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# An exploration of the key factors affecting consumer buying behaviour of instant food products: A case study of Kota Bharu

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**Abstract.** With modernization and lifestyle changes, instant food emerges as a fast-growing food product in the food industry worldwide, and Malaysia makes no exception. Most people like to eat food that can be prepared quickly, thereby saving time and energy. Instant food satisfies the convenience seekers' demand since it is a convenient food that requires minimal preparation before consumption. To dominate the competitive handicap in the marketplace, marketers must have a good grasp on consumer behaviour and preferences that prevail buying decisions. However, information on what constitutes buying behaviour of consumers from Kota Bharu, Kelantan towards instant food products is relatively limited. In this context, a survey study is presented to explore the key factors affecting consumer buying behaviour of instant food products in Kota Bharu. The questionnaire, validated by the Cronbach's Alpha test had been distributed to 384 Kota Bharu respondents who were sampled by convenience sampling. Demographic characteristics of respondents are summarized by the descriptive analysis. Exploratory factor analysis unveiled eight underlying factors prompting consumers to buy instant food products. These eight factors accounted for around three-fifths of the total variance explained. It was found that the factor "marketing and branding attributes" had the most decisive influence on consumers.

## 1. Introduction

Food is a crucial element of human life. Intake of food provides some nutrition to humans. By definition, food represents any chemical substances taken into the body that spurs new tissue development [1]. In contemporary society, time is precious to everyone, and thus, instant food plays a vital role in an individual's life [2]. With bustling lifestyle, individuals have begun leaning towards packed foods that offer some convenient traits [3]. The existence of instant food products with delicious taste satisfied the needs of the modern lifestyle. Mubarak Ali and Syed Ibrahim [4] expressed that almost all people like to consume food that calls for little preparation time before eating it. As accentuated by Chiruthoti [5], people are in unanimous agreement that they are under time pressure to



prepare food conventionally, yet they still demand tasty meals. This finding is in line with Jebaraj's [6] study, which disclosed that consumers place substantial interest in high-quality instant food products. Instant food is a convenient food that saves time and cooking energy. It is often commercially produced in the forms of ready-to-cook (RTE) and ready-to-eat (RTE) food products [5]. The classification of instant food is broad where it includes the canned product, frozen food, baked products, to name a few [2]. A drastic upsurge in working women, urbanization, and breakdown of the traditional family system consequences to the fast-paced lifestyle has immensely elevated the demand for instant food products [1]. Transformation in food habits and traditions are other reasons that stimulate the high demand for instant food products [3]. A similar trend is observed in Malaysia where instant food has gaining prevalence increasingly among Malaysians [7]. It is unsurprised to notice that assorted new and superior quality instant food products occupy licit shelf space in Malaysia's retail markets. With instant food, people get more free time to engage in other daily's undertakings.

Consumer buying behaviour denotes consumers' actions in choosing, buying, and consuming goods and services to satisfy their needs [8]. It is further confirmed by Gabbot and Hogg [9] that the process may consist of some activities and phases. Knowing consumer buying behaviour is deemed indispensable for marketers as this information gives them with competitive advantage over their rivals [10]. Instant food is gaining its share of importance in today's food industry, and for this reason, much research regarding the topic of instant food products have been made available in the literature. To the best of the authors' knowledge, the topic of consumer buying behaviour of instant food products among consumers from Kota Bharu, Kelantan has been comparatively under-researched. Hence, this research is initiated to expose and fill the research gap by examining the critical factors of Kota Bharu consumer buying behaviour towards instant food products. The study's findings will undoubtedly provide valuable insights to the marketers to align their plans to consumer expectations that eventually establish a sophisticated customers' base.

## **2. Methodology**

### *2.1. Data collection and data analysis*

A survey using a questionnaire was performed to explore the key drivers. Note that the study is restricted only to the consumers of instant food products. Samples of 30 to 500 are recommended for a reliable survey [11]. The sample size for this study is 384. The samples were sampled by convenience sampling from a conveniently available pool of Kota Bharu population, the capital city of Kelantan. Regarding the analysis of the data, statistical package for the social sciences (SPSS) was used.

### *2.2. Development of questionnaire*

A questionnaire with two segments were constructed. A pilot study was done to guard against the questionable questions. Note that an ambiguous free questionnaire escalates respondents' capability in exercising a rational judgment. The first segment is meant to collect demographic information. The second part entails grading the 40 key variables of buying instant food behaviour measured by a five-point Likert scale. The 40 key variables were defined beforehand by the triangulation method involving interviews and literature review. Based on literature review, some recent survey research on instant food products, for example, Mubarak Ali and Syed Ibrahim [4], Srinivasan and R.Nirmala [12], Mayakkannan [13], Vijayakumar [14], etc. were taken as reference in devising the questionnaire. The questionnaire was confirmed reliable by a Cronbach's Alpha test with an alpha score of 0.934. This survey secured a full response rate as the researchers met the respondents personally for data collection.

## **3. Results and Discussion**

### *3.1. Descriptive analysis*

The survey sample has 384 respondents who dwelled in Kota Bharu, of which 69.5% are female, and 30.5% are male. It shows that the age group under 21 years old takes up 44%, the highest percentage

group. Above 68% of the respondents are well educated with tertiary qualifications. The rest of the respondents have secondary education and below. Predictably, the survey is dominated by the Malay respondents (88.3%) since they are the largest population in Kota Bharu. Most of the respondents' earning power is RM2,000 below, represented by 81.0%.

**Table 1.** Summary of demographic profile.

Parameter	Category	Frequency	(%)	Parameter	Category	Frequency	(%)
<i>Gender</i>	Male	117	30.5	<i>Race</i>	Malay	339	88.3
	Female	267	69.5		Indian	20	5.2
<i>Age</i>	Under 21 years old	169	44.0		Chinese	18	4.7
	21-30 years old	158	41.1	Others	7	1.8	
	31-40 years old	16	4.2	<i>Monthly Income</i>	RM2,000 and below	311	81.0
	41-50 years old	26	6.8		RM2,001 to RM4,000	21	5.5
	Over 50 years old	15	3.9	RM4,001 to RM5,000	12	3.1	
<i>Education level</i>	Primary Level	1	0.3	Over RM5,000	40	10.4	
	Secondary Level	117	30.4				
	Tertiary Level	261	68.5				
	Others	3	0.8				

### 3.2. Exploratory factor analysis

Factor analysis is a famous data reduction tool [15]. This study used factor analysis to scrutinize the principal groupings of the underlying factors from the identified 40 key variables that affect consumer buying behaviour towards instant food products (Table 2). Two variables with mean scores below 3.000 were discarded for factor analysis since the respondents rated these two variables unimportantly. The Bartlett's sphericity test and Kaiser-Meyer-Olkin (KMO) test must first be enquired for a fine factor analysis to carry on. The Bartlett's test statistic is approximately chi square distributed with degree of freedom  $[p \times (p-1)/2]$  and is given by

$$\chi^2 = -\left(n-1 - \left(\frac{2p+5}{6}\right)\right) \times \ln|R|, \quad (1)$$

where  $|R|$  is the determinant of the correlation matrix,  $n$  is the sample size and  $p$  is the number of variables. Meanwhile, the KMO test is computed using

$$\text{KMO} = \frac{\sum_i \sum_{j \neq i} r_{ij}^2}{\left(\sum_i \sum_{j \neq i} r_{ij}^2 + \sum_i \sum_{j \neq i} u_{ij}^2\right)}. \quad (2)$$

Here,  $r_{ij}$  is the correlation matrix and  $u_{ij}$  is the partial covariance matrix. Bartlett's sphericity test of 0.000 indicating that the variables are orthogonal, which affirmed the existence of some correlations between variables. The KMO value is found to be 0.907, surpasses the minimum threshold of 0.6 for an acceptable factor analysis. The principal component analysis (PCA) subjected to a varimax rotation has extracted eight core factors. These eight factors' eigenvalues are above one, which is the common cut-off standard for deciding the number of factors to be retained in a factor analysis. A total of 60.63% of the variance is explained with eight extracted factors (Table 3), exceeding the sufficient construct validity of 60% [16]. Out of 38 variables, 26 are shown practically significant with factor

loadings over 0.5. Factor 8, the last extracted factor, has a less critical impact, and thus, it is sensible to have only one variable in it. This outcome coincides with Le-Hoai, Lee and Lee [17] and Yap, Low and Wang [18], who also concluded their factor analysis results with only a sole variable in the last and most minor effect factor.

**Table 2.** Mean score and ranking for 40 variables affecting consumer in buying instant food products.

Rank	Variable	Mean	Rank	Variable	Mean
1	Never buy broken/ damaged food product	4.4792	21	Slack time for other activities	3.7917
2	Availability of expiry date	4.4531	22	Flavour are important	3.7865
3	Certification mark	4.3750	23	Minimal occupation space	3.7760
4	Portative	4.3125	24	Promotion	3.7656
5	Hygienic design food packaging	4.2943	25	Purchase of well-known brand	3.7370
6	Availability of manufacturing date	4.2760	26	Eagerness to try new food products	3.6979
7	Solution for busy people	4.0286	27	Word of mouth marketing	3.6901
8	Availability of product in regular store	4.0208	28	Loyal to specific brands	3.6641
9	Modern life-style	3.9974	29	Price guarantees satisfaction	3.6198
10	Excellent backup meals	3.9792	30	Less preparation effort	3.5885
11	Less preparation time	3.9740	31	Advertising	3.5495
12	Nutritional information on product	3.9375	32	Taste sensation raises willingness to spend	3.5339
13	Liking to eat ready-to-cook (RTC) food	3.9062	33	Colour are important feature	3.5260
14	Label comparison for the most nutritious food	3.8828	34	Shorter cooking time	3.5260
15	Attractive product label	3.8776	35	Convenience inflates repurchase intention	3.5208
16	Avoid complicated cooking process	3.8672	36	Quality of food products	3.2031
17	Long shelf life	3.8620	37	Trustworthiness for consumption	3.1641
18	Innovative design of product	3.8464	38	Family recommendation	3.0573
19	Information from advertising	3.8411	39	Online purchase	2.9219
20	Non easily perishable	3.7917	40	Zero health hazard	2.9010

### 3.3. Discussion of the factor analysis results

**3.3.1. Factor 1: Marketing and Branding Attributes.** Factor 1 suggests marketing and branding attributes of instant food products, in which it explains nearly one-third of the variability on the consumer buying behaviour. Product attributes, specifically marketing and branding, are mighty in maintaining customer relationships while tapping more potential consumers. Successful social media marketing will undisputably allow companies to establish a beneficial customer relationship by ameliorating customer satisfaction, interaction and creating positive word of mouth [19]. That is, decisions of buying behaviour are highly correlated with the social factors whereby the people around us hugely induce likes and dislikes to a great extent [20]. This result is consistent with Chirutotti's [5] study, which reported that sales promotion has a significant role in instant food demand. Besides, advertising strategies are exclusively designed to attract target consumers following the specific age

groups, socioeconomic groups, and ethnics groups [8]. Thus, entrepreneurs, including instant food manufacturers, have viewed advertising as a powerful weapon in helping them to tap their target market continuously [21]. Effective post-purchase marketing strategy is essential for marketers because a satisfied customer could turn his experience into the loyalty of the product's brand [22].

**Table 3.** Factor profile.

Factors	Factor Loadings	Eigenvalue	Variance explained (%)
<i>Factor 1: Marketing and Branding Attributes</i>			
Word of mouth marketing	.769	11.367	30.722
Advertising	.732		
Information from advertising	.682		
Loyal to specific brands	.666		
Promotion	.609		
Purchase of well-known brand	.606		
<i>Factor 2: Appearance Attributes, Price and Trustworthiness</i>			
Colour are important feature	.708	2.764	7.469
Attractive product label	.652		
Price guarantees satisfaction	.625		
Trustworthiness for consumption	.606		
Innovative design of product	.605		
<i>Factor 3: Convenience</i>			
Convenience inflates repurchase intention	.848	1.725	4.661
Shorter cooking time	.847		
<i>Factor 4: Food Safety Concerns</i>			
Availability of manufacturing date	.775	1.597	4.316
Availability of expiry date	.713		
Label comparison for the most nutritious food	.662		
Never buy broken/ damaged food product	.640		
Nutritional information on product	.616		
<i>Factor 5: Product Durability and Availability</i>			
Long shelf life	.808	1.493	4.034
Availability of product in regular store	.743		
<i>Factor 6: Food Hygiene and Portative</i>			
Certification mark	.673	1.303	3.521
Hygienic design of packaging	.671		
Portative	.643		
<i>Factor 7: Perceptions</i>			
Quality of food products	.673	1.140	3.080
Taste sensation raise willingness to spend	.590		
Eagerness to try new food products	.538		
<i>Factor 8: Lifestyle</i>			
Modern life-style	.618	1.046	2.827
Total variance explained = 60.63, KMO test = 0.907, Bartlett's test of sphericity = 7509.841, Df = 666, Sig. = 0.000			

3.3.2. *Factor 2: Appearance attributes, price and trustworthiness.* Factor 2 relates to the appearance attributes, price and trustworthiness. It accounts for 7.469% of the total variance explained. Product

appearance, unequivocally colour has been confirmed as the most notable factor contributing to a positive buying experience [23]. Price is undoubtedly a crucial driver in guaranteeing consumer buying behaviour while fulfilling their satisfaction. Besides pricing, product attributes like taste, flavour, packaging, and quality are the significant determinants that precipitate buying decisions [24]. Food labeling is crucial for consumers to obtain information on food before purchasing [25]. As noted by Siti, Lee, and Wong [23], consumers tend to read the information on a product label while observing its graphics, colour, size, or shape at the beginning of the purchasing process. Innovative packaging, paired with mandatory label information on a product, is of particular importance in promoting consumer purchasing decisions, as these attributes eliminate confusion and build brand reputation. Perceived value of a product, such as new types of machinery used for product innovations, might persuade food products' buying decisions [26].

*3.3.3. Factor 3: Convenience.* Factor 3 deals with the convenience trait towards instant food products. Convenience trait directly affects food products' repurchase intention among consumers, as it minimizes cooking times but maximizes times for other activities [27]. Lack of time, resources, expertise, and ability to prepare home-cooked meals prompt consumers' intention to opt for convenience foods. Instant food products such as instant noodles save consumers time and effort while relieving them from the tedious task of gathering, cleaning, and arranging various ingredients for preparing the food [24]. Factor 3 caters for 4.661% of the total variance explained.

*3.3.4. Factor 4: Food safety concerns.* Factor 4 features food safety concerns, where it takes up 4.316% of the variability. Perception of food safety risk is one such psychological explanation that impacts consumers' purchasing attitudes and behaviours towards instant food products [28]. Health risk information, date of manufacture with best before or expiry date, amount of nutrition contents on each artificial ingredient used, and storage instructions displayed on the food product are confirmed to be the highly imperative criteria for most consumers [29]. This is in line with this study's results of this study, which found that the consumers, without fail, check the manufactured date and expiry date to ensure the food products' safety. From the consumer's viewpoint, food safety is of utmost importance. The MS1500:2004 standard, which includes the guidelines for the theory of food safety (MS1514), the Hazard Analysis Critical Control Point (HACCP-MS1480), and the recommendations for good manufacturing practices (GMP) for small and medium-sized food industries have long been implemented to ensure food safety [30]. Consumers customarily evaluate the different nutritional information between two products before purchasing to enable them to select the most nutritious and healthier food product. Furthermore, consumers also analyze the food safety of the food products [31]. It was reported that the lists of ingredients and detailed nutrition information for each barcoded item would improve the preferences of the products and comparison of nutrient content [32]. It is also a common habit for a consumer to decline to buy damaged items, and food products make no exception.

*3.3.5. Factor 5: Product durability and availability.* This factor consists of two variables concerning the topics of durability and availability of the products. A total of 4.034% of the total variance explained is contributed by factor 5. A consumer may not discard a food item until it has been confirmed to have either degraded or spoiled. As expressed by Henry and Chapman [31], fermentation effectively increases the nutritional value of foods and the taste and texture, durability and safety of foods. Giménez, Ares, and Gámbaro [33] affirmed that the shelf-life studies are ideally be conducted in the form of blind tests to achieve product improvement. A high durability product will surely enhance the acceptance rate of consumers towards the product. Moreover, the result shows that product availability at regular stores has a substantial impact on consumer buying behaviour. Vijayeta [3] highlighted that one crucial variable why the RTE food products are highly sought-after among consumers is that they are usually massively available in regular stores.

3.3.6. *Factor 6: Food hygiene and portative.* Food hygiene and the portative of food products significantly influence consumer buying behaviour towards instant food products. Factor 6 caters for 3.521% of the total variance explained. The certificate in food safety is based on tests, inspections, and audits that give the consumer confidence to consume the products. The legislation allows HACCP certification as a defense against food poisoning or contamination [30]. This study results cue that when making purchase decisions, Kota Bharu consumers have a certain level of awareness regarding the certificate marks that guarantee hygienic food. A portative advantage that emphasizes the “ease of carrying around” is another vital variable in driving one’s buying behaviour of instant food products.

3.3.7. *Factor 7: Perceptions.* Consumer perceptions towards food manifest factor 7. Factor 7 comprises three variables, which accounted for 3.080% of the total variance explained. Readiness in accepting new food products following the advancement of food technologies is crucial, relying heavily on consumer perception. The result is reconcilable with those of Niraj’s [29] findings which revealed that food products’ quality had become an increasingly essential attribute for consumers making purchasing decisions. The taste sensation is another critical variable. It was found that the difference in taste between homemade food and the RTE food product is one of the many reasons why some consumers refuse to opt for RTE food [3].

3.3.8. *Factor 8: Lifestyle.* Factor 8 implies consumer lifestyle. Only a variable is extracted into this factor, and it has the least adverse effect on consumer buying behaviour. Factor 8 merely accounts for 2.827% of the total variance explained. Lifestyle changes have led to an increase in the demand for convenience and healthy food [31]. This statement is consolidated by Vijayeta [3], who claimed that people begin to imitate western country lifestyle, and this has prompted them to place a high preference on packed food, incredibly instant food products that can be consumed quickly and easily.

## Conclusion

This study presents vital insights to the instant food marketers concerning the underlying factors of instant food products buying behaviour among Kota Bharu consumers. By factor analysis, 38 out of 40 predetermined variables gained from the triangulation are further clubbed into eight significant factors consisting of only 26 variables. Around 60.63% of the variance is explained by the eight factors. Of note, ‘marketing and branding attributes’ was found to be the most influential factor. Consolidating the study’s findings by considering a larger sample size from all over the country would be an interesting topic. The research can be explored by comparing the main drivers affecting consumer buying behaviour towards instant food products from a few different generations, like from baby bommers to generation Z.

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