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An exploration study on factors influencing Iranian food industry

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A B S T R A C T

The proposed study of this paper present an empirical investigation to detect important factors impacting on food market using factor analysis. The proposed study designed a questionnaire, distributed among 207 customers who were regular customers of two food chains in city of Tehran, Iran named Shahrvand and Hyperstar. The results of our survey indicate that six major factors including brand loyalty, physical characteristics, pricing effects, performance characteristics, brand relationship and brand position influence food industry, significantly. In terms of the first factor, brand loyalty, "Trust", "Packaging design characteristics", "Competitive pricing strategy", "Stability in quality", "External relationships" and "Meeting expectations" are important factors in different categories.

1. Introduction

The role of brands and branding in the new economy characterized by digitization and globalization are attracting considerable attention (Fernie, 1990; Dawar & Parker, 1994; Dowling & Uncles, 1997; Rowley, 2004). Morgan-Thomas and Veloutsou (2013) presented some insights on marketing and information systems research to build a framework of online brand experience. In their model, emotional characteristics of brand relationship supplemented the dimension of technology acceptance to reach at a comprehensive insight about consumer experience with an online brand. The empirical experiments involved structural equation modeling based on a survey of 456 users of online search engines. The results demonstrated that trust and perceived usefulness positively influenced online brand experience. Positive experiences result in satisfaction and behavioral intentions that in turn led to the formation of online brand relationship. In their survey, brand reputation emerged as an important antecedent of trust and perceived ease of implementation of an online brand (Sudhir, 2001).

Jones et al. (2010) explored the emergence and development of experience stores by considering their potential impact in fostering consumer brand relationships and their effect on the retail landscape.

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They provided a comprehensive review of the emergence of experience stores and their effect in developing relationships between brands and consumers. Ha and Perks (2005) studied the effects of consumer perceptions of brand experience on the web by looking into brand familiarity, satisfaction and brand trust. They discussed that creating a customer experience that is synonymous with a particular website could be recognized as an essential driver of e-performance, increasingly.

E-tailors attempt to impact consumers' shopping behavior, through atmospherics and service, as brick-and-mortar stores. They investigated several unanswered questions in recent studies of consumer behavior in the context of internet-based marketing. The results of an empirical study of e-consumer behavior demonstrated that brand trust was achieved through the following dimensions such as various brand experiences and the search for information, a high level of brand familiarity, and customer satisfaction based on cognitive and emotional factors (Rettie & Brewer, 2000; Chattopadhyay & Laborie, 2005). Dickson and Urbany (1994) investigated retailer reactions to competitive price changes. Gabisch and Gwebu (2011) examined the effect of virtual experiences on attitude formation, and offline purchase intentions, and detected three kinds of channel congruence including perceived diagnosticity, self-image congruence, and behavioral consistency, which could help describe the cross-channel effects (Underwood, 2001). They reported that multichannel impacts existed between virtual brand experiences and real-world purchasing decisions. According to Alloza (2008), Successful corporate brand management lies on sounded brand engagement and strategic alignment initiatives. Kim and Sullivan (1998) investigated the impact of parent brand experience on line extension trial and repeat purchase. Iglesias et al. (2011) studied the direct and indirect relationship between brand experience and brand loyalty. They investigated whether the relationship was mediated by affective commitment or not. The analysis recommended that affective commitment could mediate the relationship between brand experience and brand loyalty for all three product studied categories including cars, laptops and sneakers. The article extended the understanding of the brand experience construct by studying its impact on brand loyalty and by incorporating affective commitment as a mediating variable.

Morrison and Crane (2007) discussed why marketers of service brands must understand the emotional dynamics involved when a customer chooses and decides to continue to implement a service brand. It also presents practical guidance for how marketers are capable of building strong service brands by creating and managing emotional brand experiences. Hultén (2011) presented the multi-sensory brand-experience concept in association with the human minds and senses and tried to propose a sensory marketing (SM) model of the multi-sensory brand-experience hypothesis (Keller, 2011). The findings offered additional insights to managers on the multi-sensory brand-experience concept. Boo et al. (2009) examined empirical information to develop a destination brand model by investigating customer-based brand equity models through a scale purification process, ensuring its reliability and validity. Zarantonello and Schmitt (2010) used the brand experience scale to profile consumers and predict consumer behavior. Clatworthy (2012) described the development and evaluation of a process model to transform brand strategy into service experiences during the front end of new service development. O'Cass and Grace (2004) explored different consumer experiences with a service brand. Coulson (2000) presented an application of the stages of change model to consumer use of food labels. Méndez et al. (2006) analyzed price dispersion tools available to consumer goods manufacturers to obtain price consistency.

2. The proposed study

The proposed study of this paper attempts to detect important factors impacting on food market using factor analysis. The proposed study designed a questionnaire, distributed among 207 customers who were regular customers of two food chains in city of Tehran, Iran named Shahrvand and Hyperstar. The proposed study of this paper uses factor analysis to extract important factors. The questionnaire consists of 23 questions and since factor analysis is sensitive on skewness of data, we have decided to remove some of the questions including trust, profitability, reputation, customer relationship

management, stores created experience, physical design of store, familiarity, satisfaction, face to face relationships, employee's behavior, perception image, social background, response to expectations, sustainability of brand, external advertisement, packaging design, quality of packaging, quality durability, access and price. Cronbach alpha was calculated as 0.797, which is well above the minimum acceptable limit and validates the results. Table 1 shows details of some basic statistics,

Table 1

Descriptive Statistics

	N	Range	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
VAR00001	206	4.00	-.654	.169	1.323	.337
VAR00002	206	3.00	-.156	.169	-.408	.337
VAR00003	206	4.00	-.339	.169	-.427	.337
VAR00004	206	4.00	-.662	.169	.333	.337
VAR00005	206	4.00	-.378	.169	-.222	.337
VAR00006	206	4.00	-.256	.169	-.513	.337
VAR00007	206	4.00	-.663	.169	.370	.337
VAR00009	206	4.00	-.654	.169	.344	.337
VAR00010	206	4.00	-.707	.169	-.040	.337
VAR00011	206	4.00	-.620	.169	.876	.337
VAR00012	206	4.00	-.092	.169	-.300	.337
VAR00013	206	4.00	.026	.169	-.165	.337
VAR00014	206	4.00	-.582	.169	.284	.337
VAR00015	206	3.00	-.196	.169	-.422	.337
VAR00016	206	4.00	-.114	.169	-.055	.337
VAR00017	206	4.00	-.366	.169	.404	.337
VAR00018	206	4.00	-.341	.169	-.265	.337
VAR00019	206	3.00	-.810	.169	-.096	.337
VAR00020	206	4.00	-.662	.169	.513	.337
VAR00021	206	4.00	-.397	.169	-.628	.337
VAR00022	206	4.00	-.898	.169	.194	.337
Normal Score of VAR00008 using Blom's Formula	206	3.1447	-.832	.169	-.163	.337
Normal Score of VAR00023 using Blom's Formula	206	3.0526	-.999	.169	-.037	.337
Valid N (listwise)	206					

Table 2

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation(1)	Squared Multiple Correlation(2)	Cronbach's Alpha if Item Deleted(3)
VAR00001	75.676793	67.212	.379	.443	.789
VAR00002	75.953492	67.476	.326	.301	.791
VAR00003	76.074851	64.512	.461	.369	.783
VAR00004	75.880677	66.125	.345	.231	.790
VAR00005	76.069997	68.511	.178	.140	.799
VAR00006	76.235045	65.056	.367	.260	.788
VAR00007	75.836987	64.721	.496	.361	.782
VAR00009	76.050579	67.060	.261	.147	.795
VAR00010	75.701065	66.233	.357	.203	.789
VAR00011	75.977764	67.299	.314	.218	.791
VAR00012	76.696211	66.304	.286	.223	.793
VAR00013	76.594269	68.225	.195	.164	.798
VAR00014	75.841842	66.021	.403	.266	.787
VAR00015	75.972910	64.464	.561	.422	.779
VAR00016	76.536016	68.013	.208	.227	.797
VAR00017	76.167084	66.059	.387	.458	.787
VAR00018	76.065143	64.849	.459	.444	.784
VAR00019	75.560288	66.022	.412	.382	.786
VAR00020	75.953492	66.173	.353	.300	.789
VAR00021	75.934075	67.801	.215	.371	.797
VAR00022	75.662230	66.568	.314	.390	.791
Normal Score of VAR00008 using Blom's Formula	79.874675	66.910	.351	.370	.789
Normal Score of VAR00023 using Blom's Formula	79.884643	67.394	.320	.305	.791

In order to understand about the number of factors we draw Scree plot shown in Fig. 1 as follows,

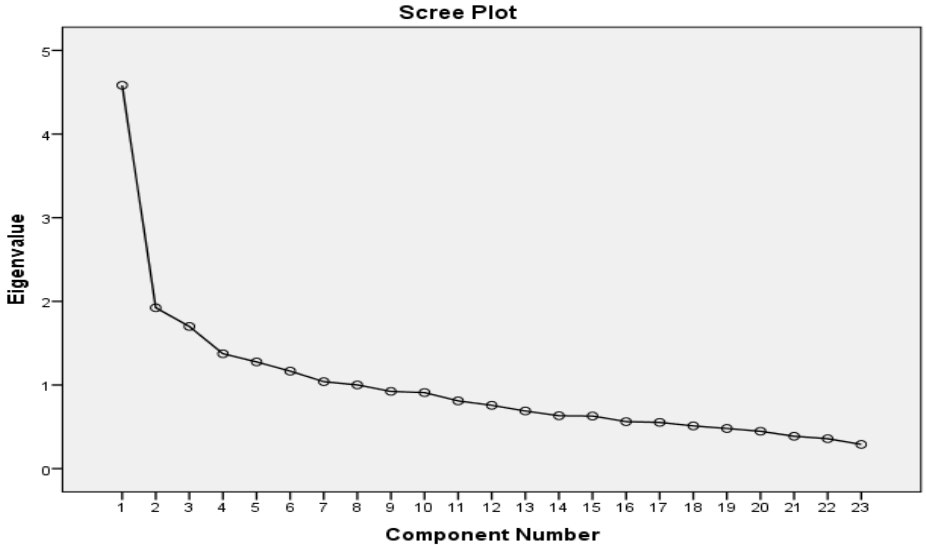

Fig. 1. The results of Scree plot

The result of Fig. 1 demonstrates that after six factors the trend becomes linear. Table 3 presents details of factor analysis before rotation implemented.

Table 3
The results of Principal Component Analysis before rotation

	Component							
	1	2	3	4	5	6	7	8
VAR00015	.673							
VAR00007	.627							
VAR00018	.577							
VAR00003	.574							
VAR00019	.527			-.361				
VAR00001	.524	-.382						
VAR00014	.515						-.343	
Normal Score of VAR00008 using Blom's Formula	.481		-.436					
VAR00006	.454		.381					
VAR00010	.444							
VAR00002	.433	-.383				.366		
VAR00004	.432				.416			
VAR00021		.694				.373		
VAR00022	.350	.675						
VAR00020	.406	.474						
VAR00017	.495		.576					
VAR00016			.511		.427			-.345
Normal Score of VAR00023 using Blom's Formula	.390	.401	-.456					
VAR00012				.660				
VAR00005				.589			.492	
VAR00011	.402				-.424	-.336		
VAR00013					.436	-.494		.455
VAR00009					.347			-.474

We have used principal component analysis using Varimax with Laiser normalization. Based on the results of principal component analysis, there are eight factors including brand loyalty, physical characteristics, price effects, performance characteristics, brand relationship and brand position and Table 4 shows details of our survey.

Table 4
The results of Principal Component Analysis using Varimax with Kaiser Normalization

	Component							
	1	2	3	4	5	6	7	8
VAR00001	.832							
Normal Score of VAR00008 using Blom's Formula	.642							
VAR00003	.568					.408		
VAR00002	.550						.430	
VAR00014	.504							
VAR00007	.441			.434				
VAR00017		.812						
VAR00018		.728						
VAR00015	.339	.577						
VAR00006		.495						
VAR00010								
VAR00021			.838					
VAR00022			.774					
VAR00020			.540	.363				
VAR00019				.774				
Normal Score of VAR00023 using Blom's Formula			.373	.576				
VAR00011					.718			
VAR00012					.471			.389
VAR00016						.739		
VAR00009						.523		
VAR00005							.825	
VAR00013								.888
VAR00004	.336			.363				.430

3. The results

The proposed study of this paper has determined six major factors using factor analysis and in this section, we present details of our findings.

3.1. The first factor: Brand loyalty

The first factor, “Brand loyalty” includes four components including “trust”, “Customer satisfaction”, “Perception profitability” and “Brand awareness” and the results are summarized in Table 5.

Table 5
The summary of factors associated with brand loyalty

Option	Factor weight	Eigenvalue	% ofvariance	Accumulated
Trust	.832	4.583	19.927	19.927
Customer satisfaction	.642			
Perception profitability	.550			
Brand awareness	.504			

Cronbach alph =0.789

It is evident from the results of Table 5 that “Trust” is number one priority followed by “Customer satisfaction”, “Perception profitability” and “Brand awareness”. Cronbach alpha has been calculated as 0.789, which validates the results of our survey.

3.2. The second factor: Physical characteristics

Physical characteristics is an essential factor and plays important role for the success of any marketing planning in food industry. This factor includes four factors including “Packaging design characteristics”, “Quality of packaging”, “Brand revokes”, and “Physical design of stores” and the results of factor analysis are given in Table 6 as follows,

Table 6
The summary of factors associated with compatibility

Option	Factor weight	Eigenvalue	% ofvariance	Accumulated
Packaging design characteristics	.812	0.533	2.404	89.247
Quality of packaging	.728			
Brand revokes	.577			
Physical design of stores	.495			

Cronbach alph =0.787

According to the results of Table 6, “Packaging design characteristics” is the most important factor followed by “Quality of packaging”, “Brand revokes” while “Physical design of stores” is the last priority.

3.3. The third factor: Pricing effects

Pricing effects is the third important factor influencing food industry, which includes three factors including “Competitive price”, “Price stability”, and “Product availability”. Table 7 demonstrates details of our survey where “Competitive pricing strategy” plays essential role on marketing food industry followed by “Price stability”.

Table 7
The summary of factors associated with pricing effects

Option	Factor weight	Eigenvalue	% ofvariance	Accumulated
Competitive pricing strategy	.838	0.387	1.685	97.186
Price stability	.774			
Product availability	.540			

Cronbach alph =0.719

3.4. The fourth factor: Performance characteristics

Performance characteristics components is the next factor, which influences food marketing and it includes three factors summarized in Table 8 as follows,

Table 8
The summary of factors associated with performance characteristics

Option	Factor weight	Eigenvalue	% ofvariance	Accumulated
Brand awareness	.434			
Stability in quality	.774	0.480	2.089	93.557
Minimum price, maximum productivity	.576			

Cronbach alph =0.786

Based on the results of Table 8, “Stability in quality” is the most important factor followed by “minimum price, maximum productivity” and “brand awareness”.

3.5. The fifth factor: Brand relationship

Brand relationship is the next factor, which influences food marketing including three factors summarized in Table 9 as follows,

Table 9
The summary of factors associated with brand relationship

Option	Factor weight	Eigenvalue	% ofvariance	Accumulated
Brand reputation	.408			
External relationships	.739	0.562	2.443	86.843
Face to face relationship	.523			

Cronbach alph =0.797

Based on the results of Table 9, “External relationships” is the most important factor followed by “face to face relationship” and “brand reputation”.

3.6. The sixth factor: Brand position

Brand position is the last factor, which influences food marketing and it includes three factors summarized in Table 10 as follows,

Table 10
The summary of factors associated with brand position

Option	Factor weight	Eigenvalue	% ofvariance	Accumulated
Social position	.389			
Meeting expectations	.888	0.689	2.997	78.916
Customer relationship management	.430			

Cronbach alph =0.798

Based on the results of Table 10, “Meeting expectations” is the most important factor followed by “Customer relationship management” and “Social position”.

4. Discussion and conclusion

In this paper, we have presented an empirical investigation using principal component analysis to detect important factors influencing brand position. The results of our survey have revealed six major factors including brand loyalty, physical characteristics, pricing effects, performance characteristics, brand relationship and brand position. In terms of the first factor, brand loyalty, “Trust” is number one priority followed by “Customer satisfaction”, “Perception profitability” and “Brand awareness”. In terms of the second factor, physical characteristics, “Packaging design characteristics” is the most important factor followed by “Quality of packaging”, “Brand revokes” while “Physical design of stores” is the last priority. In terms of pricing effects, our survey indicate that “Competitive pricing strategy” plays essential role on marketing food industry followed by “Price stability”. In terms of performance characteristics, “Stability in quality” is the most important factor followed by “minimum price, maximum productivity” and “brand awareness”. Brand relationship is another influencing factor on food industry where “External relationships” in this category is the most important factor followed by “face to face relationship” and “brand reputation”. Finally, brand position, is the last factor in our analysis where “Meeting expectations” is the most important factor followed by “Customer relationship management” and “Social position”.

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