Studying the Effect of Food Quality Dimensions (Physical Environment, Food and Services) on Mental Image of the Restaurant and Customers' Satisfaction and Intentions based on Kisang's Model

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Abstract

The present paper explores the effect of food quality dimensions (physical environment, food, and services) on mental image of the restaurant and customers' satisfaction and intentions based on Kisang's model (2012). In order to test the hypotheses, Kisang's questionnaire was used whose validity was measured via face validity and reliability was evaluated by means of Cronbach's alpha coefficient. The statistical sample included 208 customers of restaurants in Isfahan province who were selected via simple sampling. The hypotheses were tested by means of structural equations modeling at confidence level 0.95%.

One primary hypothesis and ten secondary hypotheses were proposed through which the effect of qualitative dimensions on mental image, perceived value, and finally customers' satisfaction and intentions was evaluated. The findings disclosed that quality dimensions (physical environment quality, food quality, and service quality) have a positive and significant effect on customer's mental image with regard to the restaurant and customer perceived value. Also, customer's mental image has a reverse effect on customer satisfaction.

Other results revealed that the effect of customer's mental image on perceived value is positive and significant. Moreover, given to the findings, perceived value has a direct effect on customer satisfaction which has a positive and significant effect on customer's after-purchase behavior.

Key words: Dimensions of Food Service Quality, Mental Image of the Restaurant, Customer perceived value, Customer's Behavioral intentions, Customer Satisfaction.

Introduction

The world economy is faced with wonderful changes in the 21st century. These changes will affect the countries which have a single-product economy (like oil) more than other counties, because oil has lost its previous role and power as "the black gold". Indeed, degree of economic growth and development of a country in the future depends on the volume of production and value-added created in those countries. This has increased the governments' efforts to create new competitive advantages. Consumer behavior studies all processes of selection, utilization, withdrawal of products and services, experiences or ideas by people, groups, and organizations to satisfy needs and explore the effects of such processes on the customer and community. This attitude towards the consumer behavior is wider than the traditional attitude. In traditional attitude of consumer behavior, the purchaser and the immediate backgrounds as well as outcomes of the process of purchasing are more emphasized.

Today, organizations have to introduce themselves well to the customers in order to create a suitable structure and this will only be possible through satisfactory service offering. The important point is that when customer's role and function are defined properly in the culture of a community and serving customers is regarded as a value, organizations find a proper cycle so that each organization offers high quality and valuable services and enjoys valuable services of other organizations. As a result, it will provide customer satisfaction and loyalty.

Hypotheses

One primary hypothesis and ten secondary hypotheses were proposed as follows:

Primary hypothesis: Food service quality dimensions have a significant effect on mental image, perceived value, customer satisfaction and behavioral intentions in restaurants in Isfahan province.

Secondary hypotheses

1. Physical environment quality has a significant effect on mental image of the restaurant.
2. Food quality has a significant effect on mental image of the restaurant.
3. Service quality has a significant effect on mental image of the restaurant.
4. Physical environment quality has a significant effect on customer perceived value.
5. Food quality has a significant effect on customer perceived value.
6. Service quality has a significant effect on customer perceived value.
7. Customer's mental image has a significant effect on customer satisfaction.
8. Customer's mental image has a significant effect on customer perceived value.
9. Customer perceived value has a significant effect on customer satisfaction.
10. Customer satisfaction has a significant effect on customer's behavioral intentions.

Conceptual model of the study

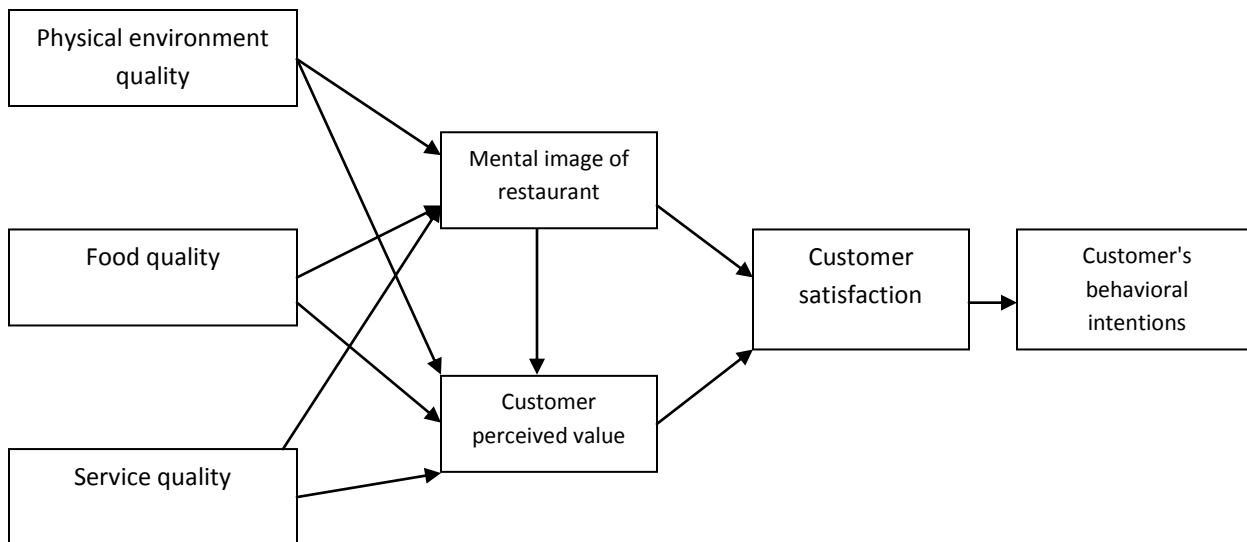The conceptual model of the study is proposed as follows given to Kisang et al's research (2012).

Figure 1. Conceptual model of the study (source: Kisang et al., 2012, p. 207)

Literature review

The major difference between product and services

Any product creates benefits for the customers who purchase and use it. Products include physical tools or things while services are action or performance. Primary studies which were carried out to distinguish services from products emphasized specifically on four general differences: intangibility, incongruity (changeability), inseparability, and non-accumulatability (Lovelock & Wright, 2004, p. 31).

Customers' expectations

Customers have right expectations which must be satisfied. Customers of service organizations often have demands as follows (Vukmir, 2006). Perhaps the most important effective factor on customer satisfaction in service organizations is appropriate behavior with customers. Thus, employees who are in contact with customers via telephone or in person should be selected carefully and those should be selected who have some prominent ethical characteristics (Edward et al., 2003). It has been perceived in numerous studies that human relations play a determining role in customer satisfaction. The result of one of the more recent studies on customer satisfaction level in one of service sectors in Iran revealed that customer satisfaction has been high where service quality has not been at an expected level but employees have had suitable behavior with customers (Luciano et al., 2013).

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Satisfaction and loyalty

Satisfaction is awareness about a comfortable status that is usually linked to meeting of some special intentions. If people achieve their intended purposes and demands, the pleasant state they feel can be referred to as satisfaction (Payandani, 2008, p. 55). According to Oliver et al's definition, loyalty is a deep and continuous commitment to repurchasing of desirable services/products in future that is led to repetitive purchasing of a similar brand or a group of similar brands given to situational factors and marketing efforts effective on behavior change (Davis et al., 2007, p. 5). At the beginning of the 1960's, dimensions of loyalty included behavioral and attitudinal concepts. Observable acts of customer loyalty are focused via behavioral studies (repurchasing behavior) and attitudinal studies explore commitment and willingness to purchase again (Bennet et al., 2007, p. 1254).

Methodology

The present research is applicable from object aspect. Applicable studies are used to eliminate human needs via the cognitive context and knowledge provided by basic researches (Sarmad, 2000). It is descriptive-field from methodological aspect. Convenience sampling was used to determine the statistical sample. One of the most widely used approaches in determining the sample size is Cochran formula that is calculated as follows. The statistical population included all customers of restaurants in Mobarakeh who have at least purchased one time from the restaurants under study. Since the statistical population is unlimited, the following formula is used to obtain the sample size. The minimum value is equal to 200 persons.

$$n \geq \frac{1.96^2 * 0.36^2}{0.05^2} \cong 200$$

Tool of data collection was questionnaire (Kisang et al's scale and Likert standard questionnaire) and validity and reliability of the questionnaire were confirmed earlier by researchers. There are different methods to measure internal consistency of a questionnaire among which split-half reliability and Cronbach's alpha are used more (Sarmad & Bazargan, 2002). The questionnaire had acceptable reliability given to the obtained value equal to 0.9. In order to confirm the validity, seven experts including the supervisor professor (marketing specialist), advisor professor (questionnaire design specialist) and five professors of management and marketing expressed their opinions about the questionnaire and its questions. They confirmed validity of the questionnaire. It was also desirable according to Kisang et al (2012).

Two-hundred forty questionnaires were distributed among the customers of restaurants in Isfahan province who have at least purchased one time from the restaurants under study. Two-hundred eight questionnaires were completed and the return rate was 87%. Structural equations modeling and SPSS software were used to analyze the collected data.

Testing of hypotheses

Variables	Physical environment quality	Food quality	Service quality	Mental image	Customer perceived value	Customer satisfaction	Customer's behavioral intentions
Physical environment quality	1						
Food quality	0.44**	1					
Service quality	0.30**	0.44**	1				
Mental image	0.22**	0.44**	0.46**	1			
Customer perceived value	0.21**	0.42**	0.47**	0.61**	1		
Customer satisfaction	0.27**	0.37**	0.39**	0.24**-	0.54**	1	
Customer's behavioral intentions	0.21**	0.31**	0.29**	0.37**	0.37**	0.46**	1

**p<0.01, *p<0.05

Figure 4.8 shows the tested model along with the standardized values on each path.

The findings reveal that all path coefficients are significant and have a positive effect on each other.

Figure 1. The tested model of survey (**p<0.01, *p<0.05)

Table 2. Results of direct, indirect and total effects coefficients and explained variance of the research variables

Paths	Direct effect	Indirect effect	Total effect	Explained variance
On behavioral intentions from:				
Physical environment quality	-	0.06*	0.06*	
Food quality	-	0.04*	0.04*	41%
Service quality	-	0.04*	0.04*	

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Mental image of the restaurant	-	-0.05*	-0.05*	
Customer perceived value	-	0.34**	0.34**	
Customer satisfaction	0.56**	-	0.56**	
On customer satisfaction from:				43%
Physical environment quality	-	0.10**	0.10**	
Food quality	-	0.08*	0.08*	
Service quality	-	0.09**	0.09**	
Mental image of the restaurant	-0.20**	0.11**	-0.09**	
Customer perceived value	0.61**		0.61**	
On perceived value from:				33%
Physical environment quality	0.20**	0.05*	0.25**	
Food quality	0.18**	0.06*	0.24**	
Service quality	0.18**	0.04*	0.22**	
Mental image of the restaurant	0.18**	-	0.18**	
On mental image from:				53%
Physical environment quality	0.26**	-	0.18**	
Food quality	0.36**	-	0.18**	
Service quality	0.24**	-	0.18**	

$**p<0.01$, $*p<0.05$

The obtained findings reveal that food, service and physical environment quality have a positive and significant effect on mental image of the restaurant and customer perceived value. The direct effect of mental image on perceived value is positive and significant but its direct effect on customer satisfaction is negative and significant. Customer satisfaction has a direct positive and significant effect on customer intentions. Results of indirect effects showed that food, service, and physical environment quality and customer perceived value have an indirect

positive and significant effect on behavioral intentions. But the indirect effect of mental image on behavioral intentions is negative and significant.

The indirect effect of food, service and physical environment quality on customer perceived value and customer satisfaction is positive and significant. The indirect effect of mental image on customer satisfaction is positive and significant too.

In sum, the results demonstrated that 41% of variance of behavioral intentions, 53% of variance of mental image, 3% of variance of customer perceived value and 43% of variance of customer satisfaction are explained by the variables existing in the model.

The fit indexes obtained for the model in Table 15 show that RMSEA index estimated equal to 0.064 has an acceptable level and other indexes such as goodness of fit index, ratio of chi-square to degree of freedom, adjusted goodness of fit index, comparative fit index, and normal fit index are all at an appropriate kevel. The above goodness of fit indexes show that the research data have a suitable goodness with factorial structure of the model.

Table 2. Goodness features of the model

AGFI	NFI	NNFI	GFI	CFI	RMSEA	x/df
0.96	0.97	0.97	0.97	0.97	0.064	3.47

The results related to direct, indirect and total effects are shown in Table 14.

Hypothesis 1: Physical environment quality has a significant effect on mental image of the restaurant.

Findings of Table 2 show that physical environment quality with the impact factor equal to β= 0.26 has a positive and significant effect on mental image at level p<0.01. Therefore, hypothesis one is confirmed and physical environment quality has a relative positive effect on mental image.

Hypothesis 2: Food quality has a significant effect on mental image of the restaurant.

The obtained findings reveal that food quality with the impact factor equal to β= 0.36 has a positive and significant effect on mental image of the restaurant at level p<0.01. Therefore, hypothesis two is confirmed and food quality has an average positive and significant effect on mental image of the restaurant.

Hypothesis 3: Service quality has a significant effect on mental image of the restaurant.

Findings of Table 2 show that service quality with the impact factor equal to β= 0.24 has a positive and significant effect on mental image of the restaurant at level p<0.01. Therefore, hypothesis three is confirmed and service quality has a relatively low positive and significant effect on mental image.

Hypothesis 4: Physical environment quality has a significant effect on customer perceived value.

Findings of Table 2 show that physical environment quality with the impact factor equal to β= 0.20 has a positive and significant effect on perceived value at level p<0.01. Therefore, hypothesis four is confirmed and physical environment quality has a relatively low positive and significant effect on perceived value.

Hypothesis 5: Food quality has a significant effect on customer perceived value.

Findings of Table 2 show that food quality with the impact factor equal to β= 0.18 has a positive and significant effect on customer perceived value at level p<0.01. Therefore, hypothesis five is

confirmed and food quality has a relatively low positive and significant effect on customer perceived value.

Hypothesis 6: Service quality has a significant effect on customer perceived value.

Findings of Table 2 show that service quality with the impact factor equal to β= 0.18 has a positive and significant effect on customer perceived value at level p<0.01. Therefore, hypothesis six is confirmed and service quality has a relatively low positive and significant effect on customer perceived value.

Hypothesis 7: Customer's mental image has a significant effect on customer satisfaction.

Findings of Table 2 show that customer's mental image with the impact factor equal to β= 0.20 has a negative and significant effect on customer satisfaction at level p<0.01. Therefore, hypothesis seven is confirmed and customer's mental image has a relatively low negative and significant effect on customer satisfaction.

Hypothesis 8: Customer's mental image has a significant effect on customer perceived value.

Findings of Table 2 show that mental image with the impact factor equal to β= 0.18 has a positive and significant effect on customer perceived value at level p<0.01. Therefore, hypothesis eight is confirmed and mental image has a relatively low positive and significant effect on customer perceived value.

Hypothesis 9: Customer perceived value has a significant effect on customer satisfaction.

Findings of Table 2 show that customer perceived value with the impact factor equal to β= 0.61 has a positive and significant effect on customer satisfaction at level p<0.01. Therefore, hypothesis nine is confirmed and customer perceived value has a positive and significant effect on customer satisfaction.

Hypothesis 10: Customer satisfaction has a significant effect on customer's behavioral intentions.

Findings of Table 2 show that customer satisfaction with the impact factor equal to β= 0.56 has a positive and significant effect on customer's behavioral intentions at level p<0.01. Therefore, hypothesis ten is confirmed and customer satisfaction has a positive and significant effect on behavioral intentions.

Conclusion

The first hypothesis was confirmed and physical environment quality has a positive effect on mental image. Customers usually select the desired restaurant in the same way they look for a product and purchase it. If the appearance is attractive, they will consider the internal environment of restaurant and other characteristics. The second hypothesis was also confirmed and food quality has a positive and significant effect on mental image of the restaurant. The customer pays attention to the main product more than anything else. Undoubtedly, food quality in a restaurant is the most important reason for creating a suitable image of that restaurant in customer's mind. The third hypothesis was confirmed and service quality has a positive and significant effect on mental image of the restaurant. Customers always consider auxiliary services in restaurants. How waiters behave, music, and other services are the factors through which the name of a restaurant associates in people's mind. Hypothesis four was confirmed and physical environment quality has a positive and significant effect on customer perceived value. Hypothesis five was confirmed and food quality has a positive and significant effect on customer perceived value. This finding is consistent with Kisang et al's research results

(2012). They concluded that food quality has a positive and significant effect on customer perceived value. Hypothesis six was confirmed and service quality has a positive and significant effect on customer perceived value. In Seroqual's model, terms such as superiority and service adequacy are used to measure service quality. Given to the above issues, it can be expected that service quality has a positive and significant effect on customer perceived value.

Hypothesis seven was confirmed too and mental image of the restaurant has a negative and significant effect on customer satisfaction. This shows that mental image is not an expected predictor variable for measuring of customer satisfaction. Hypothesis eight was confirmed and mental image has a positive and significant effect on customer perceived value. This is consistent with findings of Kisang et al (2012) who concluded that mental image has a positive and significant effect on customer perceived value. Apparent shape of the environment helps to form suitable feelings and reaction in customers and the personnel and affects purchasers' behaviors from three ways: attracting customers' attention towards apparent services, preceding the competitors, and attracting customers from the targeted sectors; using symbolic messages to make contact with the intended audience about the nature and quality of experiencing the services; effectiveness; utilization of colors, combinations, sounds, perfumes and space design to create or enhance tendency towards special products and services or experiences. Hypothesis nine was confirmed and customer perceived value has a positive and significant effect on customer satisfaction. This is consistent with results of studies done by Laee et al (2009), M.D Ariff (2013), Fazelzadeh and Khoshmaram (2011), Ranjbarian et al (2013) and Mortazavi et al (2012).

Lin et al (2005) believe that perceived value is an essential factor for organizations. It directs them towards providing the needs of their customers, because this factor affects consumers' behavior. In this regard, Gallarza and Saura (2006) acknowledge that perceived value is related to marketing strategies such as market segmentation, product differentiation and positioning policies. For instance, if a special group of customers have specific and shared characteristics, organizations can target this special group of customers by providing that specific need. Then they have to develop market segmentation strategy, product differentiation and positioning policies to match the target market preferences (Hosseininejad Kashani, 2010). Hypothesis ten was confirmed and customer satisfaction has a positive and significant effect on behavioral intentions. Results of the present study are consistent with research results of Ranjbarian et al (2013), Kitabsi et al (2013), Fazelzadeh and Khoshmaram (2011), Kim and Li (2011), Suhaimi (2011) and Wissel and Zabkar (2009).

Exploring the effect of satisfaction on loyalty has been the most important topic in recent years. Some studies show that there is a direct relation between customer satisfaction and customer loyalty. It means that customers who are satisfied will be loyal and those who are dissatisfied switch to other sellers. Satisfaction is usually used as a predictor for future purchases. Satisfied customers repeat their purchases most probably and are deceived less by competitors. Satisfaction is mentioned as the primary necessity for loyalty (Duffy, 2005).

References

-Auh, S., Johnson, M.D, (2005). Compatibility effects in evaluations of satisfaction and loyalty. **Journal of Economic Psychology**, No 26, P.P 35-57.

-Deng, Z., Lu, Y., Kee Wei, K., & Zhang, J. (2010). Understanding customer satisfaction and loyalty: An empirical study of mobile instant messages in China. **International Journal of Information Management**, No. 30, pp: 289–300.

-Duffy Dennis, L (2005). The evolution of customer loyalty strategy. **Journal of Consumer Marketing, Emerald Group**, pp. 284–286

-Kisang R, Hye-Rin L, Woo G.K, (2012),"The influence of the quality of the physical environment, food, and service on restaurant image, customer perceived value, customer satisfaction, and behavioral intentions", **International Journal of Contemporary Hospitality Management**, Vol. 24 Iss: 2 pp. 200 – 223.

-Kisang R, Han, H. (2011). The influence of physical environments on disconfirmation, customer satisfaction, and customer loyalty for first-time and repeat customers in upscale restaurants. **International Journal of Hospitality Management**, Vol. 30 No. 3, pp. 599-611.

-Kisang R, Heesup, H, & Tae-Hee, K (2008). The relationships among overall quick-casual restaurant image, perceived value, customer satisfaction, and behavioral intentions. **International Journal of Hospitality -Management**, Vol, 27, pp. 459-469

-Luciano M, Federica I, Luisa B, (2013). **Customer satisfaction management in Italian banks**. Qualitative Research in Financial Markets, Vol. 5 Iss: 2, pp.139 – 160

-Russel-Bennet, R, Mccoll-Kennedy, R. Janet, C, (2007). Involvement, satisfaction, and brand loyalty in a small business services setting. **Journal of Business Research**, No 60,PP 1253-1260

-Sawhney and Piper (2002). Value creation through enriched marketing-operations interface. **Journal of operations management**, Vol 20, pp. 259-272.

-Shanker, V., Smith, A.K, Rangaswamy, A, (2003). Customer satisfaction and loyalty in online and offline environment. **Journal of marketing**, No 20, P.P 153-173.

-So, May W.C. & Sculli, Domenic. (2002). **The role of trust, quality, value and risk in conducting e-business**. Industrial Management & Data Systems. 9, 503-512

-Suhaimi S, (2011). **How Service Quality, Value and Corporate Image Affect Client Satisfaction and Loyalty**. The 2nd International Research Symposium in Service Management Yogyakarta, INDONESIA, 26 – 30 July 2011

-Synovate , (2005). **AS Index™ Media Information**.pp1-9. www.synovate.com

-Tser-yieth C (2005). Price, brand cues and banking customer value. **International Journal of Marketing** ,Vol 23, No 3 , pp.273-291.

-Vesel, P., &Zabkar, V. (2009). Managing customer loyalty through the mediating role of satisfaction in the DIY retail loyalty program. **Journal of Retailing and Consumer Services**, No. 16. pp. 396–406.