

RESEARCH ARTICLE

Impact of Corporate Social Responsibility, Green Initiative and Perceived Ease of Use on Brand Equity: Mediating Role of Co-creation and Moderating Role of Involvement

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Abstract: The fierce competition among fast-food restaurants has made it difficult for them to attract and retain consumers and increase brand equity (BE). This research investigates the impact of corporate social responsibility (CSR), green initiative (GI), and perceived ease of use (PEOU) on brand equity and also examined the mediating role of customer Co-creation (CC) and introduced involvement (IV) as a moderator between the mediated relations of CSR and BE, GI and BE, PEOU and BE. In this quantitative research, a convenient sampling technique was applied for data collection through questionnaires from 300 consumers of multinational fast-food restaurants using KIOSK in Pakistan. SEM with AMOS 24 was used for data analysis. All the hypotheses except one were accepted. Only PEOU had not shown any relationship with BE, although when introduced through CC, it displayed a strong relationship. The results substantiated the resource-based perspective that organizations using their resources should motivate customers to get involved; hence, their joint efforts would bring BE through CC. The findings revealed that investment in CSR practices proved to be a strategic one. It will help restaurants learn how the integration of CSR, CC, PEOU, IV, and GI can help them develop core strategic considerations.

Keywords: Perceived Ease of Use, Corporate Social Responsibility, Customer Involvement, Green Initiative, Co-creation

JEL Classification Codes: M14, M31

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1 Introduction

Globalization has connected markets worldwide which, on one hand, made it possible for different brands to grab the attention of global customers, and on the other hand, instilled a higher degree of competition among the organizations. Modern organizations strive hard to survive in this competitive environment in various aspects such as manufacturing, logistics selling, and consumption up to the point that even established brands need to cautiously devise their policies and strategies (Barić, 2017). Researchers have pointed out that pro-social marketing activities can shape a differentiated market strategy for the brand and build brand value (Liu et al., 2014), which, in turn, might keep consumers loyal. Thus, CSR is not only an ethical and ideological imperative (Barrena-Martínez et al., 2017); it is also an economic imperative. Organizations started to spend billions in taking green initiative for social responsibility (Esen, 2013) when they observed that the consumer purchase intentions are more affected by their perception of the company which is about 60%, compared to products' perception which is only about 40% (Smith, 2012). Moreover, CSR activities build a 42% image of an organization (Smith, 2012) as modern customers are now aware of the worth of the environment and are more involved in it. They rate the company higher which is concerned more about social responsibility. CSR is also an ineluctable and integral element of brand equity (Baalbaki & Guzmán, 2016). From the marketing point of view, brand equity elucidates the reputation, power, and ascendancy that an organization has in the competitive marketplace and can influence customer perception and behavior, which significantly affects the financial performance of a firm (Rao et al., 2004). Substantial brand equity differentiates an organization from its competitors and helps to accelerate financial benefits (Greel, 2012). A point to be noted here is that the technology has opened a new way of creating customer value (Porter & Kramer, 2019), allowing businesses to communicate and collaborate with customers beyond borders (Martincevic & Kozina, 2018). Self-service technology (SST) is a technological interface that enables companies to provide the best communications to customers when interacting with their respective products and services (Shin & Perdue, 2019). SST enables the business operator to produce a service independently without the involvement of a service employee (Lee & Lyu, 2019). Furthermore, SST is a proven business model, generating a favourable impact on customers and service providers (Kamarudin, 2015). Given this discussion, specific questions arise; how GI, PEOU, and CSR activities are related to CC? How are these converted into BE of that organization? What effect CC and customer IV have in these relationships?

CSR by taking GI is considered a competitive advantage by the global brands as it is anticipated to generate a brand's equity. It is no longer accepted only as something that raises the quality of life in society. Instead, it is taken as a tool to create BE by generating a positive image of the brand (Aaker & Keller, 1993). For increasing profitability and boosting the company's development, CSR is considered an added strategy. It refers to enhancing the customers' awareness of those products and practices valuable for society and the environment in their development.

With the dawn of the 21st century, specific changes started to happen that transformed the social and business context. Organizations have to realize that it is essential for them to meet the new requirements. It has become a differentiation strategy applied to create new demands and gain maximum price for a product or service. Consumers are sometimes attracted to the products formed in a responsible manner (process innovation) and sometimes to the products that display specific attributes of responsibility (product innovation).

CSR is a strategy that creates activities for an organization and supposed something for adding value in products and services. Therefore, a unique image of the organization that it is giving products and services with such distinctive features which the consumers cherish will be created in the whole market, which is the product of CSR. This difference may be made in many ways, like using technology, brand image, design of a product, system distribution, and after-sales service. Research on brands and equity for organizations is progressing and prospering rapidly due to the advancement in technology. It has been a proven fact that if BE is strengthened, it will surely enhance the productivity of marketing investment (Harvey, 2001). Thus CSR, GI, PEOU (of technology), and CC are essential to generate BE; however, their relationships require a moderator that can positively affect their relationships, and then involvement (IV) comes (Skallerud et al., 2021).

The positive image and reputation sometimes transform into BE, which is undoubtedly the result of GI and CSR activities and actions (Creswell, 2013). Therefore, GI, CSR, IV, and BE are interlinked and areas that need further research. It has become evident to the enormous multinational organizations that for building customers' brands, they have to be socially responsible by taking care of the social needs of society. However, the point to be noted is that organizations behave socially responsible only in potential markets where they find the opportunity to grow their businesses (Jones, 2005).

Some organizations, especially multinational corporations in Pakistan, are paying particular attention to performing their social responsibility for the well-being of society. McDonald's, Subway, KFC, etc., the industry tycoons in fast food are the global leaders of fast-food retailers. These companies have millions of daily customers, and thousands of locations incessantly build socially responsible corporations and introduce the latest technology (KIOSK-self-service machines). To keep in mind, the global green movements formulate their policies and management strategies by focusing on the green environment. By introducing customer-friendly technology, focusing on their extraordinary efforts is CSR activities. This research will contextualize GI, CSR, PEOU, and IV effects concerning two huge retail chains in fast food in generating BE in Pakistan. Here CSR and GI phenomena are progressing in their initial stage. In this context, the current research focuses on the relationships among GI, PEOU, and CSR with BE in the Pakistani fast-food industry by exploring the moderating effect of IV. The study will enhance an in-depth understanding of the managers of the fast-food industry for evaluating investment decisions for GI and CSR activities that lead to increase the BE of their companies as high equity brand in the market is the guarantee of its high value.

1.1 Literature Review

1.1.1 Technology Acceptance Model

This study is based on Technology Acceptance Model TAM, proposed by Davis (1989), stating that technology has been accepted widely due to its ease for both the markets and customers. It influences daily lives directly or indirectly. Widanengsih (2021) stated that TAM supports defining consumers' perspectives about adopting or rejecting the advancement of technology, bringing ease of use as it brings efficiency and effectiveness for the customers. Appreciating this, the consumers tend to use kiosk machines while ordering their food in the fast-food sector due to the ease it brings, and hence their BE is enhanced. Therefore, the study aims to test the applicability of the TAM model in the fast-food sector as it may get fruitful outcomes for the industry.

1.1.2 PEOU, CSR, GI, and BE

PEOU is the opinion or judgment of the customer while using a specific system and the ease of using it (Jeng & Tseng, 2018). Literature (Nuryanto et al., 2020) stated that PEOU is highly applicable in such sectors directly influenced by the advancement of technology. The consumer tends to be confident in using technology that is free of effort. Due to the company's easiness, customers tend to feel associated with the brand (Faircloth et al., 2001). Thus, BE supports marketers to survive in the market among its competitors (Saidarkaa & Rusfianb, 2019).

CSR is the mapping out and implementing such policies and strategies that result in society's well-being (Matten & Moon, 2008). Earlier research (Hur et al., 2014) suggested that consumers tend to attract such companies that actively participate in initiating CSR practices to raise the overall progress of the society. Thus it establishes a degree of trust and commitment among the company and customers. Literature (Afzali & Kim, 2021; Bianchi et al., 2019; Gupta & Wadera, 2020; Sharma & Jain, 2019) stated that initiating CSR practices by the organizations added value to the brand as the confidence of their customer's boost. Hence, BE gets positively influenced by CSR.

Green initiatives are commonly referred to as planning and implementing such strategies and policies by managing the environmentally friendly organization and well-being. Literature showed that incorporating green initiatives enhances customer satisfaction with using the brand (Chen & Gavious, 2015). Besides, customer satisfaction leads to gaining success for the organization as it brings the opportunity to get a competitive advantage in the market. Furthermore, customer satisfaction towards the company's green initiatives tends to raise BE (Moise et al., 2019).

1.1.3 PEOU and Co-Creation

PEOU was initially defined as "the user's expectation that learning and using new technology will not require much effort" (Davis, 1989). Furthermore, PEOU refers to the consumer's confidence in using technology to bring efficiency and effectiveness (Dwivedi et al., 2017). However, recent studies (Alalwan, 2020) suggested that PEOU significantly influences consumers while adopting modern technology. Furthermore, Apostolidis et al. (2021) examined that the functions and features of technology encourage the process of CC, both for consumers and organizations. "Value co-creation is a dual process that occurs on a co-creation platform that involves a direct interaction between two or more participants (human actors or intelligent systems and products), which result in a collaborative process" (Grönroos & Gummerus, 2014). Therefore, companies utilize the opportunity to engage their consumers in this value creation process based on their experiences and knowledge, resulting in fruitful outcomes for both consumers and organizations. (Cambra-Fierro et al., 2018). This study attempts to determine what will happen when the consumers find restaurant technology as hard for learning and using; they may respond by recommending improvement by giving valuable suggestions. Consumers tend to engage with the organizations through CC to make the technology user-friendly. Currently, in service research, the concept of CC is becoming increasingly crucial.

1.1.4 CSR and Co-Creation

CSR is defined as those social responsibilities that companies are indulged with the fundamental objective to gain profit by implementing strategies and policies for the well-being of the society (Chapple & Moon, 2005). Recent research stated that it is essential to develop a connection between environmental issues and economic processes that support the organization in attaining reputation among the customers. Organizations tend to layout such strategies and policies for implementing and incorporating such practices that end in fruitful outcomes for the welfare of society (Jeon et al., 2020). Engaging in CC activities offers consumers a chance for self-improvement within the available organizational resources (Park & Ha, 2016); thus, it brings the feeling of getting closer to the particular brand. CSR pursues to ensure the value of the environment and community where participants cooperate. Ahen & Zetting (2015) established that when consumers become more conscious of a business's CSR process, they become more familiar with the firm and eager to create their resources (e.g., information, knowledge) to help the company efficiently perform CC functions. Since little research has been done to determine the impact of social responsibility in assisting businesses to increase their creative activity, such as through CC (Biggemann et al., 2014; Simpson et al., 2020), this research is an effort to fill this gap.

1.1.5 Green Initiatives and Co-Creation

An organization takes green initiatives with the fundamental objectives of adopting improvement in the development and progress. Furthermore, implementing such environmental-friendly practices that result in fruitful outcomes that reduce the consumption of energy and resources, lower pollutant emissions, reduce the post-production wastes, or implement rational economic activities that align with society's well-being (Tapia-Fonllem et al., 2013). Organizations tend to establish green initiatives as one of the possible approaches for sustainable development. Wysocki (2021) stated that green initiatives play a significant role in eliminating environmental pollution, generating maximum benefits for implementing them. Organizations tend to indulge their consumers while laying out such strategies and policies for initiating green practices, resulting in establishing confidence and trust among organizations and customers.

1.1.6 Co-creation and Brand Equity

Brand equity can be defined as an intangible asset of cocreated organizations through the interface between consumers and brands (Christodoulides et al., 2006). BE and branding are considered significant in marketing for organizations to improve their sales and consumer loyalty (Aaker & Keller, 1993). BE plays its role in bettering business performance and sustainability (Davicik et al., 2015). To differentiate the brand from the rest, an organization needs to be involved in something huge- much more significant than be a part of marketing only (Kapferer, 2012). Von Wallpach et al. (2017) suggested that the current business method will be customer-oriented by engaging customers in the growth of market offerings. BE can be improved by value CC as it builds a win-win situation for both the organizations and consumers (Zhang et al., 2015). Less research has been done to observe the benefits of CC for service sector consumers (Kristal et al., 2016; Van Dijk et al., 2014). Omar et al. (2020) empirically proved that CC is one of the critical predictors of BE and demanded that his work should be extended to the restaurant industry. Moreover, (González-Mansilla

et al., 2019) stated that consumers' participation while creating the product or services increases the BE.

1.1.7 Co-Creations Mediating Role

In branding, CC means that the organization's formal brand identity is created where the brand evolves. The organization thus cannot control the brand (Kaukonen, 2021). Ind & Schmidt (2019) had discovered a strong effect and importance of CC on innovation, customer relationships, and differentiation on the brand type. On the other hand, Omar et al. (2020) noticed that implementing CC practices in organizations improves the self-enhancement aspects of consumers. Thus, CC tends to bring PEOU for the customer as it brings an opportunity to the customer to actively engage with the brand in terms of bringing efficiency and effectiveness. González-Mansilla et al. (2019) has empirically proven that consumers' participation while creating the product or services tends to increase the BE. Thus, the study proposes the hypothesis that CC mediates the relationship between PEOU and BE.

Literature (Luu, 2019) stated that CC is one the potential mediator to endorse the role of CSR, as CSR practices incorporated by organizations strengthen their relationship with its customers, that in turn brings fruitful outcomes for their brand. Similarly, Raza et al. (2020) empirically proven CC mediates the CSR practices implemented and incorporated by the organization, with customer loyalty towards the brand. Thus, the customer's degree of trust and confidence leads to add value to the BE. Based on earlier presented literature, the study proposes the hypothesis Co-creation is termed as those sources of knowledge and information, customers possess while engaging with the brand, to suggest changes according to their needs and desires (Gohary et al., 2016). Customers tend to highly appreciate those organizations that offer and incorporate green initiatives, which results in the environment's well-being. According to social identity theory (Hogg, 2020) and the Means-end theory (Gutman, 1982; Widanengsih, 2021), customers tend to pay attention to those organizations that willingly devise strategies and policies to incorporate green initiatives. Thus, such organizations get successful in gaining the confidence and trust of their customers. Consumers are more likely to prefer those organizations which involve them in decision making through co-creation, as involving customers in decision making related to the environment builds a sense in consumers that the organization is concerned about the environment in real terms, which ultimately boosts their green loyalty (Wu & Cheng, 2019). Thus, the adoption of a green initiative, as a means of improving sustainability, is seen as an appropriate step in shaping a positive image of the organization (Shampa & Jobaid, 2017).

1.1.8 Customer involvement's Moderating Role

Customer involvement refers to the triggering factor that encourages customers to engage with the brand to fulfill their needs and requirements accordingly (Fatima & Razzaque, 2013). The customer tends to those brand that brings ease while using their products or services offered in the market. Chen & Gavius (2015) stated that customer perception about using the product in terms of ease is greatly enhanced by customer IV. The consumer tends to be confident in using technology that is free of effort. Due to the company's easiness, customers tend to feel associated with the brand (Faircloth et al., 2001). Ma et al. (2021) stated that customer IV regulates customer's perceptions about the brand. Due to that, the study

proposes that customer IV acts as a moderator between PEOU and BE. Moreover, customers tend towards those brands that engage in CSR practices while serving their products or services. Mandolfo et al. (2020) indicated that customer IV towards the brand significantly influences the brand's progress, and hence, the BE is increased. Thus, it is concluded that customer IV moderates the relationship between CSR and BE. Additionally, green initiatives implemented and incorporated by the company refer to map out such strategies and policies that significantly contribute to society's well-being. According to social identity theory (Hogg, 2020), customers tend to be involved in such brands that pay great attention to implementing green initiatives that directly benefit society. Thus, it encourages establishing trust in the customer that leads to enhance the BE.

1.1.9 Hypotheses Development

- H1a: PEOU has a positive impact on Brand Equity.
- H1b: CSR has a positive impact on Brand Equity.
- H1c: Green initiative has a positive impact on Brand Equity.
- H2: PEOU has a positive impact on Co-creation.
- H3: CSR has a positive impact on Co-creation.
- H4: Green initiative has a positive impact on Co-creation.
- H5: Co-creation has a positive impact on Brand equity.
- H6: Co-creation mediates the relationship between PEOU and BE.
- H7: Co-creations mediates the relationship between CSR and BE.
- H8: Co-creation mediates the relationship between GI and BE.
- H9a: Customer involvement moderates the relationship between PEOU and BE.
- H9b: Customer involvement moderates the relationship between CSR and BE.
- H9c: Customer involvement moderates the relationship between GI and BE.

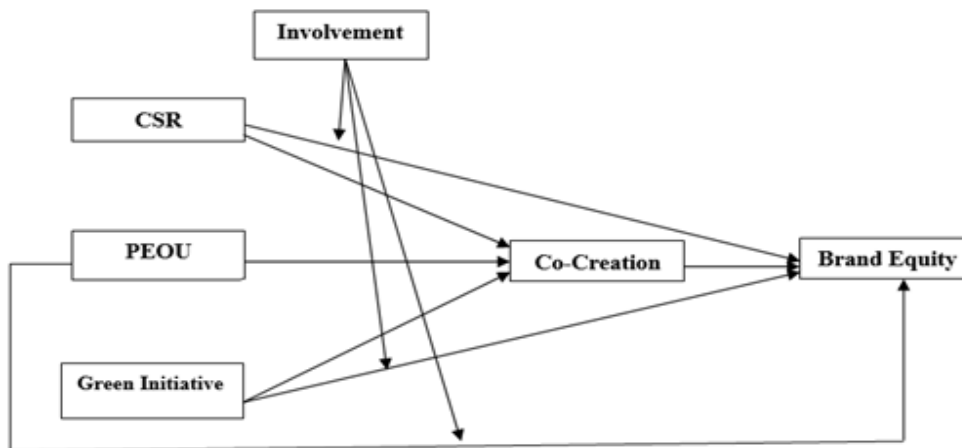


Figure 1: Conceptual Framework

2 Methods

The population of this quantitative research consisted of adults like graduate students, teachers, doctors, lawyers living in Punjab (Pakistan) and regularly visiting those restaurants which were using KIOSK (self-service machine) and they fell in the age groups mainly ranging from 18–55 above. For checking the conceptual model of the current study that linked CSR, PEOU, GI (antecedents), CC (mediator), and BE (outcome) in this cross-sectional study, a non-experimental survey design was used. For data collection, self-administered questionnaires were disseminated. Items with 5-point Likert Scale were used to get the responses. This data collection was done online and by visiting these restaurants personally. However, care was taken that the respondents should be educated enough to understand the questionnaire and also a user of these KIOSK machines.

However, a minimum sample of 200 is needed for using the structural equation modeling (SEM) technique. However, [Hatcher & Stepanski \(1994\)](#) suggests that approximately ten times more than measurement items is a suitable sample size for SEM analysis. Therefore, the suitable sample size is 260 as the total items were 26. However, the sample size was kept at 300. A convenience sampling technique was used. The data was first entered in the SPSS datasheet and then tested in terms of multivariate assumptions. Data were collected by disseminating online questionnaire links to the customers but before that, the consent of the participants was obtained.

2.1 Sample profile

The sample comprised of 58.2% (175) males 41.8% (125) females, of whom 29.4% (92) were married whereas, 69.4% (208) were unmarried. As for as their age groups were concerned, 47.2% (141) were from age group 18-24, 38.5% (115), from age group 25-34, 8.4% (25) from age group 35-44, 4.7% (14) from age group 45- 55, 1.3% (4) from age group 56 and above. The next descriptive variable was income level and 29.4% (88) were having 50000/- above salary, 50.2% (150) having salary in between 21000/-30000/-, 20.4%, (61) having salary in between 31000/-40000/-. Moreover, their education categories were as follows, 31.8% (95) were having Master's Degree, 36.1% (108) having a Graduation degree, whereas 25.8% (77) were having a post-Graduate degree. As far as their work experience is concerned 34.1% (102) were having experience less than a year, 17.7% (53) having experience of 1-2 years, 12.4% (37) having experience of 3-4 years, 10.7% (32) having experience of 5-6 years, 5.4% (16) having experience of 7-8 years, 19.7% (59) having experience more than 8 years.

2.2 Measures

The survey instrument consisted of 26 items having six demographic variables: gender, age, marital status, income level, work experience, and education level. The rest of the variables were measured by adopted scales having proven reliability and validity. The measure for the CC construct is taken from ([Nysveen & Pedersen, 2014](#)). This scale has four items. BE was measured by the scale (BOBE) developed by [Bourgonje \(2016\)](#) and comprised of four items. The measure of CSR, developed by [Eisingerich et al. \(2011\)](#), and having three items, was used. The scale of PEOU has adapted from [Davis \(1989\)](#) It consisted of 6 items. Lastly, the measure of GI developed by [Lai et al. \(2009\)](#) having four items was used in this study. Involvement Inventory (PII) measure was taken from having five items. All of

the items were rated on a five-point Likert scale ranging from strongly agree to strongly disagree.

3 Results

After data collection data preparation process started. In this process, filled questionnaires were checked and coded. The four assumptions of SEM were fulfilled (i.e.) normality, reliability, multicollinearity, and common method biases. The normality of the data in this research was checked by the values of skewness and kurtosis and it was found within the normal range. "Reliability refers to the consistency of findings by using the same measurement tool" (Mugenda & Mugenda, 2003). The value of Cronbach alpha must be 0.70 or above.

The observed Cronbach's alpha values for all variables were as follows CSR 0.801, CC 0.862 for GI 0.861, PEOU 0.911, IV 0.852, and OBE 0.852. Further, as current research is cross-sectional so for testing common method biases, application of Harman's single-factor test done and it showed variance in data, Podsakoff et al. (2003). This was done for testing that data should not be collected from the same person or responses were not the same. This test exhibited only 29.1% of the whole variance verifying common method bias was not the issue, while a single factor <50% of the total variance. It does not account for the majority of variance that specified our data was not affected by common method biases.

Table 1: Measures

Names of Variables	Used Code	Authors of Measures	No of Items	Prior-Reliability	Likert-scale
Corporate Social Responsibility Green Initiative	CSR	Eisingerich et.al 2010	3	0.801	5-point
	GI	Patterson and Spreng 2009	4	0.861	5-point
Perceived Ease of Use	PEOU	Davis (1989)	5	0.911	5-point
Co-creation	CC	Nysveen and Pedersen 2014	6	0.862	5-point
Brand Equity	BE	Yooa&Donthub (2001)	4	0.88	5-point
Involvement	IV	Williams and Roggenbuck's (1989)	5	0.859	5-point

Next by applying SPSS 23 assumption of multi-collinearity was tested. It is assumed in multiple regression that all variables are independent of one another. Ineffectiveness of data is a problem, once one variable among all the variables in linear combination is highly correlated with another variable. Variance inflation factor ranges from 1.3 to 2.0 so not more than 3, therefore the issue of multicollinearity does not exist. VIF test values depict the ineffectiveness of data concerning collinearity is not an issue in this study.

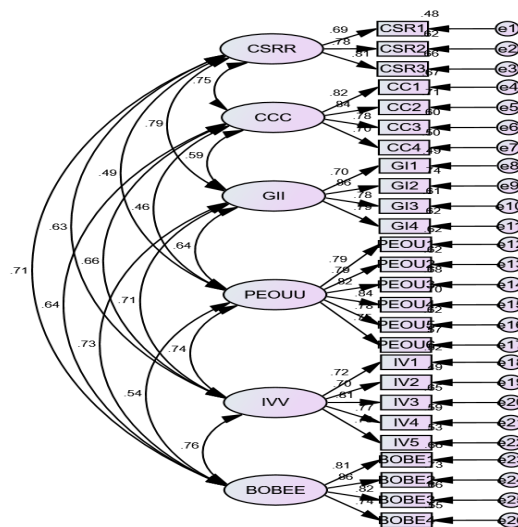
3.1 Structural Equation Modeling

Next for data analysis, the SEM technique by using AMOS software is used. Path analysis techniques with the help of maximum likelihood estimation were used for testing the proposed model. Confirmatory factor analysis (CFA) was done. Multiple indices for checking the fit-statistics were used to examine the fitness of both models: measurement-model and structural-model.

3.2 Measurement Model

Confirmatory factor analysis (CFA) was done with twenty-six observed variables and thirty-two latent variables while performing a specification search. For model assessment maximum likelihood estimation (MLE) was applied. Factor analysis was done to get factor-loadings, SMC range, AVE, and Cronbach Alpha values to remove those factors that could become the basis for poor model fit. Firstly, items having factor loading less than the accepted values, less AVE, and fewer values of Cronbach-Alpha had to be eliminated from the model. Factor loadings of all items were in the acceptable range; hence no item was removed.

Figure 2: Measurement Model Specification



In order to test the strength of measures of the particular constructs of the proposed model convergent validity, discriminant validity, and reliability, were studied, considered

as a part of measurement model analysis . Values of Cronbach's alpha and composite reliability (CR) were measured to check reliability of the measure. For measuring reliability of a construct CR 0.70 and Cronbach's alpha 0.70 were taken as minimum threshold. To achieve convergent validity, factor loadings and average variance extracted (AVE) were used and for that, the threshold level for all the constructs was set for the AVE value and it should be greater than 0.5 (Fornell & Larcker, 1981).

The convergent validity of constructs was achieved with the AVE values exceeding the required threshold of 0.50 for all the constructs. Moreover, all measurement items' significant factor loadings 0.5, as achieved, were evidence of convergent validity . Three methods were used, for gaining discriminant validity. First, inter construct correlation coefficients' square was compared with AVE square root, and to establish discriminant validity inter construct correlation values should be exceeded by the square root of AVE (Fornell & Larcker, 1981), as mentioned in Table 3. Further, the correlation confidence interval between the two constructs was examined these values of all the constructs were less than 1.00. This proved the discriminant validity and the fact that all constructs were considerably different from one another. Measurement items' significantly strong factor loadings (FL 0.50) loaded on their respective latent constructs were evidence of discriminant validity (Fig. 2).

Table 2: Description of Variables after Factor Analysis

Observed Variable	Code	Mean	S.D.	SMCs Range	Factor Loading	Cronbach Alpha value
Corporate Social Responsibility	CSR1	1.88	0.893	0.659	0.692	0.801
	CSR2	2.37	0.974	0.615	0.784	
	CSR3	2.21	0.915	0.478	0.812	
Co-Creation	CC1	2.52	1.068	0.497	0.816	0.862
	CC2	2.64	1.054	0.602	0.845	
	CC3	2.53	1.068	0.714	0.776	
	CC4	2.42	0.999	0.665	0.705	
Green Initiative	GI1	2	0.81	0.622	0.703	0.861
	GI2	2.04	0.861	0.611	0.863	
	GI3	2.12	0.861	0.744	0.782	
	GI4	2.11	0.861	0.494	0.789	
Perceived Ease of Use	PEOU1	2	0.781	0.567	0.786	0.911
	PEOU2	2.04	0.771	0.615	0.785	
	PEOU3	2.03	0.792	0.703	0.825	
	PEOU4	2.01	0.781	0.68	0.839	
	PEOU5	2.04	0.809	0.616	0.784	
	PEOU6	2.05	0.823	0.618	0.753	
Involvement	IV1	2.19	1.009	0.528	0.722	0.859
	IV2	2.39	1.014	0.588	0.702	
	IV3	2.34	0.892	0.65	0.806	
	IV4	2.21	0.859	0.493	0.767	
	IV5	2.33	0.954	0.521	0.726	
Brand Equity	BOBE1	2.11	0.77	0.545	0.814	0.88
	BOBE2	2.21	0.738	0.664	0.856	
	BOBE3	2.26	0.705	0.732	0.815	
	BOBE4	2.21	0.716	0.662	0.738	

However, the values of fit indices of the initial measurement model were slightly less than recommended value, therefore, re-specification of the discriminant validity model was performed for model improvement as recommended by Byrne et al. (2016). Following him, one modification at one point in time was done. Re-specification consisted of three steps; Problem identification, Re-modification and re-analysis. This process is repetitive till recommended fit-indices for model are accomplished. Re-specification in initial-measurement-model's valuation through technique of stage by stage exclusion of observed-variables, in first phase items, and subsequent measurement of re-specified model as was stated MacCallum (1986).

Convergent validity was measured for removal of observed variables that are problematic through measurement of factor loading. At the first phase, all dimensions' factor-loading values were significant statistically (≥ 0.40) were considered for further examination. Newly formulated modified indices were examined in the second step. Modification indices proposed findings regarding adjustment in 2 once high-correlation is reported among error-terms and that further suggested structural path analysis. Byrne et al. (2016) argued that justification and explanations for these adjustments was binding and for attainment of fit, these modifications cover observed variables' elimination.

It was by Byrne et al. (2016) hypothetical model labeled as co-variance-matrix of sample restricted co-variance matrix, although structural equation modeling investigates fit amongst these two matrices that conclude in residual matrix that in turn shows difference amongst these two matrices. Investigation of standardized residuals is essential for model adjustment when fundamental FL-factor-loading appropriateness standardized-residual that is problematic is >2.58 , are compulsorily removed. Table 3 shows the validity for all dimensions is measured by James-Gasken's-excel-tool.

Table 3: All Dimensions of the Study Convergent and Discriminant Validity

	CR	AVE	MSV	IV	CSR	CC	GI	PEOU	BOBE
IV	0.862	0.556	0.514	0.75					
CSR	0.808	0.584	0.532	0.64	0.76				
CC	0.867	0.62	0.564	0.66	0.751	0.79			
GI	0.866	0.618	0.612	0.71	0.765	0.59	0.79		
PEOU	0.912	0.633	0.545	0.74	0.495	0.46	0.64	0.8	
BOBE	0.882	0.651	0.584	0.72	0.706	0.64	0.729	0.54	0.81

Assessment of modified measurement model showed good-fit with improved values of all the required indices; (see table displaying indices of the second-fit model). While analyzing measurement-model suggested range of reliability indices were reported and alpha values ranged from 0.660 to 0.911 as per measures' internal reliability, though composite-reliability (CR) ranged from 0.808 to 0.912, values were greater than acceptable values.

AVE valuation for individual variables was done to measure convergent validity. Values of SMCs for all individual items were within the range of 0.766 to 0.785. Factor-loadings excluding CSR1 0.692, of all variables were more than the suggested value (0.70) and were significant. AVE measurement exceeded acceptable value (0.50) as it ranged from 0.556 to 0.651 in the case of all variables. It is required that the MSV value must be greater than the AVE value. While measuring discriminant validity, results displayed that the AVE root

square of all measured variables values came out to be less than MSV. Similarly, the root square AVE of all concerned variables was less than MSV.

3.3 Structural Model and Hypothesis Testing

After assessing measurement model-fit, structural model-fit is evaluated to examine theorized relationships among all given endogenous and exogenous variables. Structural-model encompasses five variables that are with 26 indicators that are structured on theoretical / conceptual-model proposed by [Hayes & Scharkow \(2013\)](#), specified three variables (CSR, GI, PEOU) as exogenous, one variable (BE) as endogenous, and one variable (CC) as mediator.

Table 4: Initial, Final Measurement and Structural Models

Fit Indices	In-Initial Measurement Model	Mea-Final Measurement Model	Mea-Structural Final Specified Model	Ranges and Acceptance Criteria	Analysis of Final Measurement Model
CMIN/df	5.151	2.754	4.139	<3 Good	Good fit
GFI	0.871	0.937	0.921	>0.95 Great	Good fit
AGFI	0.817	0.902	0.937	>0.80 Great	Good fit
CFI	0.907	0.971	0.947	>0.95 Great	Good fit
RMSEA	0.103	0.67	0.066	0.50 to 0.10 Mod.	Moderate fit

The structural model was good-fit displaying all indices above acceptable values; see table 4. The obtained outcomes were attained subsequent to the addition of covariance path till fit-indices got the appropriate value, no elimination of the path was required corresponding to parameter estimates' table. Thereafter hypothesized-model was good fit. Acceptable threshold levels for structural model are given in table 4.

Results supported all nine hypotheses, confirming significant effects of the proposed directions, in the structural model. Here the researcher explicates the testing of hypotheses concerning the hypothesized association between variables in this theoretical research model.

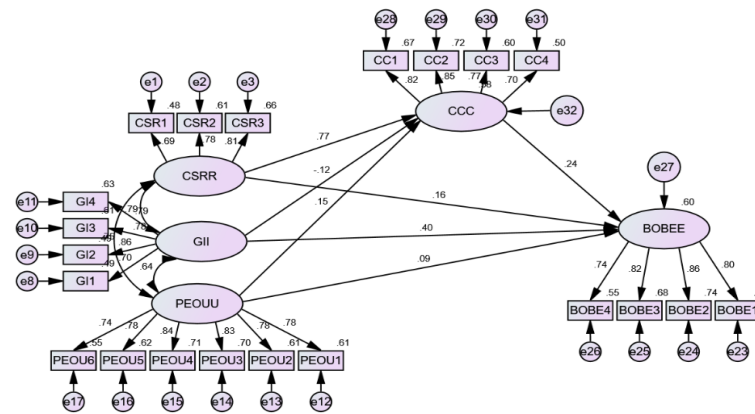


Figure 3: Path Analysis

All the three independent variables i.e. PEOU, CSR and GI had significant positive relationships with BE (0.104, $P=0.080$), (0.194, $P=0.006$) and (0.150, $P=0.000$) respectively. Hence H1a, H1b and H1c were accepted showing that BE is increased by CSR, PEOU and GI. Similarly H2, H3 and H4 were also accepted as the results showed that PEOU, CSR and GI had positive relationships with CC (0.115, $P=0.071$), (0.486, $P=0.000$) and (0.150, $P=0.055$) respectively, showing that CC increased by PEOU, CSR and GI each. As for as H5 was concerned the results showed that CC had significant positive relationship with BE (0.255, $P=0.000$) which revealed that showing that BE was increased by CC. Results are shown in table 5 below.

Table 5: Standardized Regression Weights - (Direct Effects)

	Structural Paths	St.Regession Coeffi- cient	P-Value	Results
H1a	PEOU BE	0.104	0.08	Accepted
H1b	CSR BE	0.194	0.006	Accepted
H1c	GI BE	0.15	0	Accepted
H2	PEOU CC	0.115	0.071	Accepted
H3	CSR CC	0.486	0	Accepted
H4	GI CC	0.15	0.055	Accepted
H5	CC BE	0.255	0	Accepted

3.4 Mediation Analysis

Next mediation analysis was performed with AMOS-24 by utilizing bootstrapping technique, which is a technique of re-sampling in which data obtained from the actual sample is replaced. SEM requires large samples for improving the quality of this estimate and by this technique, sample was enhanced to 5000. Moreover, AMOS is characterized to

simultaneously estimate direct, indirect and mediating effects. Significance value that is two-tailed by bootstrapping showed significance-level of indirect, direct and total-effect simultaneously. Only standardized effect measured for examination while using AMOS. To gauge the increase and decrease in total effect value of direct effect is equated with the value of total effect.

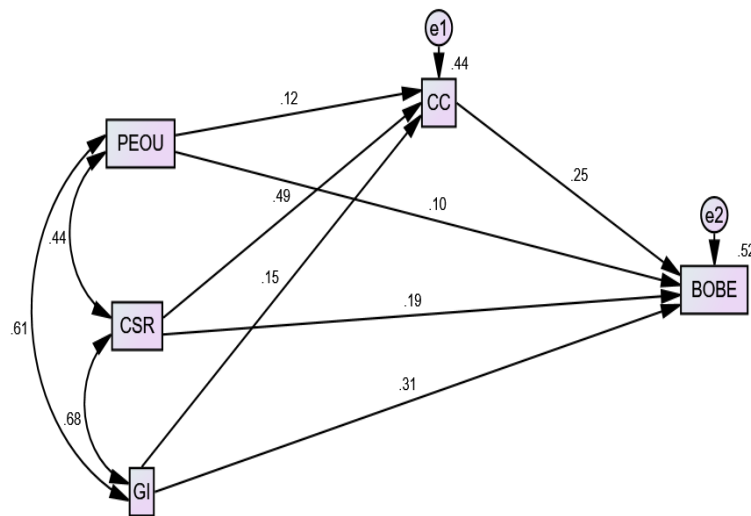


Figure 4: Mediation Analysis

Table 6: Standardized Direct, Indirect and Total Effects

Hypotheses	S. Total Effect		S. Direct effect		S. Indirect Effect		Results
	Coefficient	P-Value	Coefficient	P-Value	Coefficient	P-Value	
GI⇒ CC ⇒ BE	0.457	0	0.314	0.001	0.142	0	P. Media- tion
PEOU⇒ CC ⇒ BE	0.221	0.007	0.109	0.145	0.112	0.046	No Me- diation
CSR⇒ CC ⇒ BE	0.361	0	0.197	0.022	0.165	0	P. Media- tion

Apparently from the findings of direct effect of GI ⇒ BE that 34 percent variation in BE occurred owing to GI and once CC put in between the path the effect on BE displayed was 31 percent. So, CC significantly but partially mediates the relationship between GIBE as the association between them was reduced nonetheless it remained significant and bootstrapping two tailed significance value was less than 0.05 that specified that indirect effect in the research model was significant besides partial-mediation exist therefore H8a is accepted.

On the other hand, from the findings of direct effect of PEOU \Rightarrow BE that 11% variation in BE occurred owing to PEOU and once CC put in between the path the effect on BE displayed no change and remained 11%. So, CC did not mediate the relationship between PEOU & BE as the association between them remained unchanged and although bootstrapping two tailed significance value was less than 0.05 that specified that indirect effect in the research model is significant besides that no mediation existed therefore H8b is accepted.

The findings revealed that the third variable's direct effect CSR \Rightarrow BE caused 21% variation in BE and once CC put in between the path the effect on BE reduced to 20%. So, CC significantly but partially mediated the relationship between CSRBE as the association between them was reduced nonetheless it remained significant and bootstrapping two tailed significance value was less than 0.05 that specified that indirect effect in the research model is significant so partial-mediation existed therefore H8c is accepted.

3.5 Moderation Analysis

Later, moderation is checked. First of all, model fit of the structural models was attained and then the next step is checking of the moderation effects of IV mentioned in H9a, H9b and H9c. In these hypotheses an effort was done to find out that whether an increase in IV would strengthen the three positive relationships between CSR BE, PEOU BE and GI BE. In order to check the separate interaction effect of CSR IV, PEOU IV and GI BIV on BE, the author used the standardized values of CSR, PEOU, GI and IV in the SPSS and computed the interaction variables (CSR_x_IV), (GI_x_IV) and (PEOU_x_IV) separately. The author checked the moderation effect in AMOS. Significant results were attained and then graphs in Stats Tools Package suggested by [Lowry & Gaskin \(2014\)](#) by using 2-way interaction were drawn. Next step was plotting the values of z-score standardized regression.

Table 7: SEM (AMOS) Moderation

	Ind. Variable	Mod Variable	Interaction Effect
CSR	0.18	0.43	0.19
PEOU	0.42	0.6	0.21
GI	0.41	0.53	-0.12

To test H9a, the same process was repeated in case of PEOU (PEOU_x_IV), it proposed that an increase in IV would strengthen the positive relationship between PEOU and BE and the results brought forward that IV would dampen the positive relationship between PEOU and BE (Figure 5).

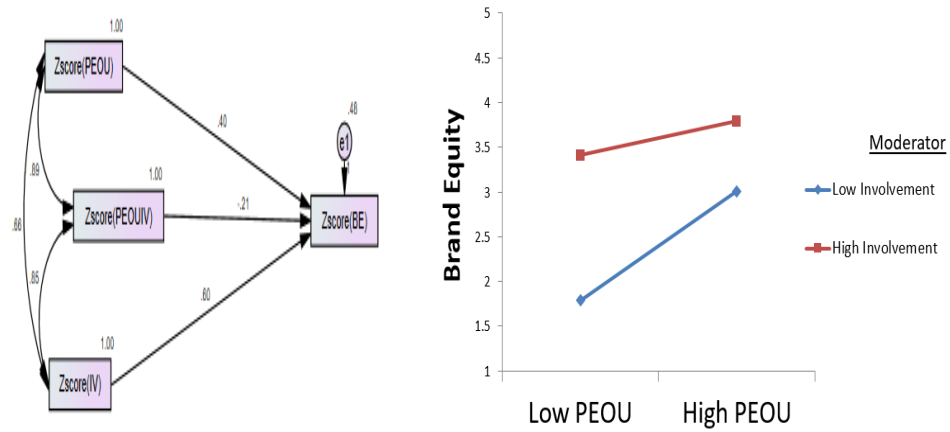


Figure 5: Moderation Analysis PEOU, BE, IN

Further H9b was checked that whether an increase in IV would strengthen the positive relationship between CSR and BE, and the results revealed that IV would strengthen the positive relationship between CSR and BE (Figure 6).

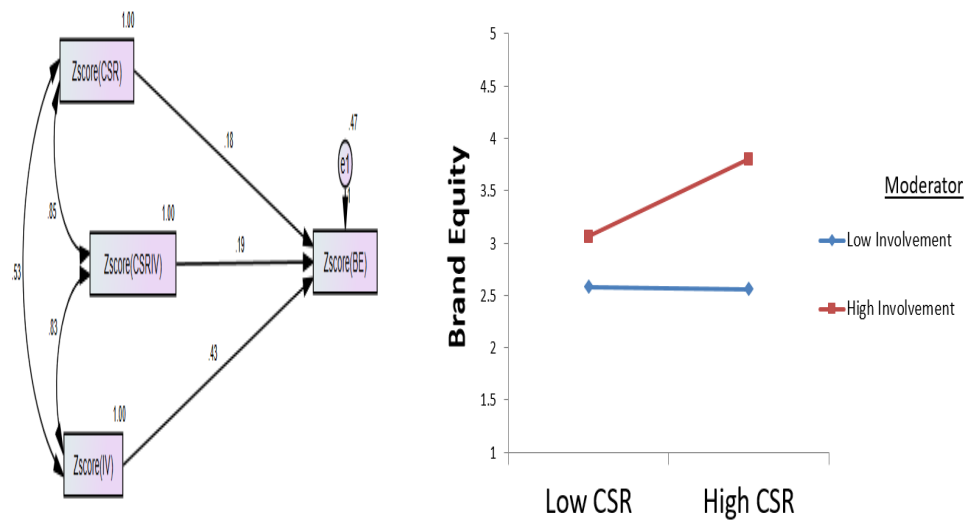


Figure 6: Moderation Analysis CSR, BE, IN

Again in H9c it was checked that whether an increase in IV would strengthen the positive relationship between GI and BE however the results revealed that instead of strengthening, IV would dampen the positive relationship between GI and BE (Figure 7).

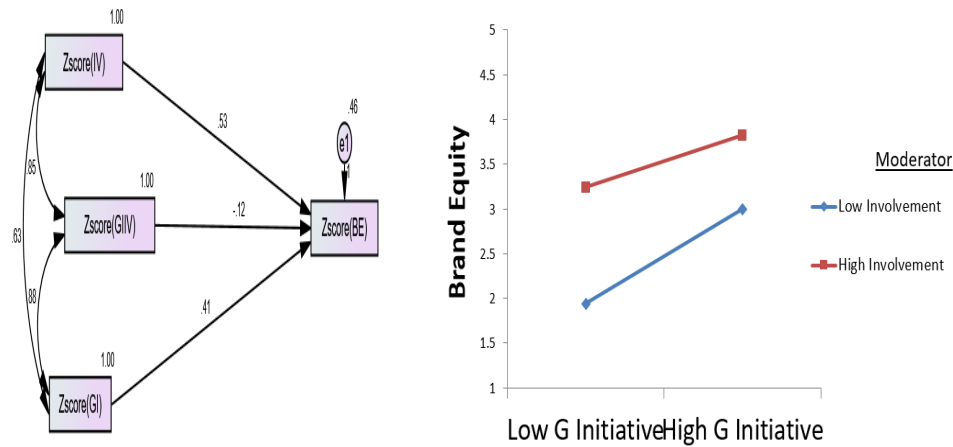


Figure 7: Moderation Analysis GI, BE, IN

4 Discussion, Conclusion and Implications

4.1 Discussion

This research focuses on the impact of CSR, GI, PEOU and CC for creating BE. The findings stated that all the hypotheses based on direct relationships were accepted. PEOU has positive influence on BE of the restaurants. Customers feel more confident in going to those fast-food restaurants that use modern technology as it provides ease both for customers and brands. Furthermore, the results are also aligned with the earlier research (Alalwan, 2020; Dwivedi et al., 2017). The survey findings also showed that organizations, when using modern technology, feel more confident in serving their customers, especially when involving their customers during the process of change which enhances their brand experiences. The results are in line with the earlier research of Cambra-Fierro et al. (2018) that stated the organization's chance to involve their customers enhances the mutual benefits of BE and customer satisfaction.

The findings showing that CSR positively influences the CC of the restaurants, revealed customers feel more attraction for those organizations, especially in the restaurant industry, that is efficiently and effectively fulfilling their social responsibility. The findings supported the studies of Biggemann et al. (2014) and Simpson et al. (2020) by showing that CSR has an important role in increasing BE (Lii & Lee, 2012).

The findings that the restaurants' GI positively influences CC, suggested that organizations tend to take GI by adopting eco-friendly practices in their operations to maximize their benefits by grabbing the attention of their customers in terms of retaining and sustaining them. It is aligned with the earlier research of Wysocki, 2021) which showed that organizations adopt environment-friendly practices for the maximization of their profit. H5 proposed that CC positively influences BE among its customers. The results revealed that if the organizations tend to explore and examine the CC while asking their customers IV, such practices and policies enhance the BE among their customers (Von Wallpach et al., 2017; Zhang et al., 2015). The findings of mediation analyses exhibited, that customer tends

towards those restaurants that highly encourage CC while implementing CSR practices, the findings are aligned with the findings of (Raza et al., 2020). CC second mediation findings regarding GI and BE, suggested that that customer tends to engage with those brands that pay special attention towards incorporating GI thus, it enhances their BE, which is in accordance with the earlier research of (Gohary et al., 2016).

The moderation analyses revealed that customer IEnhanced BE in case of CSR but it seemed to dampen the relationships in case of PEOU and GI. This may be culture-specific and customers in a developing country like Pakistan may act as a resisting factor while adopting change to bring efficiency and ease. Similarly, due to the low literacy rate of Pakistan, the normal customers may fail to identify the importance of GI taken by the fast-food restaurant for the welfare of the society.

4.2 Conclusion

In this competitive modern time, performance of an organization is now not only simply consisting of marketing products or services. To remain successful in this contemporary market, it has become a distinctive and permanent feature of brands to exceed customer expectations for making their experience of shopping extraordinary. The study's findings emphasized that managers of these restaurants should direct their efforts toward CSR activities by taking GI. Keeping in view the objective of improving their company's corporate social performance, is not only for their general organizational progress but also contributes to the betterment of society at large. The findings conclude that by making technology easy to use, by taking GI and focusing on CSR activities, they can gain direct benefits for their organizations by enhancing BE.

4.3 Limitations and Future Research Directions

This study has many contributions but it also has some limitations too that may pave ways for future researchers to explore. The model's explanatory power in the case of CSR was 16%, in the case of GI it was 40%, whereas in the case of PEOU it was almost negligible, showing the fact that there must be more variables that may be involved in this model for enhancing the likelihood of BE in future models. By the inclusion of few more variables in this model, the predictive power will be enhanced. This study has applied a convenient sampling technique so there may be a chance of overestimating some demographic groups, hence the results must be interpreted with care. Future research must be done using some probability sampling technique from different cities of the country to gain generalizability. This research has been done with restaurants; however, similar research models may be checked using other service or other manufacturing industries. Moreover, this model may be further extended for studying customer behavior outcomes like word of mouth and purchase intention. Future researchers may also consider the influences that gender, religion, and education have on these particular relationships. Qualitative research must be done to understand the relationships as CSR and BE are complex concepts. It will also be interesting to explore what could happen if organizations have socially irresponsible behavior.

4.4 Implications and Suggestions

There are significant practical implications of this research both for theory as well as for people. As far as theoretical implications are concerned, current research emphasizes the effect of CSR and GI in generating BE in the restaurants of Pakistan. It means that when the organizations are committed to CSR and take GI by concentrating on CC, this enables them to make purposeful associations with the customers. Such Customers become willing to back up companies by showing encouraging attitudes. While participating in CSR by taking the GI to give the general impression that they are giving more importance to the philanthropic effort, customers' benefit is significant. Hence, through the branding process, they communicate reliably with the customer, which finally takes them to achieve BE. Although PEOU of technology is found not to have any significant relationship with BE yet through CC and customer IN it becomes substantial and positive.

Similarly, mediation of CC and moderation of IN strengthen CSR activities GI, as customers are motivated by this to contribute to the restaurant's communication rules and give customers a chance to share beneficial information for the quality improvement of the products and/or services. CSR of a restaurant provides customers a foundation to directly report to it, which enhances customer's self-respect and drives the customers to cross boundaries of behavior. Additionally, social identity theory strengthens the power of the ethical value-based marketing model in defining the relationship among GI, PEOU, CSR, CC, and IN. The current study also proves that the organizations that comprehend their customers' wants and motivate them by involving them in CC, their BE enhances. CSR may be described in three words – strategic, altruistic, and ethical. It is giving value and respect without harming the environment, community, marketplace, and workplace. This establishes the restaurant's goodwill which generates BE and adds to the restaurant's reputation. Therefore, restaurants' CSR-related recognition is more robust than any other.

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