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The Classification of Design Elements for the Food and Beverage Service Business: an Original Review for the Service Innovation

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Abstract: 1) Background: In service business areas, design enhances the customer experience through the elements which anticipate specific emotional responses of customers. Many service companies are keen to develop and examine design elements from the customer perspective. Furthermore, recently, having considered the significance of customers' emotional responses by design elements, categorising design elements into manageable dimensions can facilitate the evaluation of design elements. However, design elements and dimensions of design value are not defined in the current service marketing literature, and companies need a measurement tool and managerial guideline to their innovative value creation and compelling service delivery. For these reasons, this research aims to categorise the design value dimensions and propose the managerial implication for the innovative use of design; 2) Methods: This study used the mixed methodology; two stages of interviews and SEM (Structural Equation Modelling); 3) Results: Interview analyses facilitate the identification of design elements in the service delivery process. SEM results underpin the relevance of the categorised design elements and their impact on customer loyalty by comparing different groups (country and time elapsed from experience); and 4) Conclusions: Findings are the fundamentals of developing measuring tool for design and trigger future studies for conceptualising intangible assets.

Keywords: Service innovation; Design value; Value measurement

1. Introduction

Today creativity invigorates the manufacturing, service, retail, and entertainment industries beyond the deficient development of information and software [1]. Businesses implement creative techniques for improving service delivery, but how a specific element of service design impacts on the end-users is still under the development process [2-4]. Having considered the intangible nature of service businesses, the significance of measuring tool for service industry is unquestionable [5].

Service consists of visual elements at a place where the interaction of stakeholders occurs [2,6]. The interactions converge on a holistic evaluation of the experience, which is interpreted as the design value. Understanding how design contributes to enhancing the interaction between stakeholders is the key for successful services [7].

The contemporary consumption involves many different considerations besides the traditional trade-off concept of value. Customer's evaluation of offerings is the result of holistic experience with emotional interactions [8,9]. It is necessary to clarify elements of the service design element and identify the touch-points where design can contribute significantly. As design adds value to a

business by enhancing the competitive advantage of the firm [10], how design adds value in service delivery can be useful for understanding the contributions of design [11].

In this context, design elements in the service business can be one of the pivots on the interaction with stakeholders for creating unique service value [12,13]. To understand how the interaction is affected by design elements of a service firm, this research will empirically examine the design elements in the service delivery process and investigate how design elements enhance the customer loyalty in the food and beverage service industry.

2. Materials and Methods

2.1. Design Value in Service Business

The role of design in the contemporary management does not pertain simple aesthetic meanings of an offering. Design emotionally and functionally interacts with the customer and adds value to products and services [10]. Also, the broad range of products and services triggers a new way of perceiving design in the contemporary market [9]. Design in the contemporary management contributes to enhancing the functionality of products, pleasurable experience and self-fulfilment of consuming offerings [14,15]. These contributions are the fundamental of the holistic concept of customer value [16]. Thus, design in corporate management has a goal of aiming the greater customer value [17].

Recently, there are many efforts for addressing the practical outcomes of design such as the ongoing project in the Design Management Institute (DMI) called "Design Value Index". According to DMI report 2015, the return on investment for design-centric companies is two times larger than the one for S&P 500 companies [18]. It can be interpreted that the profitability of a firm in the contemporary business is derived from its design competency. However, design values have several dimensions besides the economic value. Table 1 explains the design values in the business process and performance. As Krippendorff mentioned [19], design is making sense of things. The design activities can make the effectiveness of business strategic and sustainable development [20,21].

Table 1. Definitions of design in the contemporary business (modified, Nam [28])

Author(s)	Contents
Kotler and Rath [20]	Design is the process of seeking to optimise consumer satisfaction and company profitability through the creative use of major design elements (performance, quality, durability, appearance, and cost) in connection with products, environments, information, and corporate identities.
Gorb and Dumas [22]	A course of action for the development of an artefact or a system of the artefact; including the series of organisational activities required to achieve that development
Krippendorff [19]	The etymology of design goes back ... means making something, distinguishing it by a sign, giving it significance, designating its relation to other things, owners, users, or gods. ... design is making sense (of things). ... design is a sense creating activity ... the product of design is to be understandable or meaningful to someone ... design is concerned with the subjective meanings of 'objectively existing' objects ...

Borja de Mozota [17]	Design = Intention + Drawing ... Design is a problem-solving activity, a creative activity, a systemic activity, and a coordinating activity.
Hands [21]	Design is both an integral and intrinsic part of a variety of business cultures that provide a fertile seedbed for strategic growth and sustainable development

In particular, the design values connect with the emotional perception. Recently customer value in the market is explored by the multi-dimensional approaches sought for multiple relevant items of determining customer perceived value (see Table 2). It means that the dimensions are interactive [23] and include holistic aspects of consumption such as prepurchase experience [24]. The contemporary consumption involves many different considerations besides the traditional trade-off concept of value [17, 25]. Furthermore, service characteristics of business became essential for marketing due to its interactive nature [26] and new contributions like brand and design [27].

Table 2. Definitions of value in the holistic perspective (modified, Nam [28])

Author(s)	Contents
Woodruff [29]	Customer value is a customer's perceived preference for an evaluation of those product attributes, attribute performances, and consequences arising from use that facilitate (or block) achieving the customer's goals and purposes in use situation.
Wagner [30]	Value is the pleasure derived from perceiving, evaluating, and judging a product or some facet of a product.
Holbrook [17]	Consumer value is an interactive relativistic preference experience.
Grönroos [12]	Value for customers means that after they have been assisted by a self-service process ... or a full-service process ... , they are or feel better off than before.

Nam and Carnie argued that the customer perceived design value can be classified into four discrete dimensions as Holbrook's original typology indicates [31]; Self-oriented – Extrinsic, Self-oriented – Intrinsic, Other-oriented – Extrinsic and Other-oriented – Intrinsic. Service consists of physical and systemic elements of communication and interaction [5,6]. From the service perspective, the consumption event between customers and a service provider is a service-based exchange [32]. In this context, what remains in a customer's mind is arguably the aggregated experience of emotional interactions with the service provider [28]. As design adds value to a business by enhancing the competitive advantage of a firm [10], how design adds value to service delivery can be useful for understanding the contributions of design. Therefore, it is necessary to classify the design's emotional contributions for customers regarding the value-adding role in the service industry [28,31].

2.2. Design Value Type and Approaches

Given that design emotionally interacts with customers [28], the added value through design activities should pertain to emotional responses from customers. From the value perspective, the single dimensional approach of value is problematic for encompassing the complex emotions of

customers at the point of sales [25]. The multidimensional value is particularly relevant to service businesses for anticipating consumer behaviour [33].

Table 3 summarises the criteria of design value in the key literature. The criteria from Kotler and Rath are arguably the pioneering research for addressing design as a holistic concept [20]. They defined design as "the process of seeking optimised customer satisfaction". Gorb identified four discrete dimensions of design value in a business [34]. Alben listed eight considerations of design and categorised the list into two domains [35]; the direct contributions for user experience and the development process of designers. The list of considerations can be useful for developing questions for the exploratory factor analysis in future research. Moultrie et al. identified five factors for auditing design's role [36]; desirability, novelty/differentiation, usability, technical quality and profitability. The developed tool in Moultrie et al. covers from the narrow scope of tangible and intangible attributes of products to the broader scope of attributes [36].

Table 3. The criteria of design value in business

Author(s)	Criteria	Notes
Kotler and Rath [20]	Performance Quality Durability Appearance Cost	Authors described the constituencies (criteria) of effective design with both product and process perspectives.
Gorb [34]	Product Environment Information Corporate Identity	The identification is derived from designers' role and their value to business
Alben [35]	Understanding of users Effective design process Needed/Desired Learnable/Usable Appropriate Aesthetic experience Mutable Manageable	Categorized the direct contribution to products/services and the indirect effect for the superiority of process
Moultrie et al. [36]	Desirability Novelty/Differentiation Usability Technical quality Profitability	Although the tool was developed for a product design audit, it can also be applied to a service design audit

This research aims to investigate relevant design elements in a service delivery process and categorise them for managerial purposes. Hence, the availability of interpreting the criteria with design aspects is essential for the scope of this study. This study employs Gorb's view of design contributions and the rationale for Gorb's view will be addressed in the variable definition section.

2.3. The categories of perceiving design value

Regarding the dimensions of perceived value, this study adopts Holbrook's view of consumer value. Holbrook [17] determines three criteria for classifying value dimension; self-oriented or other-oriented, extrinsic or intrinsic, and active and reactive. Given that active and reactive value are difficult to distinguish in current literature [17,25,33], Nam [28] argued that classifying design value needs to consider only two criteria; self-oriented or other-oriented, and extrinsic or intrinsic. As a result, the design value contains four discrete dimensions [28]. The emotions related to each dimension are derived from Holbrook's original category and summarised in table 4.

Table 4. The customer emotions of perceiving value (modified from Holbrook, [17], p.12)

	Extrinsic	Intrinsic
Self-oriented	Output/Input, Convenience, Quality	Fun, Beauty
Other-oriented	Success, Impression management, Reputation, Materialism, Possessions	Justice, Virtue, Morality, Faith, Ecstasy, Sacredness, Magic

The self-oriented emotions are related to how design elements appeal to the consumer. However, the interaction between extrinsic value and intrinsic value in food service is more complicated than a product-oriented business [14]. One can easily distinguish the functionality and beauty of a product. Since a service is delivered as a holistic experience [37], what remains in customers' mind is the service as a whole [28]. In other words, the output of service seems a single offering but contains intricate internal processes like a code in programming [38]. Therefore, the clear distinction between extrinsic and intrinsic value is difficult in a service business [39].

On the other hand, the extrinsic and intrinsic categories for other-oriented value have discrete characteristics. The other-oriented and extrinsic value contains emotions related to self-fulfilment. The other-oriented and intrinsic value accommodates the more broad range of emotions than any other value dimensions. Following on from the preliminary study [28], this study limits the other-oriented and intrinsic value to the ethical/moral value. The ethical/moral aspects of value are still challenging to anticipate consumer behaviour [40,41], but relatively more straightforward to investigate design aspects observed by customers. As a result, this study defines three value dimensions through design elements as follows; Appealing value for self-oriented and intrinsic value, Reflective value for other-oriented and extrinsic value, and Social responsibility value for other-oriented and intrinsic (ethical/moral) value.

2.4. Systemic understanding of food and beverage service businesses

From the relationship marketing context, the value of a service business is co-created by the interaction between customers and service providers [42]. The interaction becomes the customers' holistic experience consumed in the event of service provision [43]. Besides, the abundance of products and services allows consumers to consider emotional compensations of consumption beyond the traditional trade-off concept of compensation [44]. Design of tangible element is critically related to the outcome of the service provision [45]. By influencing on the customer experience, design in service industry enriches the customer perception of a brand and its process. In order to understand the process of service delivery, this study utilises the Service blueprint [5,46]. By developing from the original Service blueprint [47], Bitner et al. propose additional domains (physical evidence and support process) within the blueprint for the practical purposes [5]. The Service blueprint facilitates the identification of relevant design elements in the food and beverage service process.

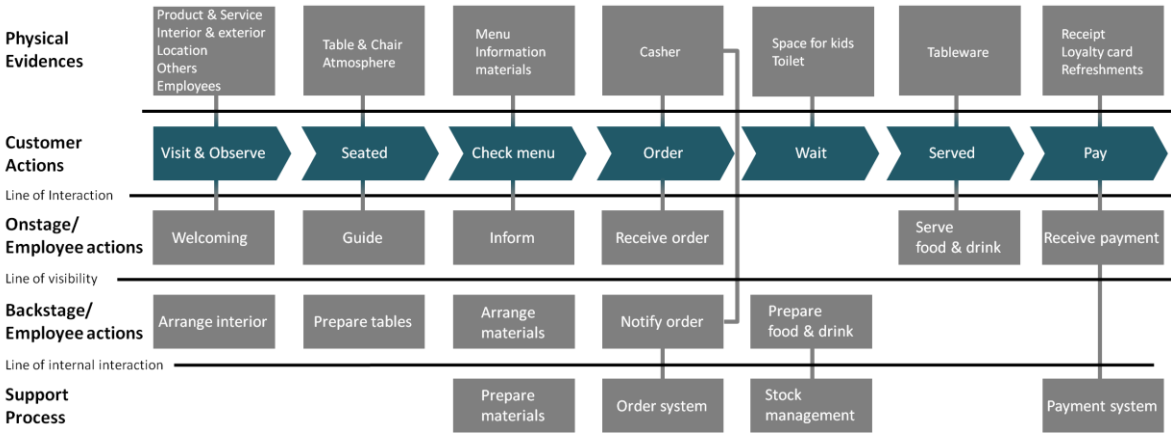


Figure 1. The Service blueprint for a food and beverage business

The figure 1 above summarises the activities of a food and beverage service business by the steps of customer behaviour. Each step is linked with actions in other domains if any visible or invisible interaction occurs. Physical evidence is mainly associated with aesthetic elements of design while other interactions and domains are related to managerial aspects of design. The specific elements are listed in each step in the Physical evidence domain.

3. Research Method

3.1. Variable Definition

Among the concepts of categorising design value, this study employs the view from Gorb for determining independent variables. Given that Gorb's classification is derived from designers' activities and contribution [34], it enables the investigation of a firm's activities to meet specific customer needs. In addition, since service businesses heavily rely on the physical and visual aspects of design [30], the link between emotions of perceiving value with specific design elements can be addressed [28]. Thus, Gorb’s classification was utilised for creating of the questionnaire from the customer perspective in this study.

As the dependent variables, this study employs customer loyalty. When a customer continuously purchases products and services, it can be explained that the person is loyalty to the brand. However, customers may repatronage a brand due to simple factors which can be easily imitated. In this case, the relationship is vulnerable without the deeper customer engagement [48]. Also, the customer engagement to a brand is diverse and composed of four different levels; Cognitive, Affective, Conative and Action [49]. The lower level of loyalty is the prerequisite for the higher level of loyalty and interacts positively with other levels of loyalty [49]. Hence, this study examines each level of loyalty as a single item for the dependent variable, customer loyalty. The operational definitions of these variables are described in table 4.

Table 5. Measurement variables

Variables		Operation definitions	References
Product & Service	Appealing and enjoyable	Appealing and enjoyable emotion through the products and services	Gorb [34]; Holbrook [17]
	Personality	One has the desired character/personality is reflected by using the products and services	
	Social value	The consumption contributes to helping other people in needs in some respects	
Environment	Overall atmosphere	Attractive and exciting location, building, interior and atmosphere of the store	

	Characteristics of the space	The environment of the store reflect one's desired character	
	Design considerations	The presence of design considerations for people with disabilities	
Information	The relevance of information materials	Appropriate and consistent information materials for the store's identity	
	The character of information materials	One's preference for the expression of information materials	
	Social message of visible materials	The presence and relevance of the store's social responsible activities	
Corporate Identity	Shop image	The image of the store through design elements	
	Self-expression through the brand	Design elements of the store reflect one's character	
	Social responsibility of the brand	The image of the store is ethical/moral in some respects	
Loyalty	Cognitive loyalty	Store A has more benefits than others in its class	
	Affective loyalty	I have grown to like Store A more so than other brands	
	Conative loyalty	I intended to buy from Store A in the future	
	Action loyalty	When I have a need for products and services of this types, I buy only from Store A	

Oliver, [49], p. 398

For checking the variables to the food and beverage service sector, this study extracts the variables by analysing interview data with the panel of experts (the second stage interviews). Total 18 participants design, marketing and service experts, who have more ten years experiences in the service sectors, answered and provided the opinion about using the food and beverage service businesses. All variables were in the 90-95% agreement rate, procured the factor reliability.

3.2. Service blueprint with design considerations and the survey structure

By having the Service blueprint result, this study designates design considerations from the interviews to the blueprint as shown in the figure below. The interview was conducted in two steps. Firstly, the interview question (which design element do you consider most when choosing a food and beverage service?) was given to design students at the University of Leeds through the e-mail conversation. Secondly, researchers asked the same question to 18 service experts. In this time, the experts helped to designate each design element to Gorb's design contribution categories and Holbrook's typology of consumer value. In doing so, researchers finalised the design elements and categorised them into the list (Product & Service, Environment, Information and Corporate Identity). Also, each item was placed on the steps in the Service blueprint for identifying the step with different design elements in consumers' mind.

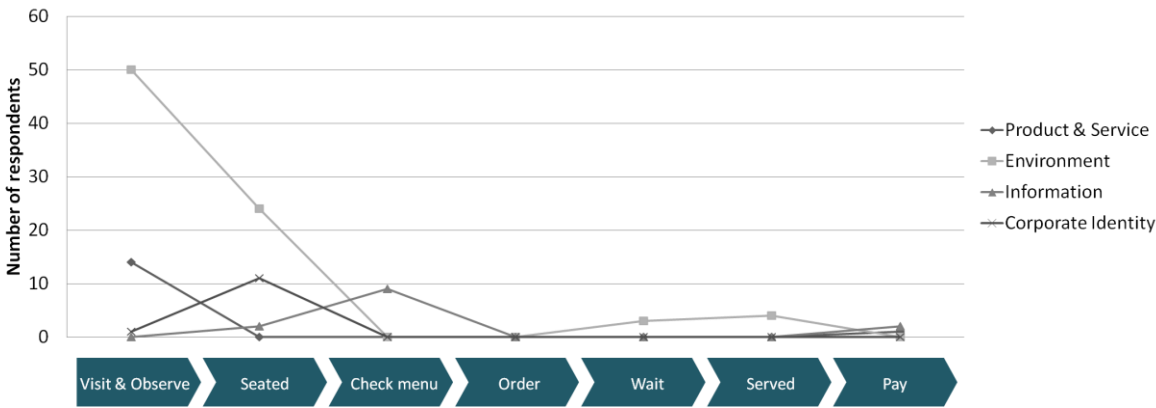


Figure 2. The number of design elements in a food and beverage service provision

The figure 2 above is the summary of interview results of design elements for a food and beverage service business. The result indicates that customers’ considerations mostly belong to the first two steps (Visit & Observe and Seated). Total 102 responses (84% of 121 responses) converged on the first two steps. Mainly, environmental design elements (81 responses, 67%) are dominant throughout the service provision. The result means the number of design elements regardless of their impact on business. Thus, it can be interpreted that design elements in the first two steps attract and resonate customers while the other elements in later steps strengthen the perceived value of the service.

Variables in table 5 need to be rearranged with value dimensions for understanding design’s contribution to customers’ emotional dimensions as described in figure 3 below. Each value dimensions contains four contributions (product, environment, information and corporate identity) of design. The survey consists of three sections; general information of the participants, independent variables and dependent variable. In doing so, the influence of a specific design contribution to each value dimension can be unveiled. Furthermore, the regression analysis of value dimensions and loyalty can be performed to identify the relative importance of each dimension to customer loyalty.

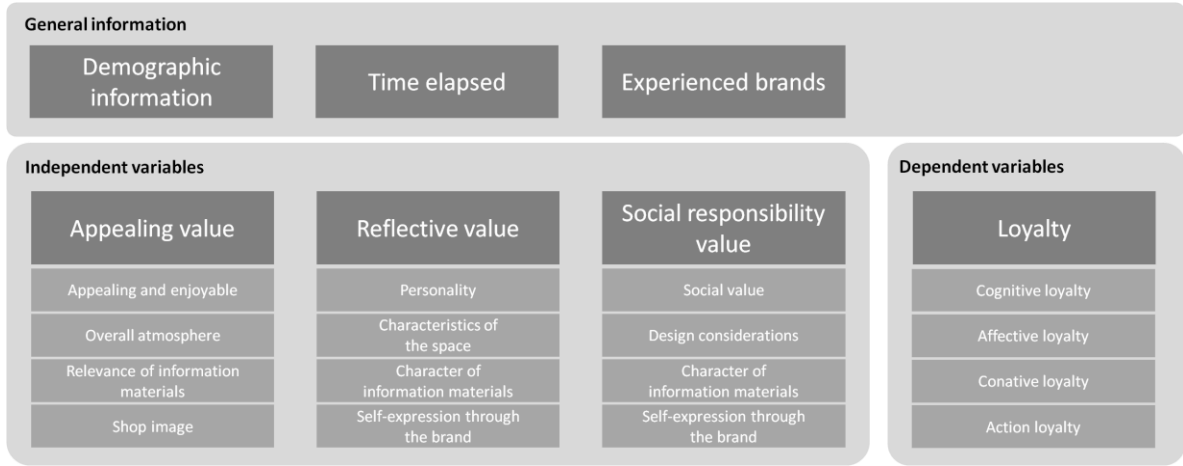


Figure 3. The survey structure with contents

3.3. Data Collection and Analysis Methods

Samples were collected total 300 from United Kingdom (UK) and South Korea (KR) market. However, this research used the completed 299 questionnaires by 189 respondents (UK) and 110 respondents (KR) without error samples. The questionnaire collection was progressed by online survey system from June to August in 2017. Thus, EFA (Exploratory Factor Analysis) was performed for confirming factors by using SPSS. Having considered the potential significance of the relationship

between design value dimensions [28], the correlation matrix is calculated and reported. Regression coefficients are reported to confirm the validity of the independent variables (Appealing value, Reflective value and Social responsibility value) for the dependent variable (Customer Loyalty). Finally, the Chi-square difference test is performed for identifying meaningful differences between countries and time groups by using SPSS Amos.

4. Analyse results

4.1. Demographic information of the data

The demographic information for the participants has summarised in table 6. 152 participants are male while 147 participants are female. 110 respondents are from South Korea, and 189 respondents are from the United Kingdom. This study asked the time of consumption experience by five categories; within a week, within a month, within three months, within six months and more than six months. Given that researchers did not restrict the number of participants for each time category, survey participants recalled their most recent and relevant experience for the survey. As a result, participants can be divided into recent experience group (consumed within a week) and old experience group (consumed more than a week ago).

Table 6. The demographic information of the survey participant

Category	Number of Participants (%)	
Gender	Male	152 (50.8%)
	Female	147 (49.2%)
Country	South Korea	110 (36.8%)
	United Kingdom	189 (63.2%)
Age	10-19	18 (6.0%)
	20-29	93 (31.1%)
	30-39	109 (36.5%)
	40-49	49 (16.4%)
	50-59	29 (9.7%)
	60+	1 (0.3%)
Time elapsed from consumption	Less than a week	170 (56.9%)
	More than a week	129 (43.1%)

4.2. Validity and reliability test results

The reliability and validity test result are described in table 7. KMO sampling adequacy is 0.897. Chi-square value is 387.058. The degree of freedom is 98. The significance is less than 0.001. Composite reliability values are all greater than 0.7, and convergent validity (AVE) is also confirmed (greater than 0.5) (thresholds referred by Hair et al. [50]).

Table 7. Reliability and Validity test results

Category	Variable	Standard loading value	Standard error	CR	AVE	Cronbach's alpha
Independent variable	Appealing value	.694	.046	.859	.606	.898
		.769	.045			
		.794	.045			
		.848				
	Reflective value	.733	.054	.874	.635	.910
		.823	.052			
		.795	.054			
		.832				

	Social Responsibility value	.822 .570 .846 .827	.049 .059 .051	.854	.600	.860
Dependent variable	Loyalty	.816 .804 .726 .690	.071 .079 .096	.845	.579	.856

The correlation between variables is summarised in table 8.

Table 8. The correlation analysis results

Category	AVE	Appealing value	Reflective value	Social Responsibility value	Loyalty
Appealing value	.606	1			
Reflective value	.635	.649	1		
Social Responsibility value	.600	.517	.593	1	
Loyalty	.579	.653	.560	.509	1

4.4. Analysis results of the relationship between the perceived design value and loyalty

Multiple linear regression was calculated to predict Customer loyalty based on three dimensions of design value (Appealing, Reflective and Social responsibility value) by using SPSS AMOS. R squared value of the model is 0.478 by setting Customer loyalty as the dependent variable. The standardised regression coefficients of each design value to Customer loyalty are 0.46 (p-value is less than 0.001), 0.155 (p-value = 0.039) and 0.180 (p-value = 0.006) respectively. The model fit indices are demonstrated in table 9.

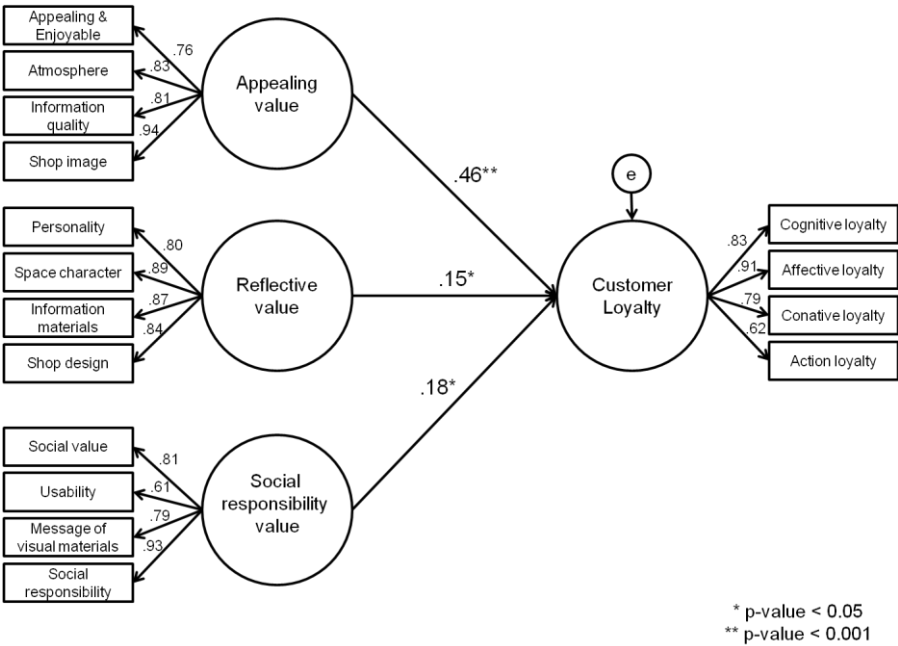


Figure 4. The multiple regression result of the model

Table 9. Model fit indices for the structural model

X2	df	P-value	X2/df	RMR	GFI	AGFI	NFI	TLI	RMSEA
387.058	98	.000	3.950	.146	.860	.806	.893	.899	.099

4.5. Comparison Analysis Results

4.5.1. Identification of the difference among gender and cultural backgrounds

In order to identify the differences, the Chi-square difference test was performed by using SPSS AMOS (version 25.0.0). As described in table 10, no path is different between male and female for the model. However, a path (Appealing value to Loyalty) demonstrates the differences in regression coefficients between cultures.

Table 10. The multi-group analyses of the model (Gender and Nationality)

	Path	Degree of freedom	Chi-square difference	p-value	Different?
Gender	Appealing value → Loyalty	1	.847	.357	No
	Reflective value → Loyalty	1	.026	.873	No
	Social responsibility value → Loyalty	1	.407	.524	No
Nationality	Appealing value → Loyalty	1	11.035	.001	Yes
	Reflective value → Loyalty	1	.021	.884	No
	Social responsibility value → Loyalty	1	1.883	.170	No

4.5.2. The effect of the time elapsed of the model

This study categorised the time elapsed into two groups: recent consumption (experienced within a week) and old consumption (experienced more than a week ago). Similar to the previous analysis, Chi-square difference test was performed for detecting differences of regression weights. The results indicate that there is no difference between recent and old experience regarding the regression weights for loyalty.

Table 11. The multi-group analyses of the model (Time elapsed)

Path	Degree of freedom	Chi-square difference	p-value	Different?
Appealing value → Loyalty	1	1.886	.170	No
Reflective value → Loyalty	1	.103	.749	No
Social responsibility value → Loyalty	1	.346	.556	No

5. Conclusion

This study examined design elements in the food and beverage business and categorised the elements into the customers' emotional dimensions. The Service blueprint technique was employed for identifying design elements in each step of service provision. The SEM (Structural equation

modelling) was conducted for building a model and investigating meaningful differences between groups. The simple model is built and analysed for confirming the relevance of categorised design elements. The results reconfirm the argument in the existing literature, however, denote important managerial implications and directions for future studies.

Firstly, the design elements related to the first impression of the brand are revealed. The elements are architecture, atmosphere, interior and location. This fair result is aligned with findings from Berry et al. [51]. By defining these design elements as a mechanic clue of the service experience, Berry et al. argued that mechanic clues are critical for building the first impression effectively [51]. Furthermore, the first impression established through these design elements is more useful to build a long-term customer relationship than functional clues which aim to meet customer expectation [52]. Having considered the significance of long-term customer relationship in a service business [53,54], service providers should put extra resources when they plan the design elements related to mechanic clues of service provision.

Secondly, not surprisingly, the Appealing value impacts on customer loyalty greater than the other value dimensions. However, emotions in the contemporary consumer behaviours, such as feelings of owning products or expressing oneself by consuming exclusive services, are still significant [55]. Thus, emotional attachment to a brand through trust and affection is still the strong influencer for both behavioural and attitudinal loyalty [56]. In this context, the Reflective value driven by brand attachment (self-fulfilling emotions of customers) should not be underestimated [57].

Additionally, given that this study asked a recent experience in participating in the survey, participants may not consider the most favourable brand. Instead, the brands can be the most available one within the given situation. In addition, the preference of food and beverage service in the contemporary market is complex and diversified [58,59]. In this situation, the brands in the collected survey do not necessarily align with an individual's personality.

Moreover, the brands in the survey result are too broad concerning generalising responses for the reflective value of service delivery. From the fast food franchises to cafes, the participants responded to the full range of food and beverage services. Given that this study aims to categorise design elements for preliminary purposes, Researchers did not limit the brand to a single business. The investigation of a specific brand in the future studies will confirm the unique characteristics of a food and beverage service firm regarding the Reflective value of customers.

Thirdly, a significant cultural difference is noted for Appealing value. As shown in table 10, the impact of Appealing value for customer loyalty differs between two cultures. The standardised coefficient of the path for South Korean (0.51) is greater than the one for British (0.42). However, the result should not attenuate the influence of Appealing value on loyalty in the UK, instead, implies the strategic importance of reactions related to Appealing value (enjoyable service, atmosphere, relevant information materials and brand image) for Korean customers.

Lastly, this study verified that there is no difference between recent and relatively old experiences. In other words, the impact of customer value established through design element does not diminish as time passes. It also underpins the argument that the strong design identity is the prerequisite of a successful brand [60]. However, there are some conditions for concluding the design's timeless effect on customer loyalty in the future studies. Firstly, narrowing the target business is required. The survey used in this study asked the whole food and beverage service experiences. Therefore, the businesses are diverse regarding the size, history and offerings. The single brand investigation can support the statement as mentioned earlier firmly. Investigating the same brand will also be useful for investigating the differences between extrinsic and intrinsic value. Secondly, participants' previous experience of the responding brand was not considered for the survey. The brand authenticity which anticipates customer trust on the brand is developed by consistency, continuity and individuality [61]. In addition, single customer experience is difficult to anticipate customer loyalty [62]. In other words, the depth of customer-provider relationship is critical for determining the time elapsed effects of customer loyalty, yet, out of scope for current study. However, having considered the importance of customers' repeated visits for a service

business, examining the number of the visit for acquiring the desired level of brand attachment can be useful for practitioners and managers.

In conclusion, the customer value should be measured with a discrete approach [63]. Given that value is considered as a holistic emotional evaluation of customers' preference [17,25,33], design which emotionally interacts with customers needs to be considered as the essential for the measuring tool. This study establishes the fundamentals for measuring design value in the service industry by categorising design elements in emotional value dimensions. Rigorous studies should be followed for developing a measuring tool and building sophisticated models with business performance indicators. In doing so, companies can manage design effectively which is traditionally regarded as an intuitive and abstractive factor.

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