

Perceived Product Quality: Role of Extrinsic Cues

Anam Javeed^{*}, Sany Sanuri bin Mod Mokhtar[†], Ismail bin Lebai
Othman[‡] and Muhammad Yar Khan[§]

Abstract

Research regarding the impact of extrinsic product packaging cues on product quality perception is relatively new. The role of various extrinsic packaging elements on the product quality perceptions remain concealed. This study examined the character of product packaging cues in product quality perceptions. This study is grounded on “Signaling theory” which explains the role of environmental stimuli in the formation of perceptions regarding the product. The framework of the study has been proposed by combining comprehensive set of Brand name, Price, Country of Origin, Nutritional Label, Precautionary label, Halal Logo and Perceived product quality. The research was carried out in order to plug the gaps in the literature of consumer behavior and to generalize the results in the Pakistani consumer market. A set of 487 consumers from the shopping complexes of capital territory of Pakistan and Rawalpindi is used to obtain the results. Data was gathered using mall intercept method following multi stage sampling technique. The responses were analyzed using Statistical Package for Social sciences (SPSS) and Smart Partial Least Square (PLS). The SPSS was used for descriptive analysis whereas Smart PLS was used for inferential analysis. There is a scarcity of empirical studies which offer wide-ranging information regarding consumer mindset specifically is Asian context. This study contributes to the body of knowledge by testing the applicability of existing theories in an under developed country’s market. However, the significance of the investigation is that it offers comprehensive information about the product quality perceptions formed on the basis of extrinsic food packaging cues.

Keywords: Product Packaging cues; Perceived Product Quality; Signaling Theory

Introduction

Food quality has remained a major topic of interest from past decade. The packaged food quality is under debate in food industry, public as well as among researches (Moslehpour & Le Huyen, 2014). The food quality has become a topic of interest because of the following reasons.

^{*} Anam Javeed, Universiti Utara Malaysia, Sintok, Malaysia. Email: anam_javeed@oyagsb.uum.edu.my

[†] Dr. Sany Sanuri bin Mod Mokhtar, Universiti Utara Malaysia, Sintok, Malaysia.

[‡] Dr. Ismail bin Lebai Othman, Universiti Utara Malaysia, Sintok, Malaysia.

[§] Dr. Muhammad Yar Khan, COMSATS Institute of Information Technology.

Firstly, the scarcity of the food has engaged the attention of the researchers to probe into the quality issues (Ergin & Akbay, 2012). Secondly, the general public has become more concerned about the quality of the food (Ergin & Akbay, 2012). As an outcome of the consumer interest, debates are being carried out on nutrients, labels, and other quality indicating cues. Thirdly, the consumers in the developing countries have become more demanding and critical about the quality of the food. The quality differentiation has become a vital character to satisfy the consumer. Competing on the factor of price and homogeneity of the product alone is no more enough as the consumer seeks for quality products with heterogenous variety hence the positive packaging cues are being utilized the marketers to make consumer perceive that a particular product has a better quality (Akdeniz, Calantone, & Voorhees, 2013).

Packaging plays a pivotal role in marketing and a role of a silent salesperson to attract customers (ST Wang, 2013). Carefully designed attractive package not only provides physical protection to the enclosed objects but also provide information to customers (Ghani & Kamal, 2010). Packaging as the container of the product encompasses attributes such as shape, size, design, color, signs and labels(Blijlevens, Carbon, Mugge, & Schoormans, 2012). Unlike advertising, where consumers may encounter the advertisements in different places (e.g., on TV at home, on roadside billboards, or on radio while driving), consumers notice product packaging mostly at the point of sales and usually in retail stores(Kauppinen-Räsänen, Owusu, & Abeeku Bamfo, 2012; Wigley & Rachel Chiang, 2009). The visual cues in packaging are considered to have a prime importance because consumers are often under time pressure and give limited attention when choosing among competing brands and the visual packaging cues assist the consumer to take the right decision(ST Wang, 2013). The consumers when look at the packaging of the product tend to cognitively take a cue from them about the quality of the product (Brandt, Moss, & Ferguson, 2009). Nutrition labels are designed to promote healthy lifestyle, better food choice and balanced serving size (Darkwa, 2014). They also provide a prior to consumption nutritional information, while buying food products is a matter of concern for researchers (Brandt et al., 2009). The brand name assists the consumers to recognize the product with much ease; hence it works as memory cue allowing the consumer to recollect the information regarding the product (Chou & Wang, 2017). The brand is responsible for the formation of quality perceptions about the product of the certain brand and these perceptions play a crucial role in final decision making of the consumer (Winkielman, McIntosh, & Oberman, 2009).

Furthermore, discussing about the scenario of country of origin effect in Pakistani market, consumers base their opinions on the country of origin image of the product. Country of origin is an effective stimulus which impacts the consumer quality judgments about the product (Tran & Fabrize, 2013). A strong and positive country of origin image not only contributes to the image of the brand but also promotes the positive country image (Chattalas, Kramer, & Takada, 2008).

The attitude of consumers worldwide regarding the product quality is becoming an interesting topic (Tobler, Visschers, & Siegrist, 2011). The European consumer is more knowledgeable about the product packaging attributes and labelling (Van Doorn & Verhoef, 2011). The packaging and packaging information plays a lead role in the product evaluation and the quality perceptions in the behavioral cycle of western consumer (Lwin, 2015). The quality perceived out of food packaging cues is a topic of fervent discussion in Asian context (Karaduman, 2016). The packaging of the food and its attributes are not given much importance in developing countries as compared to the European market (Gelici-Zeko, Lutters, & ten Klooster, 2012). The research on food packaging cues and their impact on the product quality perception are relatively new in Pakistan (Zaidi & Muhammad, 2012).

In the field of marketing, consumer behavior has been given central importance as all the efforts are directed towards the consumer (Horner & Swarbrooke, 2016). Investigating the cognitive processes of consumers is the determinant of the successful product formation which can be in compliance with the consumer perceptions (Horner & Swarbrooke, 2016). The product in compliance with the quality perceived by the consumer is essential for the success of the product or service (Horner & Swarbrooke, 2016). The review of the past literature reveals that the investigation of the impact of various combinations of food packaging cues on the perceived product quality is an avenue for investigation (Draper et al., 2011; Loken & Joiner, 2010; Zannierah Syed Marzuki, Hall, & Ballantine, 2012). This particular study aims to investigate the impact of food packaging cues on the perceived food quality. Even though, the scholars have attempted to explain the phenomenon of perceived product quality with various perspectives (Argo & White, 2012), they tend to neglect the important aspect of extrinsic packaging cues (Wardy et al., 2017). In signaling context, the product quality perceptions are greatly influenced by the cues (Amine, Chao, & Arnold, 2005). Other researchers have majorly engrossed on product cues rather than the food packaging cues (Dopico et al., 2016). From the practical perspective, the packaged food industry in Pakistan has flourished (Zafar, Hashim, & Halim, 2017). The trend of

urbanization is increasing in Pakistan and urban consumers are changing lifestyles as compared to their rural counterparts (Euromonitor International, 2016). This trend has given a boost not only to the packaged food processing companies in Pakistan but also to the media houses to develop advertising campaigns. The food companies have invested in packaged food production but the perceptions of the consumers regarding the quality of them still remains uncertain (Euromonitor International, 2015). Thus, the major problem that this study aims to address is that how the food packaging cues of brand name, price, country of origin, nutritional label, precautionary label, Halal logo, impact the perceived product quality.

The specific objectives of this study are as follows

1. To determine the impact of food packaging cues on the perceived food quality.
 - i. To determine the impact of brand name as a food packaging cues on perceived product quality.
 - ii. To analyze the impact of country of origin on perceived product quality.
 - iii. To examine the influence of price as a quality indicator on perceived product quality.
 - iv. To investigate the extent of influence of nutritional label as product packaging cue on the perceived food quality.
 - v. To reconnoiter the magnitude of the impact of precautionary allergen label on perceived product quality.
 - vi. To probe the impact of Halal logo on product quality perception.

Literature Review

Pakistani Consumer Market

The Pakistani consumer market is less affluent as compared to other markets worldwide (Asian Review, 2014). The informal sector in Pakistan is supplementing the income earned from the formal sector by the consumer of Pakistan (Tariq & Khan, 2016). The consumption of packaged food items has relatively increased and gradually increasing. The media and the power of connectivity are altering the life styles of Pakistani consumers (Tariq & Khan, 2016). The population boost in Pakistan is 2.1% per year. A hefty 28% of the country's 200 million people are in the 15-29 age brackets. Only 38% of the population lives in towns and cities, leaving significant scope for urbanization. The booming informal from the annual remittances of \$18 billion also increases the consumption capacity and trend towards the packaged food increases (Asian Review, 2014). The marginal propensity to consume is greater than other Asian countries where savings are more encouraged. As the

urbanization and awareness spurs the trend of using packaged food items tends to increase.

Food Packaging

In the modern consumption environment packaging plays very important role in marketing process (Binninger, 2017). The packaging serves as a protective container and also as a platform for presenting information regarding the product. Packaging as a marketing tool comprises of many attributes and cues for instance shape, size, design, color combination, logos and labels (Russell, Burke, Waller, & Wei, 2017). The consumer is confronted with the information from variety of sources like commercials, videos internet etc. In the point of purchase, packaging delivers valuable information to the consumer aiding him to make purchase decisions (Simmonds & Spence, 2017). Due to increasing number of information sources it has been a challenge for marketers to effectively transfer the important information to consumers. Consumers have become skeptical and elusive as compared to the past and it is becoming hard and necessary for marketer to reach them with information (Ribeiro-Santos, Andrade, de Melo, & Sanches-Silva, 2017). The most advanced form of marketing tool is the product packaging as within the retail environment consumer comes across with the product and gets into contact with packaging (Simms & Trott, 2017).

Food Packaging Cues As Quality Signals

The resultant of both expected product quality and experienced product quality is called the product perceived quality (Poulsen, Juhl, Kristensen, Bech, & Engelund, 1996). Perceived quality is the general perception of the consumers about the product. The perceived quality is based on number attributes which a product possesses (Rungtrakulchai, 2018). The product comprises of an array of elements called the image variables that are not the part of the product physically but have a strong link to the product (Erickson, Johansson, & Chao, 1984). These image variables are called the extrinsic cues and these cues must be taken into account (Erickson et al., 1984). The main highlighted quality attributes of the product which were generally used as quality indicators were price, brand name and advertisement (Zeithaml, 1988). It is being highlighted that other than price, brand name and advertisements there are many other important signals which serve as a matter of sheer importance to the consumers (Zeithaml, 1988). Several authors have studied the relationship of labelling (Wansink, Park, Sonka, & Morganosky, 2000), advertising (Jaeger & MacFie, 2001), price (Rao & Monroe, 1989), brands and designation of origin (Dodds, Monroe, & Grewal, 1991) with consumer expectations.

The cues like the labels, allergen information, the religious certification logo, the aesthetic features etc are used for quality inference by the consumer (C. Spence & Velasco, 2018). The prime aim of the enterprises is to present the right blend of quality signals in the form of a product packaging to consumer in order to satisfy the consumer which ensures the success of the product in the market place (Wulf, Odekerken-Schröder, & Iacobucci, 2001). To provide the product with the required information and symbols is the main aim behind studying the perceptions of the consumer (Mueller & Szolnoki, 2010). Due to growing interest in the healthy and safe food items, the manufacturers provide products with increased enrichment and reduced unhealthy components (Vila-López & Küster-Boluda, 2018). The manufacturers also exhibit that safety and enrichment in the form of labels which serve as labels (Šebečić, Vedrina Dragojević, Vitali, Hečimović, & Dragičević, 2007).

Signaling Theory

Signals are inherent in the shopping environment. The signaling theory was proposed by (A. M. Spence, 1974). The term market signal was introduced by taking economic perspective in view (A. M. Spence, 1974). The concept was initially explained by predicting the checking the suitability of any job candidate by education level (Renwick, Redman, & Maguire, 2013). While in a shopping environment the consumer seeks for the signals while buying the product. The two parties involved while conveying the information through signaling process. One conveying the information (signaler), one is the information seeker (receiver) and signal itself (Connelly, Certo, Ireland, & Reutzel, 2011). Signalers tend to throw the positive signals by which they intend to communicate. The consumers tend to develop perceptions related to the unobserved quality of the product by referring to these signals. In this particular study, the signaling theory fits in as it aims to investigate the influence of the packaging cues which are nutritional label, precautionary label and Halal symbol on the perception formation of the consumer which will ultimately lead to quality judgment and appropriate food preference and selection. The theory states that in the shopping environment when the consumer looks for the stimuli for getting information. Similarly, in the shopping environment when the consumer is looking for the food product, they look for stimuli from which they can get the information. The food packaging cues serve as stimuli for the consumer from which they get the information and infer the quality of the product. These judgments lead to perceptions regarding unobserved quality if the product.

Key Variables Under Study

The study on the brand name as a quality indicating cue is still a lucrative research area on emerging consume markets(Shende, 2014). Indication of brand name is very important for consumers in quality judgments. A successful brand name plays vital role in quality perceptions(Winkielman et al., 2009). Brand name is a significant quality cue according to consumers in determining the quality prior to the usage as well as in purchase behavior(Shende, 2014). The dimensions which have been addressed in the literature are reliability, social approval and sense of prestige. The knowledge possessed by the consumer regarding the brand is a node in the memory of consumer to which variety of associations are linked. The brand awareness and image are vital dimensions for any enterprise(Janssen & Hamm, 2012). The knowledge regarding the brand plays a central role in the quality perceptions of the consumer (Alba & Hutchinson, 2000).

According to the suggestion that a comprehensive number of food packaging cues need to be pooled together in an emerging consumer market to study their impact on the product quality perceptions(Qasem, Baharun, & Yassin, 2016). Empirical and practical gaps still prevail regarding the impact of food packaging cues on quality perceptions in emerging market in general and Pakistani market in specific. This particular study aims to check the extent of relationship among brand name, price, country of origin, nutritional labels, precautionary labels and Halal symbol with food quality perception. The perceived product quality is a vital concept for academicians as well as practitioners. The manufacturers sell their packaged food products by embedding quality cues(Chaudhary, 2014). The consumer expects the quality from the actual usage of the product based on the judgments formed on these quality cues. The manufacturer and marketer are responsible for meeting the expectations of the consumers. The need of investigation with food packaging cues has been emphasized by (Nilforushan & Haeri, 2015). The need of this study has also been stressed by (Hussain & Ali, 2015).

Favorable cues build long term relationship with the consumers (Kaya, 2016). The price tag is considered to be a significant quality indicating cue by the consumer. The product for which a relatively higher price is paid has superior quality (Monroe, 1976) .The food packages are no more only containers of the product but they are silent salesmen (Janssen & Hamm, 2012). The information regarding the nutritional value is imprinted on the packages. The nutritional information gives an idea about the goodness and healthfulness of the food. Different researchers in European markets have been conducted

but there is a space in literature which needs to be filled in Asian emerging market (Dawar & Pillutla, 2000). Overall, the revisiting of the literature establishes that a holistic model with a comprehensive set of packaging cues is needed to explain their relative impact on product quality perceptions. The packaging cues of brand name, price and country of origin are investigated widely in the Western markets. Similarly, the research on nutritional labels and precautionary labels have also been investigated in western arena and on western consumers but there is a deficiency of data from other markets like Asian and emerging ones. The research on Halal logo is rare not only in European markets but specifically in Asian Muslim countries. The present study has a potential to yield some interesting results from Pakistan.

Determining the impact of brand name on the product quality perception, it is disclosed that the brand name affects the product quality perceptions positively (Loken & Amaral, 2010). Furthermore, it is asserted that the country of origin labels provides a sense of satisfaction and superior quality to the consumers (Hsieh, Pan, & Setiono, 2004). The products from specific destinations hold a unique position in minds of consumers regarding quality (Haque, Anwar, & Sarwar, 2015). Very few studies have considered precautionary label as a quality predictor for the packaged food product (Cornelisse-Vermaat, Voordouw, Yiakoumaki, Theodoridis, & Frewer, 2007). The precautionary labels present information regarding potential allergens to sensitive consumers (Voordouw et al., 2009). There is a lack of empirical evidence regarding precautionary label usage and perceptions from Asian in specific Pakistani consumer market (DunnGalvin et al., 2015). Discussing further about the cues and the foods which are Halal are allowed for consumption in Islam. The presence of Halal logo on food packages provides a sense of religious compliance to the buyer (Abdul Latiff, Mohamed, Rezai, & Kamaruzzaman, 2013). The logo of Halal symbolizes health, safety and quality of the food. The Halal food is preferred not only by Muslims but non-Muslims also because of their quality perceptions. Although the Muslims are allowed to consume Halal only but the research of Halal logo in consumer behavior is still under infancy and requires results from variety of markets to generalize the results (Sandıkçı, 2011).

Theoretical Framework

The majority of research that examines the impact of marketing variables on perceived product quality has concentrated on price. More than 90 studies in the past 30 years have examined this relationship. Despite expectations of a positive relationship, results of these studies have been mixed. In several studies (Friedman, 1967; Lichtenstein &

Burton, 1989; Swan, 1974), overall association between price and perceived product quality was positive but of low magnitude. Other studies have reported results that are negative (Riesz, 1978), nonlinear (Peterson, 1970) or variable across products being judged (Lichtenstein & Burton, 1989). Several explanations have been offered for these differing outcomes. Scholars have suggested that methodological differences and demand artifacts could be responsible. The price-objective quality relationship and consumer expertise have also been shown to moderate this relationship (Rao & Monroe, 1988). A meta-analysis by suggests that a generalized positive relationship between the two variables exists (Rao & Monroe, 1988).

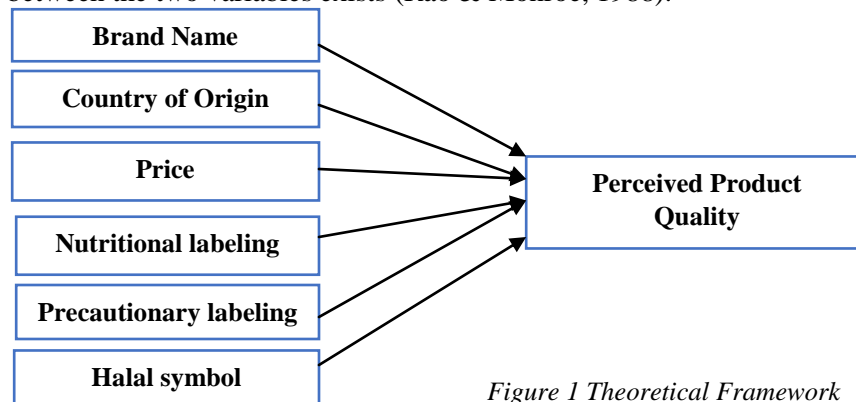


Figure 1 Theoretical Framework

Methodology and Analysis

Data Collection and Response Rate

The data was obtained from the big and famous malls of the two big cities of Pakistan. As the capital of Pakistan, Islamabad is the most developed city. It has up to date amenities, infrastructure and large number of educational institutes. Islamabad, the capital city of Pakistan is located in the federal capital territory of Pakistan. It is the most diverse and metropolitan city of the country. Rawalpindi is the neighbour city of Islamabad and also termed as twin cities. Together they form Islamabad-Rawalpindi metropolitan area. Rawalpindi has a population of approximately 2.506 million which diverse from all over the country. Taking into consideration the sample size of 384 is suitable for the population which is more than 1 million (Krejcie & Morgan, 1970). A sample size between the ranges of 100-400 has been used for structural equation model (Joe F Hair, Ringle, & Sarstedt, 2011). The overly large samples beyond 500 are prone to type II error. Type II error occurs when the hypotheses get accepted due to large sample size which were supposed to be rejected originally (Sekaran & Bougie, 2016). By

considering all the issues of sample size and limitations, this study consisting of 69 scale (3 items of demography) decided to select an optimal sample of 504 consumers with a ratio of (7:1). After calculating the sample proportions city wise, from the list of shopping malls, major shopping centres were selected from both of the cities based on the high customer turnout, geographical coverage and popularity. The strategy used in this particular study for collecting data from general consumer was to use systematic random sampling via mall intercept method. The malls were selected on the basis of geographical coverage, customer turnout and popularity.

Table 1: Selected malls and selection criteria

City	Mall	Criteria for selection
Islamabad	Centaurus Mall	Geographical coverage, High customer turnout, Popularity
Islamabad	Beverly Centre	
Islamabad	Kohsar Market	
Rawalpindi	CSD Mall	
Rawalpindi	CSD Super Mall	
Rawalpindi	Green valley premium Hyper mart	
Rawalpindi	Rafay Mall	

Although the decided sample size for study was hefty enough to accommodate for the error issues, yet further supplementary data was collected in the scientific sampling scheme. Besides, it is an eminent fact while conducting the survey is that the sample must be an appropriate illustrative of the target population. The truly representative sample makes it an absolute fit for estimation the population parameters. As the data for the study was done following a rigorous sampling procedure comprising of time and day there is a chance of bias because of any overlooked sample or due to any inadequacy while measurements. The researcher overcame the issues of late respondents by collecting the data personally from the consumers directly at the shopping complexes by adhering to the fixed schedule.

Out of 504 distributed questionnaires all of them were received back on the spot by the researcher, attaining the goal of 100% response rate however, 478 questionnaires were rendered usable out of 504 distributed questionnaires hence achieving a valid response rate of 95%. As there was direct contact with the respondents there was no issue of questionnaire rejection on the grounds of unreturned questionnaires. However, the researcher came across the issue of consumers'

unwillingness to participate in the survey which is considered to be normal in surveys. All the questionnaires were observed promptly after being filled by the respondents. The response rate is calculated by the number of respondents who responded to the questionnaire by the sample size which was determined for the study(Hamilton, 2009)

Table 2: Summary of Response Rate

City	Malls	Population	%age of sample	Questionnaire distributed	No. of responses	Response rate
Islamabad	C M	1700	10.5%	53	53	100%
Islamabad	B C	1600	9.9%	50	50	100%
Islamabad	K M	1900	11.8%	60	60	100%
Rawalpindi	CSD Mall	2600	16.1%	81	81	100%
Rawalpindi	CSD Super Mall	2300	14.3%	72	72	100%
Rawalpindi	G V P hyper mart	2800	17.4%	88	88	100%
Rawalpindi	R M	3200	19.8%	100	100	100%
		16100	100%	504	504	100%

Multicollinearity Test

Multicollinearity occurs when two exogenous variables are highly correlated with each other (Joseph F Hair, Black, & Babin, 2010). Having high multicollinearity increases the chances of errors and damages the regression values(Chatterjee & Yilmaz, 1992). Although, using PLS minimizes the need of normality tests, suggests the need of multicollinearity test prior to examining any theoretical model(Joseph F Hair et al., 2010). The two methods applied in this study for checking multicollinearity which are correlation matrix and second method is condition index. Having a correlation coefficient of 0.9 or above indicates that multicollinearity exists. In order to fulfil the condition for multicollinearity condition index should be less than 30, tolerance value should be not be less 0.20 and variance inflated factor (VIF) should be less than 5. Table 2 shows that coefficients of correlations were less than 0.90, tolerance values were above 0.20 and VIF values were less than 5 multicollinearity did not exist in the study.

Table: 2 Multicollinearity Test

Variables	Tolerance	VIF	Condition Index
Brand Name	0.725	1.380	14.374
Country of origin	0.684	1.462	17.074
Price	0.547	1.828	22.723
Nutritional label	0.521	1.921	24.991
Precautionary label	0.422	2.368	26.194
Halal logo	0.493	2.027	30.363

Respondent Profile

For a comprehensible discussion of results, it is necessitated to understand the profile of the respondents. Table 3 shows the clear canvas of the profiles of the respondents. Total of 478 respondents were put to analysis.

Table 3: Respondents' Profile

Demography	Indicator	Frequency	Percentage
Gender	Male	193	40.4
	Female	285	59.6
Education	High school	206	43.1
	Bachelor	167	34.9
	Masters	71	24.5
	Doctorate	34	7.1
Age Group	18-25	160	33.5
	26-33	167	34.9
	34-41	117	24.5
	41-above	34	7.1

The results exhibit that 59.6% of respondents who participated in the survey were female however, 40.4 of the participants were males. Furthermore, 43.1% of the participants of the study possessed high school qualification and 34.5% possess bachelors. Academic qualification of masters was acquired by 24.5 % of the respondents and doctorate was held by 7.1% of the consumers. Thereafter, 33.5% of the respondents fall into the age bracket of 18-25 years. Maximum respondents 34.9% were found to be in the age limits of 26-33 years. Rest of 24.5% of the consumers were in age limit of 34-41 years and 7.1 of the remaining consumers were 41 years and above.

Descriptive Analysis

The descriptive analysis is performed in order to describe the primary features of the data set. Descriptive analysis is basically explained via mean, standard deviation, variance in order to obtain a general view about how the respondents have responded to questionnaire (Sekaran & Bougie, 2010).

Table 4: Descriptive Statistics

Construct	N	Minimum	Maximum	Mean	Standard Deviation
Brand name	478	1	5	4.103	0.5746
Country of origin	478	1	5	3.8316	0.8513
Price	478	1	5	3.9979	0.6455
Nutritional label	478	1	5	3.7417	0.6617
Precautionary label	478	1	5	3.975	0.6527
Halal logo	478	1	5	4.0827	0.6368
Perceived quality	478	1	5	4.0553	0.6787

Five points scale 1= strongly agree, 5= strongly disagree

The outcomes of the descriptive analysis depict that the mean of all the variables lies between 3.7417 to 4.103. These values lie in a tolerable range as well as they are all above the average value. The scores of standard deviation lies between the range of 0.5746 to 0.8513 which are among the acceptable range. It can be explicitly established that all the variables possess an adequate and reasonable level of implementation.

Content Validity

The content validity connotes the suitability of the indicators to measure the main concept under the study. Moving on further, principal component analysis (PCA) is preferred by as (Vinzi, 2003). Principal component analysis (PCA) is being used by Smart PLS, hence it was used to generate all the factor loadings for the indicators. It is necessitated that the respective items must portray highest loadings on theory construct as compared to any other construct. All the indicators selected for the study were selected only after assuring that they belong to the respective constructs. Even though the indicators were sound yet factor analysis was performed in order to support statistically. Table 4.6 clearly exhibits that the loadings of all the items are highest on their own constructs then other constructs. All the indicators have significantly high loadings.

It is elaborated that the criteria for item loading by terming that loading which is less than 0.3 is poor(Krauss et al., 2008). The factor loading which lies within the range of 0.31 to 0.50 is fair. If the values lie among 0.51 to 0.60 they are supposed to be moderate. 0.61 to 0.80 are considered to be moderately strong and 0.81 to 1 are very strong. Table 5 shows that all the indicators have loadings higher than 0.61 which moderate or strong loading for every indicator.

Table 5: Content Validity

	BN	COO	HL	NL	PL	PQ	PR
BN1	0.737	0.242	0.287	0.278	0.292	0.275	0.288
BN2	0.752	0.158	0.206	0.240	0.243	0.282	0.260
BN3	0.704	0.215	0.214	0.292	0.227	0.263	0.299
BN4	0.726	0.225	0.277	0.297	0.274	0.317	0.294
BN5	0.684	0.261	0.318	0.239	0.294	0.326	0.320
BN6	0.670	0.249	0.303	0.253	0.295	0.297	0.199
COO1	0.229	0.775	0.464	0.229	0.314	0.316	0.256
COO2	0.259	0.856	0.416	0.270	0.317	0.312	0.344
COO3	0.299	0.859	0.454	0.274	0.352	0.358	0.344
COO4	0.208	0.648	0.253	0.396	0.368	0.233	0.240
HL1	0.272	0.331	0.635	0.312	0.486	0.435	0.368
HL3	0.248	0.267	0.678	0.233	0.310	0.384	0.277
HL4	0.275	0.419	0.719	0.339	0.400	0.490	0.302
HL5	0.264	0.357	0.741	0.283	0.405	0.411	0.355

Future of Marketing and Management (FMM 2017)

HL6	0.228	0.394	0.705	0.282	0.317	0.363	0.313
HL7	0.262	0.398	0.806	0.360	0.438	0.428	0.347
HL8	0.294	0.415	0.728	0.423	0.476	0.403	0.372
HL9	0.315	0.328	0.679	0.402	0.540	0.383	0.328
NL1	0.310	0.285	0.424	0.719	0.429	0.374	0.370
NL2	0.266	0.205	0.235	0.739	0.397	0.292	0.305
NL3	0.264	0.306	0.328	0.752	0.402	0.401	0.341
NL5	0.270	0.236	0.384	0.721	0.417	0.342	0.411
NL6	0.231	0.236	0.273	0.665	0.474	0.315	0.317
PL10	0.305	0.240	0.442	0.414	0.692	0.446	0.371
PL4	0.251	0.384	0.441	0.440	0.701	0.452	0.407
PL5	0.215	0.262	0.324	0.376	0.647	0.354	0.293
PL6	0.297	0.359	0.445	0.445	0.711	0.447	0.365
PL7	0.223	0.277	0.363	0.325	0.729	0.371	0.223
PL8	0.259	0.291	0.450	0.467	0.750	0.429	0.303
PL9	0.332	0.271	0.456	0.430	0.732	0.439	0.349
PQ1	0.322	0.339	0.413	0.319	0.442	0.712	0.343
PQ2	0.308	0.344	0.529	0.383	0.480	0.743	0.373
PQ3	0.312	0.361	0.378	0.397	0.471	0.726	0.282
PQ4	0.264	0.280	0.423	0.394	0.449	0.722	0.289
PQ5	0.273	0.276	0.443	0.350	0.452	0.785	0.368
PQ6	0.355	0.261	0.408	0.329	0.400	0.777	0.390
PQ7	0.340	0.289	0.470	0.414	0.455	0.758	0.389
PQ8	0.268	0.236	0.400	0.316	0.392	0.724	0.285
PQ9	0.253	0.097	0.293	0.210	0.313	0.537	0.133
PR4	0.314	0.322	0.379	0.319	0.405	0.412	0.728
PR5	0.223	0.242	0.247	0.341	0.279	0.244	0.722
PR6	0.345	0.237	0.299	0.394	0.345	0.301	0.775
PR7	0.276	0.263	0.299	0.403	0.311	0.307	0.752
PR8	0.272	0.315	0.464	0.364	0.373	0.353	0.741

Hypotheses Testing

Primarily, the function of algorithm was applied to produce the path coefficients. Furthermore, as a next step bootstrapping is carried out with 500 sample size. The sample size selected while running Smart PLS must be greater than the actual sample size which is a condition recommended by (Joseph F Hair, Ringle, & Sarstedt, 2013). Greater sample size was being used by (Lowry & Gaskin, 2014)

After determination of goodness of fit of the model, path coefficients are determined. The path coefficients are used in order to inspect the hypothesized relationships. The predictable t-tests are not assessed in PLS (Barclay, Higgins, & Thompson, 1995). Non-parametric procedures such as bootstrapping are used for generation of significance of tests. This study utilized bootstrapping technique which is implanted in Smart PLS to check out the statistical significance of the path coefficients.

Table 6: *Path coefficients of Direct Paths (Main Hypotheses)*

Hypotheses	Relationship	B-values	T-values	P-values	Decision
H1	BN-->PQ	0.123	2.910	0.004	Accepted
H2	COO-->PQ	0.027	0.646	0.519	Rejected
H3	PR-->PQ	0.082	2.056	0.040	Accepted
H4	NL-->PQ	0.097	2.094	0.037	Accepted
H5	PL-->PQ	0.272	4.620	0.000	Accepted
H6	HL-->PQ	0.261	2.056	0.040	Accepted

H1: It has been hypothesized in the study that brand name has a significant impact on consumer's product quality perception. The bootstrapping results also show that brand name casts a significant impact on the product quality perceptions ($\beta = 0.123$, $t = 2.910$, $p = 0.004$).

H2: The results ($\beta = 0.027$, $t = 0.646$, $p = 0.519$) indicate that no significant relationship exists between country of origin perceived product quality.

H3: Third hypothesis of the study states that price has a positively significant impact on perceived product quality. Bootstrapping results provides support to the hypothesis ($\beta = 0.082$, $t = 2.056$, $p = 0.040$).

H4: Nutritional label casts a significant impact on product perceived quality. The results reveal that there exists a positively significant relationship between nutritional label and product perceived quality ($\beta = 0.097$, $t = 2.094$, $p = 0.037$), hence accepting the hypothesis.

H5: Precautionary labels casts a significant impact on product perceives quality. The results show that ($\beta = 0.272$, $t = 4.620$, $p = 0.000$) precautionary labels and perceived product quality has highly and significantly associated.

H6: Halal logo casts a significant impact on product quality perception. The outcome of the bootstrapping confirms the hypothesis ($\beta = 0.261$, $t = 2.056$, $p = 0.040$).

The direct effect hypotheses were studied separately as shown by the first six hypotheses and then rest of the six hypotheses were studied with interaction effects with the moderator. The first hypothesis that brand name casts a significant impact on perceived product quality was supported by the bootstrapping. The second hypothesis, that country of origin has a significant impact on perceived product quality, was not supported. The third hypothesis, that price has a significant impact on perceived product quality was supported. The fourth hypothesis, that the nutritional label has a significant impact on perceived product quality was also supported and proved by the results. The fifth hypothesis, that the precautionary label has a significant impact on perceived product quality, was accepted with significance. Lastly, the sixth hypothesis, that Halal label has a significant impact on perceived product quality, was supported by the results of analysis and accepted.

Discussion

The main objective of the study is to *determine the impact of food packaging cues on perceived product quality*. The first research objective under the main objective was to determine the impact of brand name as a food packaging cues on perceived product quality. For achieving this objective, first hypothesis of the (H1) was devised. Brand name was taken as an independent variable and perceived product quality was taken as a dependent variable. The first hypothesis was accepted using PLS bootstrapping technique. The prevalence of positive and significant relationship between brand name and perceived product quality can be ascribed to the likelihood that brand name as a packaging element is considered as an essential quality cue. The brand name aids the consumer to develop perceptions regarding the packaged food product. The result of the hypothesis could also be explained like product quality is judged by the consumer prior to the usage by taking into consideration the brand name. These results are in line with outcomes of (Qasem et al., 2016) whose findings also reveal that brand name casts positively significant impact on the quality perceptions of the consumers. The second hypothesis of the study H2, which was defined as a positive and significant relation exists between country of origin and perceived product quality was not accepted as shown by the results. The absence of the significant relationship between the variables can be attributed to the fact that country of origin cue is subjugated in the presence of other marketing cues. The results can be otherwise explained that Pakistani consumers are less aware of the country of origin labelling as most of researches were being carried out in European markets. The results corroborate with the findings of (Kalicharan, 2014).

The third hypothesis H₃ of the study proposed that price impacts the perceived product quality significantly. The hypothesis was accepted. The positively significant relationship possibly emerges from the fact that Pakistani packaged food consumer is becoming health conscious, they expect the value from the product in exchange of money as well as they believe in the genuine of the product. The results of the study agree with the findings of (Miyazaki, Grewal, & Goodstein, 2005) who claimed that the price of the product is a sheer indicator of quality for the consumers prior to its actual usage.

The subsequent hypothesis H₄ which measured the direct relationship stated that nutritional labels casts a significant impact on perceived product quality. The analysis of the study supported the result. The positively significant results can be attributed to the probability that Pakistani consumer perceives it imperative that nutritional labels packaged food producing companies should display the nutritional label

on their package. They seem to further presume that products with proper labelling on their packages is of good quality. The results from the Pakistani consumers conforms the outcomes of (Bialkova, Sasse, & Fenko, 2016) who publicized that nutritional labels are considered as quality indicating feature by various consumers.

The successive hypothesis H_5 stated a significant effect of precautionary label on perceived product quality was found to be accepted. The substantial relationship of precautionary label and perceived product quality arose from the likelihood that Pakistani consumers suffering from various kinds of food allergies tend to have an inclination towards the presence of precautionary labels and contemplate the packaged food with this label of good quality in comparison with the products without any such display of information. The results of the study conforms to the analysis outcome of (Zurzolo et al., 2017)

The next hypothesis H_6 of the study proposed that Halal logo impacts the perceived product quality significantly was found to be supported by the results. It shows that Pakistani consumers have an absolute concern regarding the presence of Halal logo on package. They consider that the products with the Halal logo being evidently displayed on the package are considered to be having good quality. In addition to be having good quality, such products are considered to be religiously compliant. The results agree with the outcomes of (Muhamad et al., 2017).

Since, the signaling theory exhibits that extrinsic cues predict the quality of the products. The independent variables taken in framework under study are the extrinsic cues and they predict about the quality of the food. Since the items selected

Implications of Study

The impact of food packaging cues on the perceived product quality is a vital marketing issue. The food packaging cues serve as quality signals for the consumers. The food packaging cues are a dependable source of marketing communication. The consumers perceive the quality information by looking at the cues available on the packages of products.

Theoretical Contributions

The prior consumer behavior studies focused mainly on the heuristic perspective, however few studies focused specifically on the explicit food packaging cues. It has been proposed that the consumer behavior studies focusing on the food packaging cues and their impact on quality perceptions is still to catch up (Argo & White, 2012). The studies regarding the product quality perceptions needs to be carried out in developing countries like Pakistan (Yu, Liu, & Zu, 2015). Based on the

research upshots, it is confirmed that Pakistani consumers are expressively influenced by brand name, price, precautionary label and Halal logo and consider them as the quality indicating cues. These results are in line with the study of (McKinnon & Langbecker, 2014). Moving on further, the perceptions of the consumers regarding food packaging cues has not been addressed taking a comprehensive set of cues in a holistic view which is a theoretical gap this study fills up.

From the view point of theoretical contribution, this research posits a wide-ranging model for comprehending the quality perceptions of the consumers based food packaging cues because of inconsistent findings in the literature among the relationships of variables and perceived product quality. The previous studies have been conducted mainly by captivating country of origin, price and brand name as extrinsic cues mainly. The significant contribution of this study is to use the combination of nutritional label, precautionary label and Halal logo in combination with country of origin and price including the moderating effect of consumer knowledge.

Methodological Contribution

Along with theoretical contributions, this study has made few methodological contributions as well. Firstly, this study employs rigorous multi stage sampling. Mall intercept method is considered to be weak sampling technique. Nevertheless, this study was a footstep ahead in considering very little detail in terms of gate sampling, day and time sampling. By taking into consideration, the minute details increases the factor of randomness which facilitates generalizations. As per the inadequate knowledge of the researcher, this study is among the primary ones in Pakistan. This study will anticipate the upcoming researchers to achieve data from the mall intercept technique.

Secondly, although the reliable items of measures were adopted/adapted from various sources were taken but the studies were conducted in dissimilar situations. In such circumstances, it becomes imperious to establish to validity and reliability. This study has comprehensively done various statistical calculations in order to establish the validity and reliability in Pakistani consumer market. This research now offers a valid and reliable instrument for Pakistani as well as global researchers who are enthusiastic to probe into the product quality perceptions formed via food packaging cues.

Managerial Implications

The empirical analysis of the study confirms the relationship among the constructs together with the moderating effects. These relationships have been confirmed or disconfirmed statistically. From the standpoint of practitioners, this study provides a significant contribution

in the form of understanding the mind set of consumers in a shopping situation. It may also assist the marketers to devise the marketing strategies to create favorable product perceptions and long term relations with the consumers.

Marketing is a stream which has advanced from commercials to every single aspect of the product including the packaging of the product. The target of the cues embedded in the form of labeling on food packages is linked to the minds and perceptions of consumers. This study confirms that the Pakistani consumers are significantly been influenced by packaging cues. The most significant effect was observed to ascend from Halal logo. The construct of Halal logo emerged most strongly as compared to others. The results of the study entail that marketing managers should embed the cues intelligently keeping clearly in mind that they are considered as the quality signals of the enclosed product by the consumer.

The marketers are suggested to avoid any kind of deceptive cues on product labeling. In Pakistani food market, the packaged food is witnessed to exhibit a fast growth due to drifting lifestyles. It would be advantageous for marketers to recognize this segment, along with other consumer segments that do not use packaged food products. As marketing values every step that can keep customers delighted and retained, an ability to meet consumers' aforesaid demand can put them in real advantageous position in the short as well as in the long run.

References

- Abdul Latiff, Z., Mohamed, Z., Rezai, G., & Kamaruzzaman, N. (2013). The impact of food labeling on purchasing behavior among non-Muslim consumers in Klang Valley. *Australian Journal of Basic and Applied Sciences*, 7(1), 124-128.
- Akdeniz, B., Calantone, R. J., & Voorhees, C. M. (2013). Effectiveness of marketing cues on consumer perceptions of quality: The moderating roles of brand reputation and third-party information. *Psychology & Marketing*, 30(1), 76-89.
- Alba, J. W., & Hutchinson, J. W. (2000). Knowledge calibration: What consumers know and what they think they know. *Journal of consumer research*, 27(2), 123-156.
- Amine, L. S., Chao, M. C., & Arnold, M. J. (2005). Executive insights: Exploring the practical effects of country of origin, animosity, and price-quality issues: Two case studies of Taiwan and Acer in China. *Journal of International Marketing*, 13(2), 114-150.
- Argo, J. J., & White, K. (2012). When do consumers eat more? The role of appearance self-esteem and food packaging cues. *Journal of Marketing*, 76(2), 67-80.
- Barclay, D., Higgins, C., & Thompson, R. (1995). *The Partial Least Squares (pls) Approach to Casual Modeling: Personal Computer Adoption Ans Use as an Illustration*.
- Bialkova, S., Sasse, L., & Fenko, A. (2016). The role of nutrition labels and advertising claims in altering consumers' evaluation and choice. *Appetite*, 96, 38-46.
- Binninger, A.-S. (2017). Perception of naturalness of food packaging and its role in consumer product evaluation. *Journal of Food Products Marketing*, 23(3), 251-266.
- Blijlevens, J., Carbon, C. C., Mugge, R., & Schoormans, J. P. (2012). Aesthetic appraisal of product designs: Independent effects of typicality and arousal. *British Journal of Psychology*, 103(1), 44-57.
- Brandt, M., Moss, J., & Ferguson, M. (2009). The 2006–2007 Food Label and Package Survey (FLAPS): nutrition labeling, trans fat labeling. *Journal of Food Composition and Analysis*, 22, S74-S77.
- Chattalas, M., Kramer, T., & Takada, H. (2008). The impact of national stereotypes on the country of origin effect: A conceptual framework. *International Marketing Review*, 25(1), 54-74.
- Chatterjee, S., & Yilmaz, M. (1992). A review of regression diagnostics for behavioral research. *Applied Psychological Measurement*, 16(3), 209-227.
- Chaudhary, S. (2014). The Role of Packaging in Consumer's Perception of Product Quality.
- Chou, H.-Y., & Wang, T.-Y. (2017). Hypermarket private-label products, brand strategies and spokesperson persuasion. *European Journal of Marketing*, 51(4), 795-820.

- Connelly, B. L., Certo, S. T., Ireland, R. D., & Reutzel, C. R. (2011). Signaling theory: A review and assessment. *Journal of Management*, 37(1), 39-67.
- Cornelisse-Vermaat, J. R., Voordouw, J., Yiakoumaki, V., Theodoridis, G., & Frewer, L. J. (2007). Food-allergic consumers' labelling preferences: a cross-cultural comparison. *European journal of public health*, 18(2), 115-120.
- Darkwa, S. (2014). Knowledge of nutrition facts on food labels and their impact on food choices on consumers in Koforidua, Ghana: a case study. *South African Journal of Clinical Nutrition*, 27(1), 13-17.
- Dawar, N., & Pillutla, M. M. (2000). Impact of product-harm crises on brand equity: The moderating role of consumer expectations. *Journal of marketing Research*, 37(2), 215-226.
- Dodds, W. B., Monroe, K. B., & Grewal, D. (1991). Effects of price, brand, and store information on buyers' product evaluations. *Journal of marketing Research*, 307-319.
- Dopico, D. C., Mendes, R., Silva, H., Verrez-Bagnis, V., Pérez-Martín, R., & Sotelo, C. (2016). Evaluation, signalling and willingness to pay for traceability. A cross-national comparison. *Spanish Journal of Marketing-ESIC*, 20(2), 93-103.
- Draper, A. K., Adamson, A. J., Clegg, S., Malam, S., Rigg, M., & Duncan, S. (2011). Front-of-pack nutrition labelling: are multiple formats a problem for consumers? *The European Journal of Public Health*, 23(3), 517-521.
- DunnGalvin, A., Chan, C. H., Crevel, R., Grimshaw, K., Poms, R., Schnadt, S., . . . Austin, M. (2015). Precautionary allergen labelling: perspectives from key stakeholder groups. *Allergy*, 70(9), 1039-1051.
- Ergin, E. A., & Akbay, H. Ö. (2012). *Factors influencing young consumers' preferences of domestic and international fast food brands*. Paper presented at the 11th International Marketing Trends Conference Venice.
- Erickson, G. M., Johansson, J. K., & Chao, P. (1984). Image variables in multi-attribute product evaluations: country-of-origin effects. *Journal of consumer research*, 11(2), 694-699.
- Friedman, M. P. (1967). Quality and price considerations in rational consumer decision making. *Journal of Consumer Affairs*, 1(1), 13-23.
- Gelici-Zeko, M., Lutters, D., & ten Klooster, R. (2012). Understanding consumers' responses toward food packaging and their behavioural underpinnings using Kansei engineering and Focus group. *submitted for publication*.
- Ghani, U., & Kamal, Y. (2010). The impact of in-store stimuli on the impulse purchase behaviour of consumers in Pakistan. *Interdisciplinary Journal of Contemporary Research in Business*, 2(8), 155-162.
- Hair, J. F., Black, W. C., & Babin, B. J. (2010). RE Anderson Multivariate data analysis: A global perspective. In: New Jersey, Pearson Prentice Hall,).

- Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a silver bullet. *Journal of Marketing theory and Practice*, 19(2), 139-152.
- Hair, J. F., Ringle, C. M., & Sarstedt, M. (2013). Partial least squares structural equation modeling: Rigorous applications, better results and higher acceptance.
- Hamilton, M. B. (2009). Online survey response rates and times: Background and guidance for industry. *Longmont: Ipathia*.
- Haque, A., Anwar, N., & Sarwar, A. (2015). The Effect of Country of Origin Image, Ethnocentrism, and Religiosity on Purchase Intentions: An Empirical Investigation on Bangladeshi Consumers. *Indian Journal of Marketing*, 45(10), 23-35.
- Horner, S., & Swarbrooke, J. (2016). *Consumer behaviour in tourism*: Routledge.
- Hsieh, M.-H., Pan, S.-L., & Setiono, R. (2004). Product-, corporate-, and country-image dimensions and purchase behavior: A multicountry analysis. *Journal of the Academy of Marketing Science*, 32(3), 251-270.
- Hussain, R., & Ali, M. (2015). Effect of store atmosphere on consumer purchase intention.
- Jaeger, S. R., & MacFie, H. J. (2001). The effect of advertising format and means-end information on consumer expectations for apples. *Food Quality and Preference*, 12(3), 189-205.
- Janssen, M., & Hamm, U. (2012). Product labelling in the market for organic food: Consumer preferences and willingness-to-pay for different organic certification logos. *Food Quality and Preference*, 25(1), 9-22.
- Kalicharan, H. D. (2014). The Effect And Influence Of Country-Of-Origin On Consumers' Perception Of Product Quality And Purchasing Intentions. *The International Business & Economics Research Journal (Online)*, 13(5), 897.
- Karaduman, İ. (2016). The Role of Religious Sensibilities on The Relationship Between Religious Rules And Hedonic Product Consumption Behavior In Turkey. *International Journal of Humanities and Social Science Invention*, 5(4), 12-20.
- Kauppinen-Räsänen, H., Owusu, R. A., & Abeeku Bamfo, B. (2012). Brand salience of OTC pharmaceuticals through package appearance. *International Journal of Pharmaceutical and Healthcare Marketing*, 6(3), 230-249.
- Kaya, I. H. (2016). Consumers' Perception and Attitudes toward Packaged Milk in Turkey—A Descriptive Study. *Food and Nutrition Sciences*, 7(06), 405.
- Krauss, S., Brunner, M., Kunter, M., Baumert, J., Blum, W., Neubrand, M., & Jordan, A. (2008). Pedagogical content knowledge and content knowledge of secondary mathematics teachers. *Journal of Educational Psychology*, 100(3), 716.
- Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and psychological measurement*, 30(3), 607-610.

- Lichtenstein, D. R., & Burton, S. (1989). The relationship between perceived and objective price-quality. *Journal of marketing Research*, 429-443.
- Loken, B., & Amaral, N. (2010). Brand dilution: the impact of the user of counterfeits on original brand perception. *ACR North American Advances*.
- Loken, B., & Joiner, C. (2010). Leveraging a Brand Through. *Brands and Brand Management: Contemporary Research Perspectives*, 11.
- Lowry, P. B., & Gaskin, J. (2014). Partial least squares (PLS) structural equation modeling (SEM) for building and testing behavioral causal theory: When to choose it and how to use it. *IEEE Transactions on Professional Communication*, 57(2), 123-146.
- Lwin, M. O. (2015). Comparative practices of food label claims from US, EU and selected Southeast Asian countries. *Journal of Consumer Marketing*, 32(7), 530-541.
- McKinnon, L. C., & Langbecker, D. H. (2014). Socioeconomic differences in food choices: Deficiencies in nutrition knowledge or simply too much on your plate? *Australasian Epidemiologist*, 21(1), 18.
- Miyazaki, A. D., Grewal, D., & Goodstein, R. C. (2005). The effect of multiple extrinsic cues on quality perceptions: A matter of consistency. *Journal of consumer research*, 32(1), 146-153.
- Monroe, K. B. (1976). The influence of price differences and brand familiarity on brand preferences. *Journal of consumer research*, 3(1), 42-49.
- Moslehpour, M., & Le Huyen, N. T. (2014). The Influence of Perceived Brand Quality and Perceived Brand Prestige on Purchase Likelihood of iPhone and HTC Mobile Phone in Taiwan. *Research in Business and Management*, 1(1), 62-77.
- Mueller, S., & Szolnoki, G. (2010). The relative influence of packaging, labelling, branding and sensory attributes on liking and purchase intent: Consumers differ in their responsiveness. *Food Quality and Preference*, 21(7), 774-783.
- Muhamad, N., Muhamad, N., Leong, V. S., Leong, V. S., Md Isa, N., & Md Isa, N. (2017). Does the country of origin of a halal logo matter? The case of packaged food purchases. *Review of International Business and Strategy*, 27(4), 484-500.
- Nilforushan, S., & Haeri, F. A. (2015). The effect of packaging design on customers' perception of food products' quality, value, and brand preference (Case study: pegah pasteurized cheese in Isfahan City). *Walia Journal*, 31, 127-132.
- Peterson, R. A. (1970). The price-perceived quality relationship: Experimental evidence. *Journal of marketing Research*, 7(4), 525-528.
- Poulsen, C. S., Juhl, H. J., Kristensen, K., Bech, A. C., & Engelund, E. (1996). Quality guidance and quality formation. *Food Quality and Preference*, 7(2), 127-135.
- Qasem, A., Baharun, R., & Yassin, A. (2016). The Role of Extrinsic Product Cues in Consumers' Preferences and Purchase Intentions: Mediating

- and Moderating Effects. *TEM JOURNAL-TECHNOLOGY EDUCATION MANAGEMENT INFORMATICS*, 5(1), 85-96.
- Rao, A. R., & Monroe, K. B. (1988). The moderating effect of prior knowledge on cue utilization in product evaluations. *Journal of consumer research*, 15(2), 253-264.
- Rao, A. R., & Monroe, K. B. (1989). The effect of price, brand name, and store name on buyers' perceptions of product quality: An integrative review. *Journal of marketing Research*, 351-357.
- Renwick, D. W., Redman, T., & Maguire, S. (2013). Green human resource management: A review and research agenda. *International Journal of Management Reviews*, 15(1), 1-14.
- Ribeiro-Santos, R., Andrade, M., de Melo, N. R., & Sanches-Silva, A. (2017). Use of essential oils in active food packaging: Recent advances and future trends. *Trends in food science & technology*, 61, 132-140.
- Riesz, P. C. (1978). Price versus quality in the marketplace, 1961-1975. *Journal of Retailing*, 54(4), 15-28.
- Rungrakulchai, R. (2018). The relationship between price deals, perceived quality, and brand equity for a high involvement product. *AU Journal of Management*, 11(2), 36-45.
- Russell, C. G., Burke, P. F., Waller, D. S., & Wei, E. (2017). The impact of front-of-pack marketing attributes versus nutrition and health information on parents' food choices. *Appetite*, 116, 323-338.
- Sandıkçı, Ö. (2011). Researching Islamic marketing: past and future perspectives. *Journal of Islamic Marketing*, 2(3), 246-258.
- Šebečić, B., Vedrina Dragojević, I., Vitali, D., Hečimović, M., & Dragičević, I. (2007). Raw materials in fibre enriched biscuits production as source of total phenols. *Agriculturae conspectus scientificus*, 72(3), 265-270.
- Sekaran, U., & Bougie, R. (2010). *Research Methods for Business: A Skill Building Approach*. UK: John Wiley.
- Sekaran, U., & Bougie, R. (2016). *Research methods for business: A skill building approach*: John Wiley & Sons.
- Shende, V. (2014). Analysis of research in consumer behavior of automobile passenger car customer. *International Journal of Scientific and Research Publications*, 4(2), 1.
- Simmonds, G., & Spence, C. (2017). Thinking inside the box: How seeing products on, or through, the packaging influences consumer perceptions and purchase behaviour. *Food Quality and Preference*, 62, 340-351.
- Simms, C., & Trott, P. (2017). *Packaging Dependent Products: How do Firms in the Packaged Food Sector Manage the Development of new Packaging Opportunities?* Paper presented at the European Conference on Innovation and Entrepreneurship.
- Spence, A. M. (1974). *Market signaling: Informational transfer in hiring and related screening processes* (Vol. 143): Harvard Univ Pr.
- Spence, C., & Velasco, C. (2018). On the multiple effects of packaging colour on consumer behaviour and product experience in the 'food and

- beverage' and 'home and personal care' categories. *Food Quality and Preference*.
- ST Wang, E. (2013). The influence of visual packaging design on perceived food product quality, value, and brand preference. *International Journal of Retail & Distribution Management*, 41(10), 805-816.
- Swan, J. E. (1974). Price. Product Performance Competition between Retailer and Manufacturer Brands. *The Journal of marketing*, 52-59.
- Tariq, U., & Khan, H. (2016). Impact of Branded Goods on Consumer's Purchase Intentions. *KASBIT Journal of Management & Social Science*, 9(1), 176-195.
- Tobler, C., Visschers, V. H., & Siegrist, M. (2011). Eating green. Consumers' willingness to adopt ecological food consumption behaviors. *Appetite*, 57(3), 674-682.
- Tran, T. P., & Fabrice, R. O. (2013). The effect of the foreign brand on consumer perception. *Journal of marketing development and competitiveness*, 7(2), 23.
- Van Doorn, J., & Verhoef, P. C. (2011). Willingness to pay for organic products: Differences between virtue and vice foods. *International Journal of Research in Marketing*, 28(3), 167-180.
- Vila-López, N., & Küster-Boluda, I. (2018). Commercial versus technical cues to position a new product: Do hedonic and functional/healthy packages differ? *Social Science & Medicine*, 198, 85-94.
- Vinzi, V. E. (2003). The PLS Approach to path modeling. *IASC-IFCS Summer School, Lisbon*.
- Voordouw, J., Cornelisse-Vermaat, J. R., Yiakoumaki, V., Theodoridis, G., Chrysochooidis, G., & Frewer, L. J. (2009). Food allergic consumers' preferences for labelling practices: a qualitative study in a real shopping environment. *International journal of consumer studies*, 33(1), 94-102.
- Wansink, B., Park, S. B., Sonka, S. T., & Morganosky, M. (2000). How soy labeling influences preference and taste.
- Wardy, W., Chonpracha, P., Chokumnoyporn, N., Sriwattana, S., Prinyawiwatkul, W., & Jirangrat, W. (2017). Influence of Package Visual Cues of Sweeteners on the Sensory-Emotional Profiles of Their Products. *Journal of food science*, 82(2), 500-508.
- Wigley, S., & Rachel Chiang, C.-L. (2009). Retail internationalisation in practice: per una in the UK and Taiwan. *International Journal of Retail & Distribution Management*, 37(3), 250-270.
- Winkielman, P., McIntosh, D. N., & Oberman, L. (2009). Embodied and disembodied emotion processing: Learning from and about typical and autistic individuals. *Emotion Review*, 1(2), 178-190.
- Wulf, K. D., Odekerken-Schröder, G., & Iacobucci, D. (2001). Investments in consumer relationships: A cross-country and cross-industry exploration. *Journal of marketing*, 65(4), 33-50.

Future of Marketing and Management (FMM 2017)

- Yu, W.-P., Liu, Y.-L., & Zu, X. (2015). Study on the Influence of Online Merchandise Display on Consumer Product Quality Perception-The Mediating Role of Virtual Tactility.
- Zafar, M. Z., Hashim, N. A., & Halim, F. b. (2017). The Pivotal Role of User-Friendly Food Label and Personality Traits on Intention to Consume Packaged Food Products. *Journal of Food Products Marketing*, 23(7), 835-856.
- Zaidi, S. H. A., & Muhammad, B. (2012). Awareness of Pakistani consumers towards nutritional labeling on product packaging in terms of buying behavior. *International Journal of Business and Social Science*, 3(16).
- Zannierah Syed Marzuki, S., Hall, C. M., & Ballantine, P. W. (2012). Restaurant managers' perspectives on halal certification. *Journal of Islamic Marketing*, 3(1), 47-58.
- Zeithaml, V. A. (1988). Consumer perceptions of price, quality, and value: a means-end model and synthesis of evidence. *The Journal of marketing*, 2-22.
- Zurzolo, G. A., Koplin, J. J., Allen, K. J., Courten, M., Mathai, M. L., & Peters, R. L. (2017). Are food allergic consumers ready for informative precautionary allergen labelling? *Allergy, Asthma & Clinical Immunology*, 13(1), 42.