second, the study is confined to place and time limitations. The research was conducted on five-star hotels in Cairo. Thus, the results of the study may not be generalized to other areas. As well, the results were derived from data collected within a specific time period (from September 2019 to November, 2019). Hence, it would also be beneficial to conduct other

empirical longitudinal studies to provide more reliable implications. As a closing note, this research focused only on hotels. Therefore, in order to generalize the results, it would also be beneficial to examine the relationships demonstrated in this study by future research in other hospitality settings (e.g., restaurants) to indicate to what extent the value co-creation process is critical to hospitality industry.

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