Integrated perspective of eco-innovation, green branding, and sustainable product: a case of an emerging economy

Wang Jinliang, Ka Yin Chau, Fahimeh Baei, Massoud Moslehpour, Khanh-Linh Nguyen & Tran Thai Ha Nguyen

Published online: 10 Jul 2023.

Submit your article to this journal ✎

Article views: 191

View related articles

View Crossmark data

Routledge
Taylor & Francis Group

Integrated perspective of eco-innovation, green branding, and sustainable product: a case of an emerging economy

Wang Jinliang[a,b] (ID), Ka Yin Chau[b] (ID), Fahimeh Baei[c] (ID), Massoud Moslehpour[d,e] (ID), Khanh-Linh Nguyen[f] (ID) and Tran Thai Ha Nguyen[g] (ID)

[a]School of management Guangdong, University of science and technology, Dongguan, Guangdong Province, China; [b]Faculty of Business, City University of Macau, Taipa, Macau; [c]Department of Business Administration, Young Researchers and Elite Club, Sari Branch, Islamic Azad University, Mazandaran, Iran; [d]Department of Business Administration, Asia University, Taichung, Taiwan; [e]Department of Management, California State University, San Bernardino, CA, USA; [f]School of Business and Management, RMIT International University, Ho Chi Minh City, Vietnam; [g]Faculty of Finance and Banking, Van Lang University, Ho Chi Minh City, Vietnam

ABSTRACT

Climate complexities and environmental problems not only brought changes in organizational practices but also changed the consumer purchasing pattern. Consumers nowadays have become more cautious regarding the consumption pattern of firms due to ecological footprints. This increased awareness influences their buying decisions pattern which leads to the increased demand of sustainable products. Eco-innovation, in this regard, appears to be an effective tool that helps firms to incorporate ecological constraints into business practices in order to develop green branding which ultimately leads to green loyalty. Drawing on literature from existing literature, the study developed a complex framework and established the plausible relationship among outlined constructs. By utilizing PLS methodology, measurement and structural models were assessed. Results echo that eco-innovation and green branding lead to sustainable product. Moreover, evidence also indicate that eco-innovation, and sustainability positively influence green loyalty. Based on the evidence, study proposed some implications which may be helpful for policy makers to maintain the sustainability of a firm.

1. Introduction

In past few decades, sustainability as a concept has been emerged all over the globe which truly be the reason of creating awareness of environmental situation in general public. Consumer's purchase decisions and intentions, thereby, are likely to be persuaded by the increased awareness and their inclination towards sustainable

CONTACT Massoud Moslehpour ✉ writetodrm@gmail.com

consumption (Loučanová et al., 2022). At the same time, organizations are also focusing on sustainable practices due to several factors such as strict environmental regulations, pressure from consumers to safeguard environment and the own interest to achieve green agenda. To promote product, firms are required to build an understanding regarding customer preferences as each consumer has divergent preferences when it comes to the selection of different attributes of an ecological product. Thereby, it is imperative to look out the factors that explain that how consumers' awareness regarding sustainability can lead to green brand loyalty. It is also evident in literature due to severe environmental damaged and excessive consumption; consumers keenly find ways to stick to the brands which offers sustainable product. Thus, for organization they are obliged to adopt eco-innovation approach because it is believed that the more the company is innovative, the more it is environmentally friendly in the eyes of consumer. This ultimately urges consumers to show the loyalty to the brands who offer sustainable products and services (Moslehpour et al., 2022a).

Customers' loyalty is a crucial output of services/products providers worldwide. Customers' high loyalty is a powerful tool for companies' growth and survival in today's competitive world. The growth rate of customers' loyalty leads to predicting companies' income (Kaur et al., 2020; Kurniawan et al., 2022). In today's competitive market, the marketing paradigm is changed from product focus to electronic service to achieve a sales spurt. According to this, the competitors are just a few clicks away from customers through electronic service (Li et al., 2020). The attraction of new customers toward using the electronic services is expensive, and if the customers are not loyal and their buying does not regularly and frequently, the profitability will be far from the expectation. Companies' investment in expanding electronic services will be wasted. Therefore, improving customer loyalty has become a complicated and risky process for managers of global industries, ensuring the companies' survival (Atulkar, 2020; Thitinan & Chankoson Khunanan, 2022). Accordingly, the main aim of this study is to provide managerially meaningful and generalizable empirical research by answering the following questions: What factors can increase customers' brand loyalty? To what extent can these factors influence customers' brand loyalty?

Loyalty is a commitment from the desirable attitude toward a compatible purchase from a specific brand. Brand personality is based on creating a specific image in customers' minds and is named by researchers as a crucial factor in percept the process of brand choice by customers and improving customers' loyalty to services and products (Le, 2021; Sriyakul et al., 2022). Brand personality is described as a set of human characteristics related to a brand. Past researchers asserted that the brand personality eases identifying a brand among its competitors within a product class and improves the personal meaning of the brand to the customer. Brand personality enables customers to classify themselves with a brand, state their self-concept, and obtain symbolic benefits via brand possession (Mostafa & Kasamani, 2020; Van Hoa et al., 2022). Industries specialists stated that brand personality affects customers' judgments and priorities to choose a brand and also affects the advantages related to brand equity. The brand personality has beneficial advantages to customers, and specialists believe that when a customer recognizes and likes a brand personality, it reduces the

processing and retrieval of information. The brand personality helps the customers' choices and eases the complicated purchase process (Fernandes & Moreira, 2019; Shibli et al., 2021).

Past researchers believed that when the brand personality facilitates the customers to interact with firms via electronic services, they are expected to be impressed by the brand personality and are motivated to retain their relations with the brand and have improved loyalty (Hartani et al., 2021; Shanahan et al., 2019). Quality is determined as a long-term achievement in E-Service. Electronic service quality is related to customers' interaction and engagement level with electronic services, and it is based on emotional, reliability, and functional benefit, which originates from individuals' perception and recognition of the brand personality. The electronic platform is a new challenge to turn ordinary customers into loyal customers and is a critical source of competitive advantages (Liu et al., 2022; Ojogiwa, 2021).

In emerging economies, the rapid increases in economic development affects the consumption of natural resources which deteriorate the environmental quality at faster pace. Various scholars have highlighted the scarcity of literature in the area of green branding and e-service quality in emerging economies (Rehman et al., 2016; Safari et al., 2018). Moreover, literature also reveals that there is definitely a talk about green brand concept, however, little attention has been drawn to comprehend the concept from consumers' point of view. Also Selecting Iran as a study sample, it should be understood that Iran, being a Muslim country highly, follows traditions and promotes environmental protection and natural resource conservation due to Islamic values. The reason is that Islam shows greater emphasis on environment and teaches human that the protection of environment is a religious and social obligation, hence, can't be neglected or ignored. Thereby, it is interesting to scrutinized the outlined constructs in the region which is rich in Islamic culture (Anfinsen et al., 2019; Wirsbinna & Grega, 2021).

The study, thereby, aims to comprehend e-customers perceptions about the E-Service quality and check the influences of these perceptions on customers' attitudes, behavioral intentions, and loyalty toward the brand. One of its objectives is also to check the impacts of eco-innovation and sustainability on green brand loyalty. Brand personality has been criticized for its unclear organization and theoretical foundation. Therefore, to cover this gap, dependent on concepts of brand personality and its definitions in various research, it integrated with E-SERVQUAL providing a new conceptual framework to encourage patrons' brand loyalty as a new contribution to the current study. Iran Insurance serves as the case study for the present research. Iran Insurance Company (IIC) is the only corporation owned and controlled by the state and is among the top 100 brands circulating in Iran. This corporation offers its clients a wide variety of electrical and technological services. Iran Insurance Company is considered the grand company in the share market because it has more than 34 percent share in the nation's insurance market. Iran Insurance Company also controls the Islamic Republic of Iran's whole economic and financial system. Iran Insurance Company has accrued losses over the last eight years and hasn't been profitable due to the lack of customer intention to continue with this company (Jermsittiparsert, 2021).

As a practical contribution, the current study's findings may offer insightful knowledge into the awareness and recognition of experts, researchers, and practitioners in various industries associated with branding and brand personality. Its findings provide a guideline to particularly the administrators of the insurance industry and may encourage client loyalty in electronic services. By increasing consumer loyalty to their goods and ensuring the survival and growth of the organizations connected to the insurance business, the results are also important for enhancing brand equity. Due to the socioeconomic parallels across industries in transition economies, they can use the research's findings to boost the insurance sectors and, ultimately, the nation's economic growth. The study findings are significant to the general businesses dealing with brands and insurance companies as well for getting insights into how they can improve and maintain brand loyalty with the integration of eco-innovation and implementation of sustainability practices.

The current paper comprises several parts as described below: The second part presents the review of the existing literature for establishing hypotheses among eco-innovation, sustainable brand image, customers engagement motivation, customers engagement, brand equity, eco-innovation, sustainability, and green brand loyalty. The third portion deals with the methodology the authors applied to gather data for the variables and analyze the relationship among these factors. Afterward, the research results are discussed with support from previous studies. Later on, the study implications, conclusion, and limitations are given.

2. Literature review and hypotheses

2.1. Theoretical grounding

Brand personality is a unique feature that the consumer perceives and figures out the customers' attitude and behavior toward companies' products and services (Coelho et al., 2020). Because specific patterns and programs to make brand personality have not been provided by past research, in this study, by using the explained concepts about brand personality, a conceptual model is being followed to facilitate and accelerate companies' specialists' process to achieve true brand personality according to their companies brand. There are three sources from which brand personality originates. The first is consumers' reliance on the brand. Second is the impression a business wants to leave with customers. Third is the product features or service quality. These initiatives support an ongoing association among the client, brand, and company. Customers' brand loyalty is the definite result of applying brand personality concepts which play a prominent role in achieving organizational goals, improving the customers' perceived value, building a strong and trustful relationship with consumers, and motivating them to keep purchasing (Llanos-Herrera & Merigo, 2019).

They were creating an infrastructure to stay in the mind of the target community and creating a complete image of the brand in the customer's mind, and strengthening the brand's image. Creating unique, exciting, and moral imagination toward a brand is the most crucial concept by researchers used to explain brand personality making (Bairrada et al., 2019). Accordingly, based on the definition of brand image and equity, they are introduced as constructions of the proposed model in this

research. Earlier experiences of the customers in interaction with the brand and brand power in recalling these experiences, attracting the attention of the target customers through communication techniques like customer engagement by E-Services, cause create brand personality. Customer engagement is introduced as a construction since having up-to-date and friendly relationships and positive brand trends create brand personality (Peco-Torres et al., 2020; Sadiq et al., 2023).

Recently, many scholars have emphasized the need to check the theoretical concepts, views, and perspectives that can explain the relationships for consumer-brand interaction, particularly in electronic or technological services. Based on brand personality, quality in terms of customers' perception means reliability and confidence toward electronic service. So, electronic service quality as construction is introduced in this conceptual model to investigate the final result of brand personality: brand loyalty (Moslehpour et al., 2022b; Phuoc et al., 2022).

Brand loyalty is the customer's intentions and capacity to continue purchasing products or services from the same brand. In the words of Mao et al. (2020), the customer's loyalty is divided into behavioral loyalty, meaning the customer's tendency to repurchase, and attitude, meaning the customer's perceptions, recognition, and definitions of products and services. Loyalty by stimulating customers' emotions causes converting them into active partners in their brand relationships. Loyalty as a concept indicates the repeat purchases of a consumer. It shows that how satisfied a consumer is which further indicates the consistency in future purchases. This implies that factors associated with influential scenarios and marketing efforts have potential to bring change in consumer brand in order to support the brand. Few scholars also proclaim that brand loyalty means consistent satisfaction which leads to repeated purchases.

It is argued by scholars that brand equity displays the set of behaviours to all kind of stakeholders. Brand equity basically helps brand to make more profitable in contrast to non-branded products. Brand equity adds value to the product/services by considering feelings of consumers (Chien et al., 2021; Severi & Ling, 2013). Besides that, it also focuses on price, market share to main the business sustainability. According to Kotler et al. (2018), brand equity is an intangible asset hence it contains both type of values; financial and psychological. Scholars argue that brand equity is made of five driven elements; brand asset, brand associations, brand awareness, perceived quality and brand loyalty.

Brand image represents the consumer feeling towards brand. This image reflects on the thought process of consumer which is obtained when consumer gains information and knowledge about brand. A good brand image has the potential to unleash the confidence of consumers which further motivates them to consider the brand for shopping. Image of a brand can be built on three basic principles; strength, uniqueness and the memory of consumer. This is the reason; strong brand image helps organizations to earn competitive edge and maintain the reputation for a longer period (Liu et al., 2022; Severi & Ling, 2013).

E-Services are regarded as interactive, internet-based, and content-based consumer services. E-service quality strives to improve information access for decision-making, boost e-service reuse, and strengthen the relationship between customers and service

providers. The most well-known methodology to evaluate website quality and customer loyalty is the E-SERVQUAL model, which takes efficiency, accomplishment, privacy, and system availability into account (Kaya et al., 2019). As a result, in this study, the features of E-SERVQUAL are divided into three categories: information quality (the user's perception of the information generated by a system), system quality (that is not just a characteristic of the data processing system itself but also a performance quality based on engineering), and the quality of service. The level of service indicates how widely the website is used (Sasono et al., 2021).

Sustainability is comprised of three ultimate responsibilities; economic, social and environmental. It also makes the perfect blend of profit, people and planet which helps firms to build a business culture and strategy. As in present environment, the environmental damages have been on rise, thereby, sustainability has become the primary concern of practitioners and stakeholders. Organizations, now, show more attention to the core of green agenda in order to build the sustainable brand. In past decades, the world has witnessed that how top brands reshaped their vision in order to attain the status of green brand. Most of the brand are following the same footstep and tagging sustainability into their practices so that they can sharpen their parameter of corporate environmentalism. This also become necessary due to consumer changing patterns and for that they have no other option but opting for green agenda in order to be acceptable at global level (Moslehpour et al., 2022a; Papista et al., 2018).

2.2. Customer engagement motivation (CEM) and customer engagement (CE)

Companies are increasingly looking for customer interaction to engage them in their brand. Ou et al. (2020), mentioned that customer engagement strongly influences the intentions and decision-making of consumers in particular areas like the selection of a brand name, company, and products. The four main categories are used to classify the customer engagement motivations of media companies: 1. Recreation and fun, including pleasure, enjoyment, and relaxation, activities that allow one to escape reality, entertainment, and passing the time, 2. Coalition and social interactions include help-seeking, identity-related interactions, personality traits, social pressures, and social difficulties. 3. Information includes supervision and review, awareness and knowledge, information gleaned from prior purchases, and inspirations. 4. Individual cognition contains individual views, identity, introduction, faith, and confidence. The brand personality explains that the quadruple category of customer engagement motivation has originated from brand personality (Tian et al., 2021). Up until now, customer engagement has been the focus of the research. Contrary to this, customer engagement motivation has not been used in operations that treat engagement as a fictitious or latent structure or design. Ou et al. (2020) examine the relationship between motivation, customer engagement, and brand loyalty. According to the study findings, motivation positively contributes to customer engagement. At the same time, customer engagement enhances the brand value in the marketplace. So, if the customers have high motivation and high engagement,

there is an increase in brand equity. Based on the above-mentioned literary discussions, the following hypothesis is put:

H1: Customer engagement motivation has a positive relation to customer engagement.

H2: Customer engagement has a positive relation to green brand equity.

2.3. Green brand image (BI) and customer engagement

The brand image goes beyond reputation and identification to capture customers' mental impression of the business (Rasool et al., 2020). According to Hamilton (2022), Brand perception can be broken down into three key aspects: cognitive perceptions of the brand, emotional perceptions, and sensory perceptions. According to a brand anthropology approach, the brand personality is a set of brand-related human qualities. The customers must have positive and clear thinking about the brand image to give the brand a personality and make it well-known in their minds. Customers select a brand based on the mental image of the brand because it will satisfy their needs and encourage them to utilize and engage with it (Moslehpour et al., 2020). Authors have addressed the effectiveness of brand image on customer mental engagement in the previously conducted literature in diverse ways. Yunika (2022) investigates the relationship between customer satisfaction, brand image, and customer engagement. The information for customer satisfaction, brand image, and customer engagement was acquired from the 217 customers of Bank Syariah Indonesia in Padang. The empirical information reveals that the brand image significantly contributes to customers' engagement. Quynh (2019) examines the influences of brand image on customer engagement. The study posits that the degree to which consumers value a specific brand depends on how well they get along with the company's representatives and use its goods and services. When the company's brand image among customers improves, other consumers are similarly impressed, drawn to it, and engage with it more frequently. That is why the following hypothesis can be placed:

H3: Brand image has a positive relation to customer engagement.

2.4. Green brand equity (GBE) and green brand loyalty

The brand equity model, which combines behavioral and attitudinal factors, is used in this study. It includes brand awareness and brand knowledge, mental attachment with the brand, perceived quality of brand (which measures how well a brand performs in comparison to consumer expectations), brand loyalty, and perceived value in relation to the product or service benefits, which determines the brand's personality competence and its efficiency (Ebrahim, 2020). By increasing brand equity, which increases business leverage and competitive advantages, brand equity creates value for the company by increasing customer satisfaction and boosting customers' confidence to repurchase the good or service (Kataria & Saini, 2019). The study posits that brand equity and customer confidence are the distinctive foundations for consumer behavior-based loyalty to products and services. The study conducted by Šerić and Gil-Saura (2019) examines the influences of brand equity on brand loyalty. The study

claims that different brands inspire Customers in the market. They become impressed and brand loyal if they notice that many consumers in the market are aware of, associated with, and enjoying the brand. Hence, brand equity contributes to brand loyalty. On the basis of the above literature, the following hypothesis is placed:

H4: Brand equity has a positive relation to green brand loyalty.

2.5. Electronic service quality and green brand image

Cognitive perception is developed by either direct or indirect interactions with product attributes, such as non-commodity attributes (like pricing and number of consumers), utilitarian benefits (like problem-solving and security advantages), and symbolic attributes (like social credibility and surety). Emotional perceptions of e-service quality include joy, excitement, and pleasure. The customer's higher perceptions regarding the e-service quality and its practical benefits define the brand image (Suherman et al., 2021). Andrew (2019) claims that a brand corporation can more effectively engage with customers and influence their impressions if they use electronic technologies to promote their goods and services. The brand's image among customers improves due to the improvement in e-service quality. The literary workout of Wilis and Nurwulandari (2020) examines the relationship between e-service quality, e-trust, price, and brand image. The data for the e-service quality, e-trust, price, and brand image was collected through the non-probability sampling method from 182 respondents. SEM analytical technique with AMOS was applied for the empirical analysis of the factors nexus. The findings showed that the change in the e-service quality brings a significant proportional change in brand image. The improving e-service quality improves the brand image. Based on the author's views about e-service quality and brand image, it can be said:

H5: E-Service quality has a positive relation to green brand image.

2.6. Electronic service quality and customer engagement

With the improvement in the customer's perceptions and beliefs, customer engagement increases, and company-customer interaction is improved. This enhances the customer's satisfaction with the company, its products, and its services. So, the customer's loyalty increases (EzuRizzy & Ademe, 2022). Competitors can use customer involvement to their advantage by identifying, communicating, and meeting client demands (VO et al., 2019). The literary workout of Sukendia and Harianto (2021) throws light on the association between e-service quality and customer engagement. The study examines the e-service quality in website design, reliability, fulfillment, customer service, and privacy matters. The data for the factors like e-service quality and customer engagement were collected from 205 respondents who had been involved in transactions through the B2C e-commerce website in the previous half year. The PLS analytical technique was employed to check the hypotheses. The research findings confirm that e-service quality influences customers' cognitive and emotional perceptions and enhances customer engagement. Similarly, Simbolon and Yanti (2021)

analyze the nexus between e-service quality, e-satisfaction, and customer engagement. Through personally distributed questionnaires, the data for e-service quality, e-satisfaction, and customer engagement were acquired from 100 students of Bina Nusantara University (Binus). The results revealed that better quality e-services provide high customer satisfaction and motivate them for better engagement with the company. So, we can hypothesize:

H6: E-Service quality has a positive relation to customer engagement.

2.7. Electronic service quality and green brand equity

The study conducted by Saputra and Setyadi (2020) explores e-service quality, customer satisfaction, trust, customer loyalty, and brand equity. The data for the factors like -service quality, customer satisfaction, trust, customer loyalty, and brand equity was acquired from Indonesia. For analyzing the relationship among factors, the SEM technique was applied. The results stated that the companies were rendering electronic services to make dealings with the brand and take care of the quality of the customer services, improve customer satisfaction, generate customer trust and loyalty, and thus, encourage brand equity. Vo et al. (2020) examine how e-service quality impacts brand equity. When engaging with customers online, brand organizations always pay attention to the quality of their services. The brand gains popularity among customers in e-commerce as e-service quality rises. Hence, the brand equity is getting high. Demir et al. (2021), check the direct and indirect consequences of e-service quality on users' satisfaction, perceived value, and willingness to pay for online meeting platforms in the educational sector. The empirical information was acquired from 200 lecturers of a private university in the Kurdistan Region of Iraq. With the help of SEM methods, the study revealed a significant role of e-service quality in brand equity. In the light of above literature, the following hypothesis is put:

H7: E-Service quality has a positive relation to brand equity.

2.8. Eco-innovation (EIN) and green brand loyalty (GBL)

Eco-innovation is a novel business concept that encourages sustainability throughout the product's lifecycle while improving the company's overall performance and enhancing competitiveness. Environmental issues like different forms of pollution have become a major concern of the general public. Business practices are a major cause of environmental pollution. The firms that take care of eco-innovation like using renewable energy, proper disposal of wastes, recycling of wastes, water management, clean manufacturing, and improvement in other management systems satisfy the public's concerns and gain their trust. As a result, the customer's loyalty to the brand improves (Sharma et al., 2022). Loučanová et al. (2022) examine the role of eco-innovation in brand loyalty. The data for the factors and their relationship was acquired from Slovakia. The study reveals that when a firm discloses its efforts to execute eco-innovation and its fruitfulness, environmental awareness individuals prefer to interact with these firms for making purchases. Kinnunen et al. (2022), also sheds

light on eco-innovation and brand loyalty. This study posits that eco-innovation and its disclosure not only attract new customers but assist in maintaining the customers' loyalty and retention with the same brand. Based on the above discussions, we can say:

H8: Eco-innovation has a positive relation to green brand loyalty.

2.9. Sustainability (SUS) and green brand loyalty (GBL)

The literary article of Tanveer et al. (2021), identifies the relationship of sustainability with brand loyalty. The data for business sustainability and brand loyalty was taken from a sample of 1500 customers who had multiple interactions with retailers' brands in Pakistan. An econometric technique like SEM with SPSS 24 was applied to analyze the data and construct the relations among factors. The article reveals that the firm's efforts to maintain business sustainability where the major focus is on social welfare and financial profits is the second motive of the firm, which is attractive among the customers. While the customers observe that the firm is conscious of the health and social welfare of the stakeholders, they get emotionally linked to the company and try to be loyal to the brand. Panda et al. (2020) analyze sustainability's impacts on brand loyalty. The data about the sustainability role of the brand was collected from 331 customers in e-commerce through questionnaires. The relation between sustainability and brand loyalty was analyzed with the SEM technique. The results showed that the brand firms with business sustainability have more loyal customers. Jung et al. (2020) state that the pursuit of sustainability encourages businesses to prioritize social welfare, the environment's productivity, and environmental protection in addition to their financial goals. Customers are more loyal to a brand because of the company's altruism and concern for society and the environment. The above discussion helps to build the following hypothesis.

H9: Sustainability has a positive relation to green brand loyalty.

3. Research methodology

3.1. Data collection

We employed the questionnaire-based survey method to evaluate the association between the proposed conceptual model variables and the hypothesis in this research. Because the core of this research was customers' brand loyalty, the respondents and practitioners in the survey were customers of Company Iran Insurance. With the cooperation of the employees of the Iran insurance company, face to face, we asked the customers who referred to the company to take part in this survey. Of the five hundred questionnaires that were answered, 116 questionnaires were removed because some of them were not using the insurance E-Service, and some questionnaires were not fully answered. In total, 384 complete and qualified questionnaires were extracted and analyzed, resulting in an acceptable response rate of 23.2%. Kline (2015) asserted sample size should be at least two hundred, or 5–10 cases per item in

Table 1. Demographics profile (sample = 384).

Dimension	Category	Frequency	Percentage (%)
Gender	Male	203	52.87
	Female	181	47.13
Age	18–25	33	8.60
	26–35	186	48.43
	Over 36	165	43.00
Level of education	Bachelor's degree and lower	17	4.43
	Master's degree	226	58.85
	Ph.D. and higher	141	36.72
E-service usage duration	1–6 months	72	18.75
	7–15 months	107	27.87
	16–25 month	93	24.22
	Over 26 months	112	29.16

Source: Authors' Tabulation.

structural equation modeling. The research consists of 40 measurement items, so the minor samples needed were (40 × 5=) 200. Therefore, the sample size needed to evaluate the conceptual model is proper for our sample. Most respondents were male (52.87%) and were between 26–35 (48.43%) years old. Table 1 shows the details of the respondents' demographic characteristics.

3.2. Measures and questionnaire administration

The survey questionnaire of this research consists of forty measurement items as a development instrument that adapted previously validated instruments (See scales and references in Table 2). A five-point Likert scale, from (1) 'strongly disagree' to (5) 'strongly agree,' was adapted for measurement items. Age, sex, level of customers' education, and E-Service usage duration include in the conceptual model as control variables because these characteristics may cause differences among respondents and their answers.

4. Data analysis and results

We employed structural equation modeling–variance-based method (SEM-VB) to analyze the survey data via running the Smart PLS 3 because PLS is based on minimizing the error terms and maximizing the R^2 values of the dependent construct (Ringle et al., 2015). PLS-SEM is also a modular method to estimate indicators and plan features for better orientation to multivariate models. It is a simple, extensible infrastructure (Hair et al., 2017). The PLS-SEM analytic process includes two stages (Hair et al., 2017). One is the measurement model to measure the reliability and validity of the measures, and the second is the structural model to measure the relationship strength between the constructs.

4.1. Measurement model

The current study has examined the convergent validity using item loadings and Average Variance Extracted (AVE). The item loadings should be higher than 0.50, and the AVE should be higher than 0.50. The results indicated that both the criteria

Table 2. Convergent validity.

Constructs	Items	Loadings	Alpha	CR	AVE
GBE	BE1	0.626	0.751	0.812	0.594
	BE2	0.865			
	BE3	0.802			
GBI	BI1	0.879	0.833	0.899	0.748
	BI2	0.858			
	BI3	0.858			
GBL	BL1	0.887	0.917	0.933	0.638
	BL10	0.725			
	BL2	0.647			
	BL3	0.817			
	BL4	0.774			
	BL5	0.914			
	BL6	0.719			
	BL8	0.869			
EC	CE1	0.912	0.785	0.875	0.701
	CE2	0.842			
	CE3	0.750			
CEM	CEM1	0.859	0.883	0.918	0.738
	CEM2	0.924			
	CEM3	0.890			
	CEM4	0.754			
EINN	EIN1	0.843	0.857	0.891	0.581
	EIN2	0.652			
	EIN3	0.868			
	EIN4	0.887			
	EIN5	0.627			
	EIN6	0.647			
E-SEQ	ESQ1	0.882	0.710	0.791	0.563
	ESQ2	0.653			
	ESQ3	0.696			
Sustainability	SUS1	0.763	0.841	0.883	0.559
	SUS2	0.831			
	SUS4	0.662			
	SUS6	0.661			
	SUS7	0.764			
	SUS8	0.790			

Source: Authors' Tabulation.

Table 3. Fornell and Larcker.

	GBE	GBI	GBL	CE	CEM	EIN	ESQ	SUS
GBE	0.771							
GBI	0.157	0.865						
GBL	0.368	0.406	0.799					
CE	0.245	0.475	0.442	0.837				
CEM	0.040	0.611	0.386	0.466	0.859			
EIN	0.326	0.520	0.696	0.692	0.434	0.762		
ESQ	0.277	0.420	0.472	0.410	0.388	0.542	0.750	
SUS	0.349	0.504	0.564	0.693	0.424	0.668	0.448	0.748

Source: Authors' Tabulation.

are fulfilled and exposed valid convergent validity. The reliability has also been exam-
ined using Alpha and composite reliability (CR). The CR and Alpha scores of all con-
structs should be higher than 0.70. The results indicated that the values are larger
than 0.70 and exposed valid reliability. These values are mentioned in Table 2.

The discriminant validity of the survey instruments is measured through Fornell
and Larcker, and cross-loadings are shown in Table 3 and Table 4, respectively. The
results indicated that the values that exposed the association among variables itself

Table 4. Cross-losings.

	GBE	GBI	GBL	CE	CEM	EIN	ESQ	SUS
BE1	**0.626**	0.160	0.234	0.171	0.087	0.224	0.188	0.292
BE2	**0.865**	0.098	0.336	0.228	−0.032	0.330	0.270	0.289
BE3	**0.802**	0.118	0.267	0.159	0.064	0.178	0.167	0.227
BI1	0.094	**0.879**	0.363	0.479	0.575	0.447	0.370	0.463
BI2	0.187	**0.858**	0.388	0.372	0.516	0.459	0.409	0.422
BI3	0.130	**0.858**	0.295	0.372	0.487	0.444	0.304	0.418
BL1	0.296	0.316	**0.887**	0.301	0.289	0.524	0.313	0.448
BL10	0.253	0.295	**0.725**	0.441	0.269	0.626	0.433	0.497
BL2	0.202	0.289	**0.647**	0.399	0.336	0.558	0.430	0.430
BL3	0.351	0.231	**0.817**	0.242	0.240	0.418	0.313	0.360
BL4	0.284	0.409	**0.774**	0.430	0.310	0.689	0.413	0.525
BL5	0.352	0.368	**0.914**	0.335	0.345	0.552	0.350	0.478
BL6	0.219	0.325	**0.719**	0.276	0.362	0.453	0.327	0.404
BL8	0.382	0.310	**0.869**	0.322	0.295	0.517	0.385	0.389
CE1	0.192	0.448	0.433	**0.912**	0.438	0.664	0.390	0.678
CE2	0.186	0.428	0.359	**0.842**	0.505	0.534	0.279	0.636
CE3	0.252	0.303	0.310	**0.750**	0.191	0.537	0.368	0.393
CEM1	0.047	0.507	0.249	0.340	**0.859**	0.302	0.311	0.323
CEM2	0.025	0.509	0.353	0.464	**0.924**	0.378	0.349	0.374
CEM3	0.112	0.675	0.428	0.484	**0.890**	0.467	0.383	0.473
CEM4	0.015	0.329	0.243	0.233	**0.754**	0.309	0.265	0.215
EIN1	0.237	0.363	0.644	0.388	0.354	**0.843**	0.448	0.475
EIN2	0.349	0.476	0.414	0.659	0.313	**0.652**	0.272	0.618
EIN3	0.242	0.428	0.619	0.378	0.356	**0.868**	0.535	0.480
EIN4	0.239	0.373	0.646	0.436	0.360	**0.887**	0.471	0.520
EIN5	0.235	0.407	0.340	0.804	0.279	**0.627**	0.339	0.506
EIN6	0.250	0.420	0.413	0.852	0.332	**0.647**	0.367	0.575
ESQ1	0.224	0.449	0.486	0.348	0.427	0.509	**0.882**	0.434
ESQ2	0.200	0.196	0.266	0.196	0.202	0.242	**0.653**	0.230
ESQ3	0.205	0.247	0.268	0.353	0.197	0.417	**0.696**	0.305
SUS1	0.217	0.327	0.452	0.365	0.240	0.384	0.299	**0.763**
SUS2	0.260	0.388	0.322	0.454	0.303	0.460	0.291	**0.831**
SUS4	0.369	0.354	0.367	0.332	0.193	0.308	0.281	**0.662**
SUS6	0.248	0.393	0.464	0.636	0.416	0.592	0.429	**0.661**
SUS7	0.246	0.410	0.449	0.758	0.429	0.642	0.378	**0.764**
SUS8	0.235	0.372	0.420	0.489	0.275	0.545	0.289	**0.790**

Source: Authors' Tabulation.

Table 5. Heterotrait Monotrait ratio.

	GBE	GBI	GBL	CE	CEM	EIN	ESQ	SUS
BE								
BI	0.223							
BL	0.471	0.454						
CE	0.347	0.576	0.506					
CEM	0.110	0.680	0.410	0.513				
EIN	0.443	0.637	0.742	0.541	0.483			
ESQ	0.436	0.553	0.600	0.584	0.491	0.708		
SUS	0.479	0.597	0.619	0.819	0.457	0.801	0.591	

Source: Authors' Tabulation.

were larger than the association with other constructs. These figures indicated valid discriminant validity.

In addition, Heterotrait Monotrait (HTMT) was also used to examine the discriminant validity. HTMT threshold is recommended under 0.85 (Kline, 2015) under and 0.90 (Teo & Noyes, 2011) by researchers. As shown in Table 5, the HTMT values of correlations between constructs are smaller than 0.85. Therefore, there is not a lack of discriminant validity for survey instruments in this research.

Table 6. Direct path analysis.

Relationships	Beta	Standard deviation	T statistics	p values
BE -> BL	0.136	0.054	2.506	0.013
BI -> CE	0.240	0.062	3.875	0.000
CE -> BE	0.158	0.076	2.084	0.038
CEM -> CE	0.235	0.062	3.791	0.000
EIN -> BL	0.554	0.061	9.097	0.000
ESQ -> BE	0.212	0.062	3.436	0.001
ESQ -> BI	0.420	0.047	8.976	0.000
ESQ -> CE	0.218	0.066	3.303	0.001
SUS -> BL	0.147	0.058	2.542	0.011

Source: Authors' Tabulation.
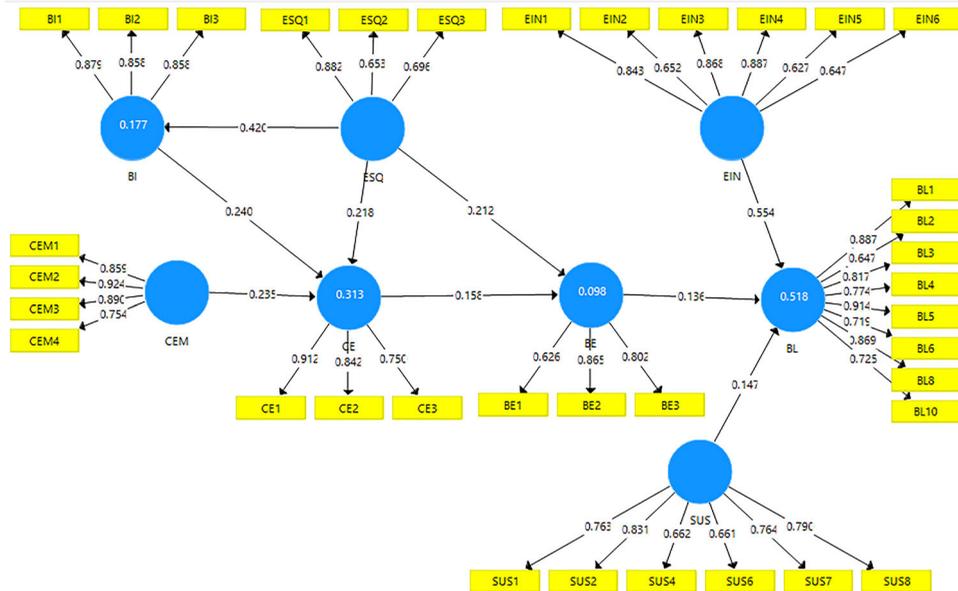
Figure 1. Measurement model.
Source: Authors' Tabulation and SmartPLS output.

4.2. Structural model

After evaluating the measurement model, the significance level of the proposed hypothesis in the conceptual model was measured through bootstrapping of five hundred re-samples. The details of the result are indicated in Table 6 and Figure 1. The results showed that customer engagement motivations, green brand image, and E-service quality positively influence customer engagement. According to the results, brand equity is positively influenced by customer engagement and E-service quality. The results also indicated that green brand equity, eco-innovation, and sustainability positively influence users' green brand loyalty.

The role of the mediators has not been measured as a hypothesis, so to achieve a complete analysis of the structures and relationships, the indirect effect is described in Table 7 and Figure 2. The results indicated that green brand image significantly mediates among E-services quality and customer engagement, customer engagement significantly mediates among e-services quality and green brand equity, customer engagement significantly mediates among customer engagement motivation and green

Table 7. Indirect path analysis.

Relationships	Beta	Standard deviation	T statistics	p values
ESQ -> GBI -> CE -> GBE -> GBL	0.182	0.042	4.333	0.000
ESQ -> GBI -> CE -> GBE	0.376	0.110	3.418	0.000
ESQ -> CE -> GBE -> GBL	0.563	0.109	5.165	0.000
GBI -> CE -> GBE	0.567	0.198	2.864	0.012
GBI -> CE -> GBE -> GBL	0.182	0.026	7.000	0.000
ESQ -> GBE -> GBL	0.653	0.182	3.588	0.000
CE -> GBE -> GBL	0.366	0.121	3.025	0.001
CEM -> CE -> GBE	0.653	0.188	3.473	0.000
ESQ -> CE -> GBE	0.284	0.076	3.737	0.000
ESQ -> GBI -> CE	0.101	0.025	3.961	0.000
CEM -> CE -> GBE -> GBL	0.662	0.216	3.065	0.000

Source: Authors' Tabulation.
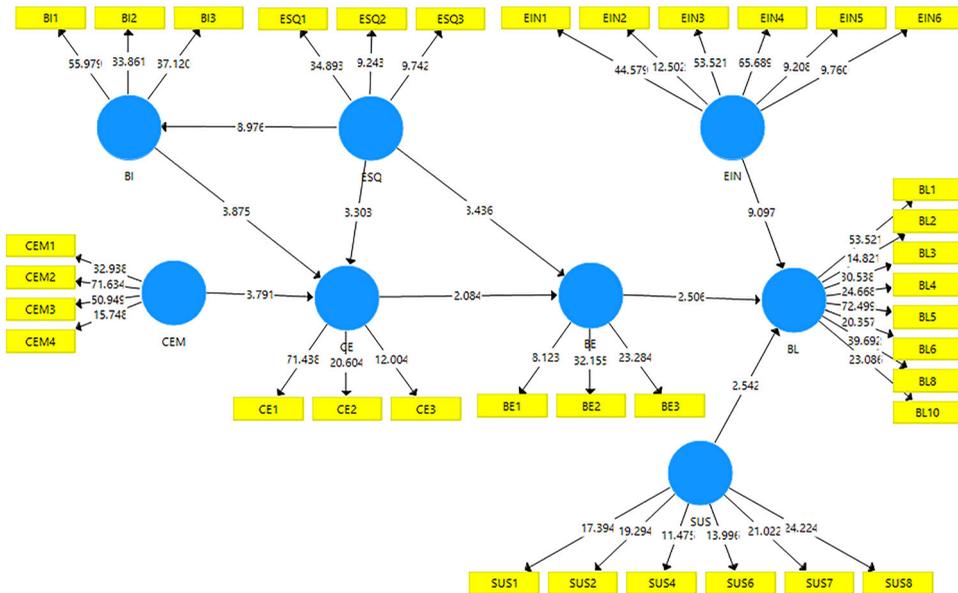
Figure 2. Structural model.
Source: Authors' Tabulation and SmartPLS output.

brand equity, and brand equity significantly mediates among customer engagement and green brand loyalty.

5. Discussion

The results revealed that customer engagement motivation is positively linked to customer engagement. These results are supported by Cambra-Fierro et al. (2021), which highlight the interaction of the customers with the organization or its representatives through online or offline means depends on the customer's feelings and capacity. The customers who have high motivation to get engaged in the notification, commercial ads, or gamification shared by the companies online are likely to have better interaction with the company. These results are also in line with Lee and Park (2022). According to the author's views, the greater the customer engagement motivation, the greater the customer engagement with the company and its products online.

The results also showed that customer engagement positively relates to brand equity. These results are supported by Rahman et al. (2022), which states that the customers' engagement with the company through online media enhances their knowledge of the customers about the company brand and its features. With the increasing interest through enhanced engagement with the company, the customers record positive thinking for the brand. This enhances the brand value in the market. Hence, customer engagement contributes to brand equity. These results also match with Algharabat et al. (2020). The study posits that the value of a brand in a market is based on the customer's perceptions and behavior towards the brand products and services. If customer engagement with the company increases, the brand equity improves.

The results indicated that green brand image has a positive relation to customer engagement. These results are in line with Quynh (2019), which states that the fact how much a particular brand has value among customers in the market is up to the customer's interaction with the company representatives, its products, and services. When the brand image is getting improved among customers, others are also impressed, feel attracted, and are engaged with the company with greater frequency. These results are supported by Ngo et al. (2019), which reveals that when the brand image is good in the eyes of the customers, they are likely to be keenly engaged with the brand. It's been shown by the study results that brand equity has a positive relation to brand loyalty. These results also match with Garanti and Kissi (2019), which claims that customers get motivation from others in the market. If they observe that many customers in the market have an awareness of, association with, and good experience of the brand, they become impressed and loyal to the brand. These results also agree with Khadim et al. (2018), which reveals that increasing brand equity encourages the customers to green brand loyalty.

The results also revealed that e-service quality has a positive relation to green brand image. These results are in line with Handayani et al. (2021). The study states that if a brand company uses electronic services for the marketing of their products and services, they can better interact with the customers and shape their perceptions. The improvement in the e-service quality improves the brand image among customers. These results are in line with Ghani (2020), which highlights that e-service quality is significantly linked to brand image as the high-quality e-services improve the image of the brand in the marketplace. The results also showed that e-service quality has a positive relation to customer engagement. These results are in line with Hikmah and Riptiono (2020), which states that when the customers find the quality of electronic services provided by the company higher than their expectations, they feel attracted, and consequently, customer engagement is high. The results are also supported by Vo et al. (2020). The study posits that if the e-services provided by a brand are easy to access, easy to understand, and enough to interact with the company, the customers' engagement with the social media plate-forms the company uses increases.

The results indicated that e-service quality has a positive relation to green brand equity. These results are in line with Ali et al. (2021), which highlights that the brand companies always take care of the quality of the services they provide online to interact with the customers. If the quality of e-services increases, the brand gets popularity

among customers in the market. So, the brand equity is high. These results are also supported by Norouzi et al. (2021), which states that the improvement in e-service quality brings a proportional increase in green brand equity. The results revealed that eco-innovation has a positive relation to brand loyalty. These results match with Rabadán et al. (2019), which highlights that the companies which maintain innovation for presenting eco-friendly products and services are attractive to new and potential customers. So, customers' loyalty toward the brand increases. These results are also in line with Mercado-Caruso et al. (2020). This study posits that eco-friendly innovation in the business processes, resources, resource allocation, customer services, and manufacturing of products develops the emotional attachment of the customers to the brand. So, it results in increasing brand loyalty.

The results showed that sustainability has a positive relation to green brand loyalty. These results are supported by Ben Amara and Chen (2020), which shows that the achievement of sustainability not only focuses on the financial objectives of the firms but also motivates the firms to take care of the social welfare and protect the environment and its productivity. The companies' selflessness and care for the environment as well as society enhance the customers' loyalty to the brand. These results are also in line with Kuchinka et al. (2018), which claims that the sustainability maintained by brand companies improves their image in the eyes of the public. The surety of fair dealings, as well as social responsibility fulfillment, improve customer emotions toward the brand leading to improved brand loyalty.

6. Implications

This study serves as the guidelines for the authors on how they should perform in future work while writing on brand loyalty. The current study presents a proper structure of how e-service quality affects brand loyalty. It explains that e-service quality contributes to green brand loyalty by affecting green brand image, customer engagement motivation, customer engagement, and brand equity. The study makes a contribution to literature for making analysis of the influences of eco-innovation and sustainability on brand loyalty. The study examines the impacts of e-service quality on green brand image, customer engagement motivation, customer engagement, green brand equity, and green brand loyalty, as well as the impacts of eco-innovation and sustainability on green brand loyalty for Iran.

The study has many empirical implications for emerging brands as it guides them on how they must make effective use of e-commerce to improve brand loyalty. The study guides the company management that they must form policies to improve the e-service quality to improve brand image, customer engagement, and green brand equity. The study also guides that with effective strategies, the customer engagement motivation must be aroused because it increases brand loyalty with the improvement in customer engagement and brand equity. The study guides that brand companies must formulate and implement policies for eco-innovation so that brand loyalty can be improved. Similarly, the brand companies must try to achieve sustainability in business performance in order to achieve customer loyalty towards the brand.

7. Conclusion

The aim of the study was to examine the impacts of e-service quality brand image, customer engagement motivation, customer engagement, and brand equity and, thereby, its contribution to brand loyalty. The study objective was also to check the role of eco-innovation and sustainability in brand loyalty. Through a survey of Iran, quantitative information for e-service quality, green brand image, customer engagement motivation, customer engagement, eco-innovation, sustainability, and green brand equity were acquired. The results showed a positive association between e-service quality, green brand image, customer engagement motivation, customer engagement, eco-innovation, sustainability, and green brand equity. Customer engagement with the company and its products online increases in direct proportion to customer motivation. The increase in customer engagement motivation enhances customer engagement. The results revealed that the high e-service quality improves the green brand image, customer engagement, and brand equity which all lead to green brand loyalty. The results indicated that Businesses that continue to innovate in order to offer eco-friendly goods and services are appealing to new and prospective clients. Customers become more loyal to the brand as a result. The results stated that the integration of business sustainability improves the product quality, customer services, and the welfare of stakeholders. This improves the feel of the customers towards the company and encourages green brand loyalty.

8. Limitations & future recommendation

The study has several limitations despite its considerable significance in the literature. Future authors must show extra efforts to remove these limitations. The study examines the impacts of e-service quality, brand image, brand equity, eco-innovation, and sustainability on brand loyalty. The limited number of factors for the analysis of brand loyalty keeps the study scope limited. It is recommended that future authors that they should analyze more factors that could affect brand loyalty for a greater scope of research. Moreover, the current study takes the Iran Insurance company as the sample of the research for determining the role of e-service quality brand image, customer engagement motivation, customer engagement, brand equity, eco-innovation, and sustainability in brand loyalty. The selection of a single company from Iran for the association among these factors is not enough to present valid results. The future authors must collect evidence from multiple brands and countries for general results.

Disclosure statement

There are no competing or conflicts of interest to declare.

ORCID

Wang Jinliang http://orcid.org/0000-0002-2109-6529
Ka Yin Chau http://orcid.org/0000-0002-0381-8401
Fahimeh Baei http://orcid.org/0000-0003-2047-7992
Massoud Moslehpour http://orcid.org/0000-0001-8808-2407
Khanh-Linh Nguyen http://orcid.org/0000-0001-5784-9652
Tran Thai Ha Nguyen http://orcid.org/0000-0003-2598-3720

References

Algharabat, R., Rana, N. P., Alalwan, A. A., Baabdullah, A., & Gupta, A. (2020). Investigating the antecedents of customer brand engagement and consumer-based brand equity in social media. *Journal of Retailing and Consumer Services*, *53*, 101767. https://doi.org/10.1016/j.jret-conser.2019.01.016

Ali, S., Yusop, Z., Kaliappan, S. R., & Chin, L. (2021). Trade-environment nexus in OIC countries: Fresh insights from environmental Kuznets curve using GHG emissions and ecological footprint. *Environmental Science and Pollution Research*, *28*(4), 4531–4548. https://doi.org/10.1007/s11356-020-10845-6

Andrew, M. (2019). E-service quality and brand image on buying interest. *Journal of Secretary and Business Administration*, *3*(1), 23–38. https://doi.org/10.31104/jsab.v3i1.83

Anfinsen, M., Lagesen, V. A., & Ryghaug, M. (2019). Green and gendered? Cultural perspectives on the road towards electric vehicles in Norway. *Transportation Research Part D: Transport and Environment*, *71*, 37–46. https://doi.org/10.1016/j.trd.2018.12.003

Atulkar, S. (2020). Brand trust and brand loyalty in mall shoppers. *Marketing Intelligence & Planning*, *38*(5), 559–572. https://doi.org/10.1108/MIP-02-2019-0095

Bairrada, C. M., Coelho, A., & Lizanets, V. (2019). The impact of brand personality on consumer behavior: The role of brand love. *Journal of Fashion Marketing and Management: An International Journal*, *23*(1), 30–47. https://doi.org/10.1108/JFMM-07-2018-0091

Ben Amara, D., & Chen, H. (2020). A mediation-moderation model of environmental and eco-innovation orientation for sustainable business growth. *Environmental Science and Pollution Research*, *27*(14), 16916–16928. https://doi.org/10.1007/s11356-020-08206-4

Cambra-Fierro, J. J., Fuentes-Blasco, M., Huerta-Álvarez, R., & Olavarría, A. (2021). Customer-based brand equity and customer engagement in experiential services: Insights from an emerging economy. *Service Business*, *15*(3), 467–491. https://doi.org/10.1007/s11628-021-00448-7

Chien, F., Hsu, C. C., Sibghatullah, A., Hieu, V. M., Phan, T. T. H., & Hoang Tien, N. (2021). The role of technological innovation and cleaner energy towards the environment in ASEAN countries: Proposing a policy for sustainable development goals. *Economic Research-Ekonomska Istraživanja*, *35*(1), 4677–4692. https://doi.org/10.1080/1331677X.2021.2016463

Coelho, F. J. F., Bairrada, C. M., & Matos Coelho, A. F. (2020). Functional brand qualities and perceived value: The mediating role of brand experience and brand personality. *Psychology & Marketing*, *37*(1), 41–55. https://doi.org/10.1002/mar.21279

Demir, A., Maroof, L., Khan, N. U. S., & Ali, B. J. (2021). The role of e-service quality in shaping online meeting platforms: A case study from higher education sector. *Journal of Applied Research in Higher Education*, *13*(5), 1436–1463. https://doi.org/10.1108/JARHE-08-2020-0253

Ebrahim, R. S. (2020). The role of trust in understanding the impact of social media marketing on brand equity and brand loyalty. *Journal of Relationship Marketing*, *19*(4), 287–308. https://doi.org/10.1080/15332667.2019.1705742

EzuRizzy, C., & Ademe, D. (2022). E-service quality and customer engagement of online shops in Bayelsa state, Nigeria. *GPH-International Journal of Business Management (IJBM)*, *5*(01), 76–87. https://doi.org/10.0313/bm.v5i01.566

Fernandes, T., & Moreira, M. (2019). Consumer brand engagement, satisfaction and brand loyalty: A comparative study between functional and emotional brand relationships. *Journal of Product & Brand Management*, *28*(2), 274–286. https://doi.org/10.1108/JPBM-08-2017-1545

Garanti, Z., & Kissi, P. S. (2019). The effects of social media brand personality on brand loyalty in the Latvian banking industry: The mediating role of brand equity. *International Journal of Bank Marketing*, *37*(6), 1480–1503. https://doi.org/10.1108/IJBM-09-2018-0257

Ghani, M. R. A. (2020). The relationship between product quality, e-service quality and brand image on customer satisfaction: Preliminary investigation in Perlis. *International Journal of Business and Management*, *4*(5), 43–54. https://doi.org/10.26666/rmp.ijbm.2020.5.6

Hair, J. F., Hult, G. T. M., Ringle, C. M., Sarstedt, M., & Thiele, K. O. (2017). Mirror, mirror on the wall: A comparative evaluation of composite-based structural equation modeling methods. *Journal of the Academy of Marketing Science*, *45*(5), 616–632. https://doi.org/10.1007/s11747-017-0517-x

Hartani, N. H., Haron, N., & Tajuddin, N. I. I. (2021). The impact of strategic alignment on the sustainable competitive advantages: Mediating role of it implementation success and it managerial resource. *International Journal of eBusiness and eGovernment Studies*, *13*(1), 78–96.

Hamilton, S. (2022). Deep learning computer vision algorithms, customer engagement tools, and virtual marketplace dynamics data in the metaverse economy. *Journal of Self-Governance & Management Economics*, *10*(2), 56–69.

Handayani, D. F. R., Widowati, R., & Nuryakin, N. (2021). The influence of e-service quality, trust, brand image on Shopee customer satisfaction and loyalty. *Jurnal Siasat Bisnis*, *9*, 119–130. https://doi.org/10.20885/jsb.vol25.iss2.art3

Hikmah, A. N., & Riptiono, S. (2020). Pengaruh customer engagement dan e-service quality terhadap online repurchase intention dengan customer satisfaction sebagai variabel intervening pada marketplace Shopee. *Jurnal Ilmiah Mahasiswa Manajemen, Bisnis Dan Akuntansi (JIMMBA)*, *2*(1), 89–100. https://doi.org/10.32639/jimmba.v2i1.447

Jermsittiparsert, K. (2021). Linkage between energy consumption, natural environment pollution, and public health dynamics in ASEAN. *International Journal of Economics and Finance Studies*, *13*(2), 1–21.

Jung, J., Kim, S. J., & Kim, K. H. (2020). Sustainable marketing activities of traditional fashion market and brand loyalty. *Journal of Business Research*, *120*, 294–301. https://doi.org/10.1016/j.jbusres.2020.04.019

Kataria, S., & Saini, V. (2019). The mediating impact of customer satisfaction in relation of brand equity and brand loyalty: An empirical synthesis and re-examination. *South Asian Journal of Business Studies*, *9*(1), 62–87. https://doi.org/10.1108/SAJBS-03-2019-0046

Kaur, H., Paruthi, M., Islam, J., & Hollebeek, L. D. (2020). The role of brand community identification and reward on consumer brand engagement and brand loyalty in virtual brand communities. *Telematics and Informatics*, *46*, 101321. https://doi.org/10.1016/j.tele.2019.101321

Kaya, B., Behravesh, E., Abubakar, A. M., Kaya, O. S., & Orús, C. (2019). The moderating role of website familiarity in the relationships between e-service quality, e-satisfaction and e-loyalty. *Journal of Internet Commerce*, *18*(4), 369–394. https://doi.org/10.1080/15332861.2019.1668658

Khadim, R. A., Hanan, M. A., Arshad, A., Saleem, N., & Khadim, N. A. (2018). Revisiting antecedents of brand loyalty: Impact of perceived social media communication with brand trust and brand equity as mediators. *Academy of Strategic Management Journal*, *17*(1), 1–13.

Kinnunen, J., Saunila, M., Ukko, J., & Rantanen, H. (2022). Strategic sustainability in the construction industry: Impacts on sustainability performance and brand. *Journal of Cleaner Production*, *368*, 133063. https://doi.org/10.1016/j.jclepro.2022.133063

Kline, R. B. (2015). *Principles and practice of structural equation modeling*. Guilford publications.

Kotler, P., Keller, K. L., Ang, S. H., Tan, C. T., & Leong, S. M. (2018). *Marketing management: an Asian perspective*. London: Pearson.

Kuchinka, D. G., Balazs, S., Gavriletea, M. D., & Djokic, B.-B. (2018). Consumer attitudes toward sustainable development and risk to brand loyalty. *Sustainability*, *10*(4), 997–1024. https://doi.org/10.3390/su10040997

Kurniawan, K., Supriatna, J., Sapoheluwakan, J., Soesilo, T. E. B., Mariati, S., & Gunarso, G. (2022). The analysis of forest and land fire and carbon and greenhouse gas emissions on the climate change in Indonesia. *AgBioForum*, *24*(2), 1–11.

Le, M. T. (2021). The impact of brand love on brand loyalty: The moderating role of self-esteem and social influences. *Spanish Journal of Marketing – ESIC*, *25*(1), 156–180. https://doi.org/10.1108/SJME-05-2020-0086

Lee, J., & Park, C. (2022). Customer engagement on social media, brand equity and financial performance: A comparison of the US and Korea. *Asia Pacific Journal of Marketing and Logistics*, *34*(3), 454–474. https://doi.org/10.1108/APJML-09-2020-0689

Li, M.-W., Teng, H.-Y., & Chen, C.-Y. (2020). Unlocking the customer engagement-brand loyalty relationship in tourism social media: The roles of brand attachment and customer trust. *Journal of Hospitality and Tourism Management*, *44*, 184–192. https://doi.org/10.1016/j.jhtm.2020.06.015

Liu, Z., Lan, J., Chien, F., Sadiq, M., & Nawaz, M. A. (2022). Role of tourism development in environmental degradation: A step towards emission reduction. *Journal of Environmental Management*, *303*, 114078. https://doi.org/10.1016/j.jenvman.2021.114078

Llanos-Herrera, G. R., & Merigo, J. M. (2019). Overview of brand personality research with bibliometric indicators. *Kybernetes*, *48*(3), 546–569. https://doi.org/10.1108/K-02-2018-0051

Loučanová, E., Olšiaková, M., & Štofková, J. (2022). Open business model of eco-innovation for sustainability development: Implications for the open-innovation dynamics of Slovakia. *Journal of Open Innovation: Technology, Market, and Complexity*, *8*(2), 98–119. https://doi.org/10.3390/joitmc8020098

Mao, Y., Lai, Y., Luo, Y., Liu, S., Du, Y., Zhou, J., … Bonaiuto, M. (2020). Apple or Huawei: Understanding flow, brand image, brand identity, brand personality and purchase intention of smartphone. *Sustainability*, *12*(8), 3391–3409.

Mercado-Caruso, N., Segarra-Oña, M., Ovallos-Gazabon, D., & Peiró-Signes, A. (2020). Identifying endogenous and exogenous indicators to measure eco-innovation within clusters. *Sustainability*, *12*(15), 6088–6098. https://doi.org/10.3390/su12156088

Moslehpour, M., Chau, K. Y., Tu, Y. T., Nguyen, K. L., Barry, M., & Reddy, K. D. (2022a). Impact of corporate sustainable practices, government initiative, technology usage, and organizational culture on automobile industry sustainable performance. *Environmental Science and Pollution Research*, *29*(55), 83907–83920.

Moslehpour, M., Chau, K. Y., Du, L., Qiu, R., Lin, C. Y., & Batbayar, B. (2022b). Predictors of green purchase intention toward eco-innovation and green products: Evidence from Taiwan. *Economic Research-Ekonomska Istraživanja*, 1–10. https://doi.org/10.1080/1331677X.2022.2121934

Moslehpour, M., Ismail, T., Purba, B. I., & Lin, P. K. C. (2020, February). The Effects of Social Media Marketing, Trust, and Brand Image on Consumers' Purchase Intention of GO-JEK in Indonesia. In Proceedings of the 2020 The 6th International Conference on E-Business and Applications (pp. 5–10).

Mostafa, R. B., & Kasamani, T. (2020). Brand experience and brand loyalty: Is it a matter of emotions? *Asia Pacific Journal of Marketing and Logistics*, *33*(4), 1033–1051. https://doi.org/10.1108/APJML-11-2019-0669

Ngo, H., Nguyen, T., & Kang, G.-D. (2019). The effect of perceived value on customer engagement with the moderating role of brand image: A study case in Vietnamese restaurants. *International Journal of Innovative Technology and Exploring Engineering*, *8*(7C2), 451–461.

Norouzi, M., Ghodrati Zoeram, A., Haghighi, A., & Ghoreishi, R. (2021). Investigating the effect of perceived electronic services quality on brand equity with the mediating role of

customer culture (Case study: Sepah Bank, North Khorasan Province). *Journal of Accounting and Management Vision*, 4(48), 32–46.

Ojogiwa, O. T. (2021). The crux of strategic leadership for a transformed public sector management in Nigeria. *International Journal of Business and Management Studies*, 13(1), 83–96.

Ou, J., Wong, I. A., Prentice, C., & Liu, M. T. (2020). Customer engagement and its outcomes: The cross-level effect of service environment and brand equity. *Journal of Hospitality & Tourism Research*, 44(2), 377–402. https://doi.org/10.1177/1096348019897360

Panda, T. K., Kumar, A., Jakhar, S., Luthra, S., Garza-Reyes, J. A., Kazancoglu, I., & Nayak, S. S. (2020). Social and environmental sustainability model on consumers' altruism, green purchase intention, green brand loyalty and evangelism. *Journal of Cleaner Production*, 243, 1185–1199. https://doi.org/10.1016/j.jclepro.2019.118575

Papista, E., Chrysochou, P., Krystallis, A., & Dimitriadis, S. (2018). Types of value and cost in consumer–green brands relationship and loyalty behaviour. *Journal of Consumer Behaviour*, 17(1), e101–e113.

Peco-Torres, F., Polo-Pena, A. I., & Frias-Jamilena, D. M. (2020). Brand personality in cultural tourism through social media. *Tourism Review*, 76(1), 164–183. https://doi.org/10.1108/TR-02-2019-0050

Phuoc, V. H., Thuan, N. D., Vu, N. P. H., & Tuyen, L. T. (2022). The impact of corporate social and environmental responsibilities and management characteristics on SMEs' performance in Vietnam. *International Journal of Economics and Finance Studies*, 14(2), 36–52.

Quynh, N. H. (2019). The moderating influence of brand image on the relationship between customer engagement and customer loyalty. *Indian Journal of Marketing*, 49(9), 42–56. https://doi.org/10.17010/ijom/2019/v49/i9/146939

Rabadán, A., González-Moreno, Á., & Sáez-Martínez, F. J. (2019). Improving firms' performance and sustainability: The case of eco-innovation in the agri-food industry. *Sustainability*, 11(20), 5590–5606. https://doi.org/10.3390/su11205590

Rahman, M., Faroque, A. R., Sakka, G., & Ahmed, Z. U. (2022). The impact of negative customer engagement on market-based assets and financial performance. *Journal of Business Research*, 138, 422–435. https://doi.org/10.1016/j.jbusres.2021.08.023

Rehman, M. A., Seth, D., & Shrivastava, R. L. (2016). Impact of green manufacturing practices on organisational performance in Indian context: an empirical study. *Journal of Cleaner Production*, 137, 427–448.

Rasool, A., Shah, F. A., & Islam, J. U. (2020). Customer engagement in the digital age: A review and research agenda. *Current Opinion in Psychology*, 36, 96–100. https://doi.org/10.1016/j.copsyc.2020.05.003

Ringle, C., Da Silva, D., & Bido, D. (2015). Structural equation modeling with the SmartPLS. *Brazilian Journal of Marketing*, 13(2), 29–36.

Sadiq, M., Ngo, T. Q., Pantamee, A. A., Khudoykulov, K., Ngan, T. T., & Tan, L. L. (2023). The role of environmental social and governance in achieving sustainable development goals: Evidence from ASEAN countries. *Economic Research-Ekonomska Istraživanja*, 36(1), 170–190. https://doi.org/10.1080/1331677X.2022.2072357

Safari, A., Salehzadeh, R., & Ghaziasgar, E. (2018). Exploring the antecedents and consequences of organizational democracy. *The TQM Journal*, 30(1), 74–96.

Saputra, G. Y., & Setyadi, H. J. (2020). Pengaruh e-service quality terhadap customer satisfaction, trust, customer loyalty dan brand equity pengguna layanan mobile banking. *Media Bina Ilmiah*, 15(3), 4293–4304. https://doi.org/10.33758/mbi.v15i3.882

Sasono, I., Jubaedi, A. D., Novitasari, D., Wiyono, N., Riyanto, R., Oktabrianto, O., … Waruwu, H. (2021). The impact of e-service quality and satisfaction on customer loyalty: Empirical evidence from internet banking users in Indonesia. *The Journal of Asian Finance, Economics and Business*, 8(4), 465–473. https://doi.org/10.13106/jafeb.2021.vol8.no4.0465

Šerić, M., & Gil-Saura, I. (2019). Understanding brand equity in hotel firms. What is the role of brand loyalty and satisfaction?. *International Journal of Contemporary Hospitality Management*, 31(9), 3526–3546. https://doi.org/10.1108/IJCHM-06-2018-0516

Severi, E., & Ling, K. C. (2013). The mediating effects of brand association, brand loyalty, brand image and perceived quality on brand equity. *Asian Social Science*, *9*(3), 125.

Shanahan, T., Tran, T. P., & Taylor, E. C. (2019). Getting to know you: Social media personalization as a means of enhancing brand loyalty and perceived quality. *Journal of Retailing and Consumer Services*, *47*, 57–65. https://doi.org/10.1016/j.jretconser.2018.10.007

Sharma, N., Paço, A., & Kautish, P. (2022). The impact of eco-innovation on green buying behaviour: the moderating effect of emotional loyalty and generation. *Management of Environmental Quality: An International Journal, 33*(4), 1026–1045. https://doi.org/10.1108/MEQ-11-2021-0267

Shibli, R., Saifan, S., Ab Yajid, M. S., & Khatibi, A. (2021). Mediating role of entrepreneurial marketing between green marketing and green management in predicting sustainable performance in Malaysia's organic agriculture sector. *AgBioForum*, *23*(2), 37–49.

Simbolon, F. P., & Yanti, L. (2021). Customer engagement in higher education: How important the role of social media marketing, e-service quality, and e-satisfaction for generation Z students? *The Winners*, *22*(1), 15–23. https://doi.org/10.21512/tw.v22i1.6970

Sriyakul, T., Chienwattanasook, K., & Chankoson, T. (2022). Does industrialization and renewable energy consumption determine economic growth? Empirical evidence from Asian countries. *International Journal of Economics and Finance Studies*, *14*(03), 264–279.

Suherman, H. B., Mawarti, J., Iskandar, Y., & Heriyati, P. (2021). Impact of e-service quality, brand awareness, advertising, and brand image for repurchase intention on the specialty store. *Open Access Indonesia Journal of Social Sciences*, *4*(6), 548–560. https://doi.org/10.37275/oaijss.v4i2.93

Sukendia, J., & Harianto, N. (2021). The impact of e-service quality on customer engagement, customer experience and customer loyalty in B2C e-commerce. *Turkish Journal of Computer and Mathematics Education (TURCOMAT)*, *12*(3), 3170–3184.

Tanveer, M., Ahmad, A.-R., Mahmood, H., & Haq, I. U. (2021). Role of ethical marketing in driving consumer brand relationships and brand loyalty: A sustainable marketing approach. *Sustainability*, *13*(12), 6839–6849. https://doi.org/10.3390/su13126839

Teo, T., & Noyes, J. (2011). An assessment of the influence of perceived enjoyment and attitude on the intention to use technology among pre-service teachers: A structural equation modeling approach. *Computers & Education*, *57*(2), 1645–1653.

Tian, Z., Lu, M., & Cheng, Q. (2021). The relationships among mobile travel application attributes, customer engagement, and brand equity. *Social Behavior and Personality: An International Journal*, *49*(7), 1–10. https://doi.org/10.2224/sbp.10353

Thitinan, T. S., & Chankoson Khunanan, S. (2022). Modelling the impact of e-government on corruption for the COVID-19 crisis. *International Journal of eBusiness and eGovernment Studies*, *14*(3), 26–45.

Van Hoa, N., Van Hien, P., Tiep, N. C., Huong, N. T. X., Mai, T. T. H., & Phuong, P. T. L. (2022). The role of financial inclusion, green investment and green credit on sustainable economic development: Evidence from Vietnam. *Cuadernos de Economía*, *45*(127), 1–10.

Vo, N. T., Chovancová, M., & Tri, H. T. (2020). The impact of e-service quality on the customer satisfaction and consumer engagement behaviors toward luxury hotels. *Journal of Quality Assurance in Hospitality & Tourism*, *21*(5), 499–523. https://doi.org/10.1080/1528008X.2019.1695701

Wilis, R. A., & Nurwulandari, A. (2020). The effect of e-service quality, e-trust, price and brand image towards e-satisfaction and its impact on e-loyalty of Traveloka's customer. *Jurnal Ilmiah MEA (Manajemen, Ekonomi, & Akuntansi)*, *4*(3), 1061–1099. https://doi.org/10.31955/mea.v4i3.609

Wirsbinna, A., & Grega, L. (2021). Assessment of economic benefits of smart city initiatives. *Cuadernos de Economía*, *44*(126), 45–56.

Yunika, E. (2022). The influence of customer satisfaction, brand image on customer loyalty of Bank Syariah Indonesia (BSI) in Padang with customer engagement as mediation variable. *Strategic Management Studies*, *1*(1), 45–59.