A STUDY ON THE CORRELATION AMONG BRAND IMAGE, PERCEIVED RISK, AND PURCHASE INTENTION IN FOOD AND BEVERAGE INDUSTRY

Chia-Jen HUNG

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A Study on the Correlation among Brand Image, Perceived Risk, and Purchase Intention in Food and Beverage Industry

Chia-Jen HUNG[1]

Abstract

Food and beverage industry, among leisure industries in service industry, appears the fiercest competition in past years. In face of the violent competition in the market, food and beverage industry gradually emphasizes and understands the management of brands, designs experiencing environment, creates atmosphere and situations, as well as shapes customer experience and consumer experience to satisfy consumers' desires and needs. Since brand has become the important asset for the sustainable development of an enterprise, a brand could retain customers and attract customers for several times of consumption. Aiming at the customers of The Grand Hi Lai Hotel, total 300 copies of questionnaire are distributed, and 242 valid copies are retrieved, with the retrieval rate 81%. The research results show significantly negative effects of 1.brand image on perceived risk and 2.perceived risk on purchase intention as well as remarkably positive effects of 3.brand image on purchase intention. According to the results, suggestions are proposed, expecting to help food and beverage industry establish brand image, effectively grasp consumer needs, and attract consumers' visit to achieve the goal of sustainable management.

Keywords: food and beverage, brand image, perceived risk, purchase intention.

[1] General Education Center, Nanya Institute of Technology, Taoyuan, TAIWAN. E-mail: hungren2002@yahoo.com.tw

Introduction

Owing to the change of domestic economic structure in past years, the increasing employment population enhances national income and production value in service industry. Among leisure industries in service industry, including hotel industry (hotels, motels, resorts), food and beverage industry (fine dining restaurants, chain restaurants, garden restaurants, KTV restaurants, compound restaurants), and tourism (travel agency, recreation areas, resorts), food and beverage industry reveals the fiercest competition. Current food and beverage industry has formed the competitive climate. Along with the evolution of industrialization and urbanization in past years, dining-out population is annually increasing. A lot of businesses discover such a huge need for dining out and invest in food and beverage industry so that food and beverage industry constantly expands and is about to become oversupply. It results in the fierce competition in food and beverage industry. A restaurant does not simply provide food and wait for consumers. As dining-out has entered the age of gold, dining-out industry has advanced from purely supplying food to presenting various leisure functions. Consumers no longer ask for food, but request the flavor & characteristics of food, the decoration of restaurants, the atmosphere in the dining place, and the service quality of restaurants.

Diet becomes a culture and art, and food and beverage industry could not retain customer simply with dishes and flavor. In face of the fierce competition in the market, brand design, market strategy, characteristics & innovation, menu design, service quality, and decoration should be worked on. Food and beverage industry gradually stresses on and realizes the management of brand, designs experiential environment, creates atmosphere and situation, and shapes customer experience to satisfy consumers' desires and needs. Since a brand has become a primary asset for the sustainable development of an enterprise, a brand could retain customers and attract customers' several times of visits. Consumers would take brand into account in the beginning of shopping that consumers and brand shows close correlations, as natural as the relationship between people. A brand with higher image value could attract consumers. Furthermore, consumers with higher brand image would give higher evaluation to the product to further induce the purchase intention and the repurchase motivation. In this case, establishing unique image positioning in consumers' mind, effectively grasping consumer needs, attracting consumers' visits, and having consumers be willing to visit become the critical issues for the management of food and beverage industry at current stage.

Literature review

Brand image

Park & Tussyadiah (2016) defined brand as the tool for consumers identifying a product, the reference for consumer making purchase evaluation, instead of the experience, and the consistent guarantee of brand source and quality. Moreover, a brand could assist consumers in identifying goods in the market and distributors in convenient management as well as enhance the uniqueness of products. From past research on brand image, Chiang *et al.* (2014) defined brand image as consumers' brand ideas, which were mostly subjective perception and formed through consumers' rational and emotional interpretation. Moreover, brand image did not exist in the technology, function, and entity of a product but was shaped by the influence of relevant marketing activity, environment factor, and acceptors' characters. When taking brand image into account, the perception presented by the fact would be more important than the fact. Grohs & Reisinger (2014) defined a brand as a name, symbol, design, or mark to manifest a manufacturer's goods and services and have a product enhance the function and profit as well as other value (Line *et al.*, 2016). They regarded brand image as the function composed of the interaction between acceptors and product stimulation, e.g. product attributes, sponsors, marketing combination, people's feeling, personal value, experience, user association with brand, and many situational variables (Huang, 2014).

Referring to Chung *et al.* (2015), three dimensions for brand image are defined as below: (1) Functionality: The internal benefit when consuming products or services and reflecting the product-related attributes. Such benefits are generally connected with basic motivation of physiological and security needs and involve in the desires for problem-solving or avoidance; (2) Experience: Related with product use or service acceptance and reflecting product-related attributes. Such benefits satisfy experiential needs, e.g. sensory enjoyment, diverse and cognitive stimuli; (3) Symbolism: External benefits when consuming products or services, which normally respond to non-product attributes and are related to social identity or personal performance and outer-directed and self-respect potential needs. In this case, consumers might stress on the reputation, exclusiveness, and fashion of a brand as it is related to self-concept. Symbolic benefits should present major relationship with social, public, and symbolic products (Tseng, 2015).

Perceived risk

Rahman & Areni (2014) first proposed the idea of perceived risk in consumer behavior and defined perceived risk as the subjective awareness that merely when the existence of perceived risk was aware would the effects of risks be influenced. Besides, the implied risk contained the uncertainty and effect of the results. Afterwards, perceived risk was broadly applied to explain various

consumer behaviors. Past research definitely pointed out the effect of perceived risk on consumer behavior, as consumers expected to pursue the maximal benefits in the purchase process. In this case, consumers would avoid possible losses caused by risks, i.e. the method to avoid errors (Simoes, Dibb, & Farhangmehr., 2015). Deslandes & Goldsmith (2015) defined perceived risk as possible losses when pursuing a desire. Nok *et al.* (2017) assumed that consumer motivation of making purchase decision aimed to achieve certain purchase objective, and the existence of risk elements had consumer not being able to predict whether the intentionally purchased product would achieve the predicted purchase objective. Uncertainties might be resulted from some factors, e.g. products, brand, purchase location, and purchase method. Horner & Swarbrooke (2016) regarded perceived risk as subjective expectation of a potential loss, and the occurrence probability might cause distinct results. Ozbek *et al.* (2015) conceptualized the definition of perceived risk as the certainty to perceive the occurrence possibility of an event (occurrence probability) and the assumption of the effect after the occurrence of the event (occurrence result). Hunf, Cheng, & James (2016) conceptualized the idea of perceived risk that a consumer would appear perceived risk when realizing the consumption behavior not satisfying the consumption objective.

Referring to Chen *et al.* (2016), the following dimensions are proposed for perceived risk in this study: (1) Physical risk: referring to the risk of services offered by food and beverage businesses resulting in physical damage; (2) Physiological risk: referring to the risk of services offered by food and beverage businesses not achieving the expected result to damage self-respect or self-perception; (3) Functional risk: referring to the risk caused by employee education & training, equipment, and technology of food and beverage businesses not reaching the expected performance.

Purchase intention

Smith & Murphy (2015) defined purchase intention as a consumer's subject tendency to certain product, which could be the important indicator to predict consumer behavior. Gomez, Lopez, & Molina (2015) proposed that purchase intention could be used for predicting purchase behavior. For this reason, purchase intention was the most accurate predisposing factor in marketers predicting customers' purchase behaviors. Nevertheless, purchase behavior was a decision-making process. A consumer, in order to satisfy needs, would search for relevant information according to the experience and external environment. When information was accumulated to certain quantity, the consumer would decide to purchase certain goods through evaluation and consideration, comparison and judgment (Oladepo & Abimbola, 2015). Cheong *et al.* (2014) considered that purchase intention might be formed when consumers presented good impression and attitudes towards certain products or brands. In other words, purchase intention referred to subjective probability to purchase specific product or brand. Kwok,

Wong, & Lau (2015) pointed out purchase intention as the possibility of a consumer tending to purchase the product. The higher purchase intention stood for larger purchase probability, and consumers with positive purchase intention would form positive commitment (Huang *et al.*, 2014). Rodrigo & Hendry (2015) regarded purchase intention as the psychological state of a consumer planning to consume specific brand in certain period. Meanwhile, it was the probability and possibility of a consumer taking or having real purchase reaction.

With literature review, perceived value, as proposed by Lee (2016), is used for measuring purchase intention in this study. The variables of (1) possible to purchase, (2)intention to purchase, and (3)considering to purchase are the dimensions for purchase intention.

Research hypothesis

Wang *et al.* (2014) indicated that customers could reduce regret and loss or dissatisfaction through high brand image. Apparently, consumers would reduce the purchase risk with brand image that high brand image could help customers select goods and avoid possible risks after purchase (Line *et al.*, 2016). Yang, Liu, & Li, (2015) described the relationship between brand image and perceived risk that high and good brand image represented the excellent attribute and function of the product, which would be stable in use and show guarantee. As customers would not worry about the expectation after purchase in the purchase process, the possibility of perceived performance risk and psychological worry to result in risk would be reduced (Huang, 2014). The following hypothesis is therefore proposed in this study.

H1: Brand image presents significantly negative effects on perceived risk. Nok *et al.* (2017) revealed the negative relationship between perceived risk and purchase intention, meaning that an enterprise should reduce the perceived risk of products and enhance consumer trust of products to enhance the purchase intention. Tajeddini & Nikdavoodi (2014) pointed out the effect of perceived risk on consumers' purchase behavior and decision-making. Chen *et al.* (2016) considered that the more perceived risk of consumers would reduce the purchase possibility; consumers would reduce risks by collecting information before purchase. Hunf, Cheng, & James (2016) discovered that participants' risk perception would affect the purchase intention. Groups with high risk perception showed more purchase intention of insurance than those with low risk perception. Wang & Tsai (2014) stated that ones with experience in medical dispute presented higher intention of medical liability insurance, and 60% Chinese medicine practitioners agreed with the usefulness of insurance for dispute. Accordingly, the following hypothesis is proposed in this study.

H2: Perceived risk reveals remarkably negative effects on purchase intention. Kwok, Wong, & Lau (2015) indicated that brand image would strongly influence consumer opinions about an enterprise, and consumers were likely to purchase

products of an enterprise with good image. Tseng (2015) mentioned that consumer perception of brand image would influence the product evaluation and selection and further affect the purchase intention. Woo, Kim, & Uysal (2015) revealed that consumers' perceived brand image would affect the decision of purchase behavior (Huang *et al.*, 2014). Xu *et al.* (2016) argued that using consumers' product knowledge as the competition strategy could win consumer trust and encourage consumers purchasing products. Lee (2016) indicated that an enterprise actively enhancing brand image would enhance consumers' perceived product quality and benefit consumers' purchase behavior. Chung *et al.* (2015) regarded brand image as the association in consumers' mind with brand, while product image, corporate image, national image, and user image would positively affect purchase behavior. Chiang *et al.* (2014) considered that the better brand image could have emotional consumers appear impulsive purchase. As a result, the following hypothesis is proposed in this study.

H3: Brand image shows notably positive effects on purchase intention.

Research method design

Operational definition and measurement of variable

Brand image. Brand image contains three dimensions of functionality, experience, and symbolism. The scale is referred to Chung *et al.* (2015). The overall reliability coefficients of functionality, experience, and symbolism show 0.84, 0.80, and 0.81.

Perceived risk. Perceived risk includes three dimensions of physical risk, physiological risk, and functional risk. The scale is referred to Chen *et al.* (2016). The overall reliability coefficients of physical risk, physiological risk, and functional risk reveal 0.82, 0.85, and 0.83.

Purchase intention. Referring to Lee (2016), purchase intention covers three dimensions of possible to purchase, intention to purchase, and considering to purchase. The overall reliability coefficients of possible to purchase, intention to purchase, and considering to purchase appear 0.88, 0.90, and 0.87.

Research object

Aiming at The Grand Hi Lai Hotel, the customers are distributed 300 copies of questionnaire. Total 242 valid copies are retrieved, with the retrieval rate 81%. The professional aesthetic architecture and the international experience of hotel management have The Grand Hi Lai Hotel be the most elegant and honorable landmark in southern Taiwan. Hi Lain could provide the best-quality professional service for the reputable international accommodation quality and cuisine. The Grand Hi Lai Hotel positively expands the branches for dining and has more than

10 profession cooks lead up to 13 Chinese, western, and Japanese restaurants and bakeries. The designed comfortable dining environment presents luxury private rooms and relaxing atmosphere and offers authentic cuisine and quality dining services.

Verification of reliability and validity analysis

The reliability of the research dimensions achieves 0.7, showing high reliability of the research dimensions. The construct validity of the research scales is analyzed with Confirmatory Factor Analysis. From Table 1, the research scales reveal good convergent validity and construct validity.

Table 1: Confirmatory factor analysis

research dimension	overall fit	analysis result
brand image	X2=0(P<0.001); DF=0; GFI=1.00; CFI=1.00	excellent overall model fit
perceived risk	X2=0(P<0.001); DF=0; GFI=1.00; CFI=1.00	excellent overall model fit
purchase intention	X2=0(P<0.001); DF=0; GFI=1.00; CFI=1.00	excellent overall model fit

Results

Correlation analysis

From *Table 2,* brand image, perceived risk, and purchase intention present remarkable correlations, revealing the possibility of multicollinearity among such research dimensions. Nested Model could be used for solving such a problem. The notable correlations among research dimension also reveal the consistency with research hypotheses.

Table 2: Correlation analysis

research dimension	α	brand image	perceived risk	purchase intention
brand image	0.83			
perceived risk	0.84	0.25**		
purchase intention	0.88	0.30**	0.32**	

Overall model discussion

From *Table 3*, the overall model fit standards $\chi2/Df=1.733$, smaller than the standard 3, RMR=0.005, showing the appropriateness of $\chi2/DF$ and RMR. Besides, chi-square value is sensitive to sample size that it is not suitable for directly judging the fit. However, the overall model fit standards GFI=0.983 and AGFI=0.924,

higher than the standard 0.9 (the closer GFI and AGFI to 1 reveals the better model fit) that this model presents good goodness-of-fit indicators.

Table 3: Overall Linear Structure Model Analysis

	X2/Df	1.733
Overall fit	GFI	0.983
	AGFI	0.924
	RMR	0.005

*Note: * stands for p<0.05, ** for p<0.01, *** for p<0.001.*

Research hypothesis discussion

Since each Nested Model shows a degree of freedom difference, chi-square differential test is utilized in this study for the research hypotheses. When the difference in chi-square value between Nested Model and theoretical model reaches the significance, the path coefficient being set 0 is remarkable. The research results reveal that the model achieves the significance. The Nested Model analysis is shown in *Table 4* and the hypothesis test results are listed in *Table 5*.

Table 4: Nested Model analysis

Model	χ^2	$\Delta\chi^2$	GFI	CFI	RMSEA
Theoretical model	256.17		0.983	0.991	0.09
Model 1: Hypothesis test	259.79	3.62*	0.983	0.991	0.09
Model 2: Hypothesis test	264.90	5.11*	0.983	0.991	0.09
Model 3: Hypothesis test	271.22	6.32*	0.983	0.991	0.09

Table 5: Hypothesis test

research hypothesis	correlation	empirical result	P	result
H1	-	0.351	0.00	supported
H2	-	0.372	0.00	supported
H3	+	0.391	0.00	supported

Conclusion

The research results show notably negative effects of brand image on perceived risk in food and beverage, revealing that the more emphases on brand image could better reduce customers' perceived risk of food and beverage. It also reveals that an enterprise stressing more on brand image could better decrease consumers' doubts and reduce consumers' perceived risk of the food and beverage industry. Perceived risk presents remarkably negative effects on customers' purchase intention, showing that customers with higher perceived risk would appear lower consumption intention in food and beverage industry. Customers with perceived risk could easily be unpleasant to lose purchase intention. Consumers perceiving more risks would reduce the purchase possibility, and consumers would reduce risks by collecting information before purchase. Brand image of food and beverage allows consumers easily identifying product quality and confirming product differentiation of brand to further acquire psychological satisfaction through purchase behavior. It is discovered that the more positive brand image would form better brand perception to enhance consumers' purchase intention.

Suggestion

From the important research results and findings, following practical suggestions are proposed in this study.

1. Food and beverage businesses should promote more healthy and delicious food for the brand image, as they are the image of a successful food and beverage enterprise. It could also have consumers show stronger trust on the brand image. Food safety problems in past years have consumers gradually stress on food safety. "Health" and "safe" are regarded as the most important factors in food and beverage industry, while product flavor and cookery show less importance. In this case, paying attention to food health and safety could effectively reduce customers' perceived risk and enhance the purchase intention.

2. Food and beverage businesses could reinforce promotion activity, e.g. training frontline service staff as persuasive salespeople, cooperating with relevant enterprises for promotion, and utilizing popular media like food programs, food magazines, and newspaper columns to enhance restaurants' reputation and expand new customers. Products with GMP certificate or health food certificate could be promoted to reinforce brand image and product value, enhance customers' product symbolism, and allow consumers further understanding the safe product to effectively reduce customers' perceived risk and enhance the purchase intention.

3. Food and beverage businesses should provide more convenient and characteristic information channels, such as humorous & interesting or comparative advertisement and eye-catching signboards, so that consumers, who passively search for restaurant information, could more easily receive restaurant message to stimulate potential consumers. The advance of modern technologies has the Internet become the major information source of lots of consumers who are willing to spend time for searching restaurant information. For this reason, food and beverage businesses are suggested to provide user-friendly webpages, simplify operation interface, include pictures to make the webpages livelier, and provide deeper and diverse restaurant information to satisfy consumer needs in the diverse information and explain product contents and characteristics in details to effectively reduce consumers' perceived risk.

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