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Innovative Food and Its Effects toward Consumers' Purchase Intention of Fast Food Product

LES ALIMENTS INNOVANTS ET SES EFFETS VERS L'INTENTION D' ACHAT DES PRODUIT DE FAST FOOD DES CONSOmmATEURS

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Abstract: This study is about the discoveries on innovative food and its effects toward consumers' purchase intention of fast food products in Malaysia. The research aims to investigate whether consumers really consider the innovation factor when making decision to purchase the fast food products. The findings of the study indicated that there is less influence of innovative food on the consumers' purchase intention which emphasizes more on the 'output' (which is the end products) rather than 'input' (which is raw materials used in producing the foods). Innovative food is being too narrowly defined by the consumers' as only a technology-related part of innovations. Whereas innovative food could be perceived in a broader scope such as product innovation, process innovation, organizational innovation and market innovation. The result has shown some differences with the previous literature where food innovativeness were found to have positive relationship toward the consumers' satisfaction. Hence, this study is expected to contribute to the existing knowledge on the dimension of consumer

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purchase intention to the industry players as well as academicians. Future research should focus on the similar study with the extended scope to other fast food restaurants in Malaysia. By doing this, hopefully we can get a clearer picture on the existing and new variables which can be further examined.

Key words: Innovative Food; Freshness; Presentation; Taste; Fast Food Restaurant

Résumé: Cette étude porte sur les découvertes concernant les denrées alimentaires innovantes et de ses effets à l'intention d'achats des consommateurs sur les produits de restauration rapide en Malaisie. La recherche vise à déterminer si les consommateurs ont vraiment considéré le facteur de l'innovation lors de la décision d'achat des produits de restauration rapide. Les conclusions de l'étude indiquent qu'il y a moins d'influence de la nourriture innovantes sur l'intention d'achat des consommateurs qui met l'accent plus sur la «production» (ce qui est produit fini) plutôt que «input» (ce qui est de matière première utilisée dans la production des aliments). Les alimentaires innovants sont trop étroitement définie par les consommateurs car seule une partie de technologie liés à des innovations. Considérant que les aliments innovants pourrait être perçue dans un plus large champ d'application tels que l'innovation produit, innovation de processus, l'innovation organisationnelle et innovation sur le marché. Le résultat a montré quelques différences avec la littérature antérieure, où l'innovation alimentaire a été trouvée à avoir des relations positives à l'égard de la satisfaction des consommateurs. Ainsi, cette étude devrait contribuer aux connaissances existantes sur la dimension de l'intention d'achat des consommateurs pour les joueurs de l'industrie ainsi que des universitaires. Les recherches futures devraient se concentrer sur l'étude similaire avec le champ d'application étendu à d'autres restauration rapide en Malaisie. En faisant cela, j'espère que nous pourrions obtenir une image plus claire sur les nouveaux et les variables existantes qui peuvent être examinées plus avant.

Mots clés: Aliments innovants; Fraîcheur; Présentation; Goût; Restauration rapide

1. INTRODUCTION

Nowadays, in modern living, food choice is crucial for health conscious consumers who always place the importance on healthy living lifestyle and nutritional value products. Consumers are seeking quality, value and desirable environment away from the daily life pressures (Soriano, 2002). With the growing affluent and educated society, consumers today are demanding safe and better food quality to consume. Factors such as safety, freshness, storage, preparation, consumption, price, packaging, and place of purchase are the factors that may create the consumers' purchase intentions towards their food purchasing behavior. Quality and safety are two important elements in consumer food perceptions and decision making associated with food choice (Grunert, 2005, Röhr et al., 2005). Price is not the prime factor and those sellers who are able to serve good quality food will always win the customer. Nevertheless, consumers always are seeking a better value for their money (Klara, 2001). Food quality and fresh ingredients are the most important reasons why customers return to the restaurant (Brumbach, 1998).

In contrast, failure to deliver quality food can only threaten marketers' long term profitable relationship with the customer. The future of the food product will be short-lived and the consumer acceptance will fall drastically. As the consumer perception is getting lower, it would seem reasonable to suppose that the overall chances to induce the consumer intention to purchase the food product will definitely be an uphill task to the marketer. According to Creyer and Ross (1997), purchase intentions are often measured as an alternative for real purchase behavior. Mittall et al. (2001) further described service managers are deeply aware of the need to offer a service mix that is reliable with the attributes most valued by those most likely to purchase. It is important for the food supplier to search for the factors that relate the consumers'

perception towards quality product, thus it will give an impact on what the consumer is paying for and expenditure behavior in future (Grunert, 1997). In order to attract and create the purchaser intention, it is important for the managerial division in food industry to understand and identify what are the factors that can lead to the consumer purchase intention.

As we can see today, most of the food manufacturers have started applying some innovations and modern technology equipment into their productions. According to Avermaete et al. (2003), the increased competition has pushed food companies to become more efficient in processing, to re-organize management, develop new products, and explore new markets in order to meet the needs and wants of consumers competitively. Among the benefits of technological innovation are low costs, convenience, flexibility and safety (Alexander, 1999).

Many researchers have developed various classifications of innovation with a very broad concept (Cumming, 1998, Grunert et al., 1997 and Johannessen et al., 2001). Lundvall (1992) has defined innovation as an ongoing process of leaving, searching, and exploring which results in new products; new techniques; new forms of organizations; as well as new markets. Kotler (1991) and Grunert et al. (1997) described product innovation as any goods, service, or idea that is perceived by someone as new. Therefore, a product maybe considered an innovation to one person or organization but not to one another (Johannessen et al., 2001). As we have noticed over the last decades, a few new market segments have been introduced by the food industry, ranging from organic and nutritional foods to ready-made meals. These segments did not exist on its own but resulting from the food development and innovation itself.

Nevertheless, according to Avermaete et al. (2003), most researchers tend to focus only on technology related innovations. Lundvall (1992) described innovation into four main factors such as product innovation, process innovation, organizational innovation and market innovation. In fast food sector, innovation promotes healthier choices, the decrease in preparation time as a way of labour cost reduction and revenue management (Kimes et al., 1999). The founder of the Kentucky Fried Chicken Corporation for example, Colonel Sanders, was successful in solving the process innovation (efficiency) and product innovation (quality) (Rodgers, 2008). Furthermore, other fast food restaurants are incorporating process innovation concept as what is being practiced by McDonald's with its make-to-stock and Burger King with its work-in-process inventory (Davis et al., 2002).

Furthermore, according to Pysarchik et al., (1999), processed food can be perceived as an innovation. One of the ways to increase the service sector productivity is by the means of industrializing the service as what McDonald's did in its assembly-line approach in fast-food retailing. This innovation could be implemented by adding equipment, standardizing production and harnessing the power of technology to respond to consumer needs and desires (Kotler and Armstrong, 2010). As suggested by Turnbull and Meenaghan (1980), consumer characteristics such as demographics and opinion leadership are related with innovativeness. Boyd and Mason, (1999) has suggested that communication behavior might be the characteristic that also relates with innovativeness. This clearly means that through communication a lot of changes can be made because people can share their experience and knowledge on how to create something new to the consumer in the market. Thus, to be successful in fast food industry, the player should adapt with the innovation not only to the process but also to the product, organizational and market innovation. By doing so, the players would be able to survive longer in the market by building strong profitable relationship with the customer.

However, there are some question marks on the part of the consumers themselves. Do consumers actually consider innovation factor when making decision to purchase any particular food product? Therefore, it is important for the food producer to understand the whole scenario and its effect to the food demand in order to reach the desire position in the marketplace. Thus, the purpose of this study is to identify the relationship between independent variable (innovative food) and dependent variables (customer purchase intention). The expected result is consistent with Theory Reasoned Action (TRA) which suggests that a person's behavior is determined by his/her intention to perform the behavior (Ajzen and Fishbein , 1980). But what constitutes to predict the influence of behavior has become the main interest of the study.

From the review of literature, Figure 1 depicted the proposed theoretical framework of the study:

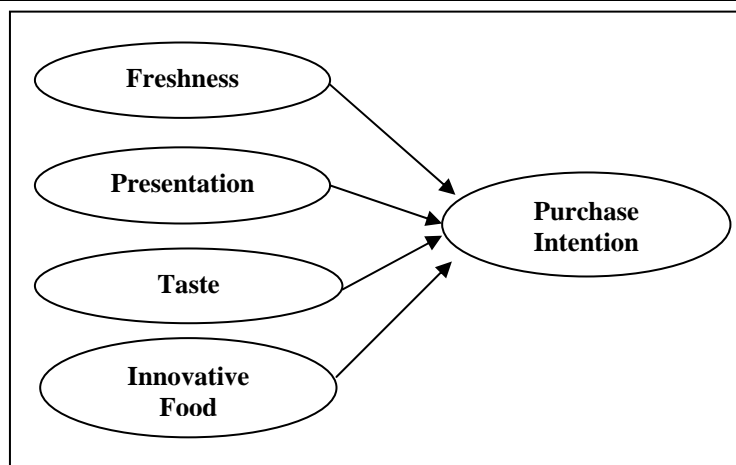


Figure 1: Proposed Theoretical Framework

2. RESEARCH METHODOLOGY

2.1 Hypothesis Development

Given the preceding discussion, the following hypotheses are proposed :

- H₁: There is a significant influence of freshness towards purchase intention of fast food product
- H₂: There is a significant influence of presentation towards purchase intention of fast food product
- H₃: There is a significant influence of taste towards purchase intention of fast food product
- H₄: There is a significant influence of innovative foods towards purchase intention of fast food product

2.2 Research Design

This research is a quantitative research where sources of information are gathered from questionnaires. Instrument utilized was through the self-administered questionnaire containing closed-ended and scales to matrix questions. This study is a descriptive study which is interested in describing the characteristics of a population or phenomenon. This study also used hypotheses testing to determine the influence of innovative food towards customer purchase intention of fast food products. The type of sampling is non-probability sampling. Data collected were based on convenience sampling since the respondents were selected mainly from the Subway Restaurants customers in the state of Penang, Malaysia. Three branches of Subway Restaurant have been chosen as the avenue for data collection; namely E-Gate in Gelugor, Queensbay Mall in Bayan Lepas and Autocity in Juru. The population identified to be estimated as 400 customers who patronize the three branches per day. Data collections were made in the months of March and April 2010. Out of the total population, 120 respondents responded to the research survey. The sample size fulfils the rule of thumb as proposed by Roscoe (1975), for which sample sizes larger than 30 and less than 500 are appropriate for most research. Pre-testing of the questionnaire was made during the pilot study. The scale was piloted amongst a sample of ten (10) university students.

2.3 Data Analysis Method

For the purpose of this study, the researcher used the Statistical Software Package for Social Sciences (SPSS) Version 17 to compute all the data gathered from the questionnaires. The techniques of analysis used in this study were descriptive (mean, standard deviation) and inferential analysis (multivariate regression) to sum up the data collected. The questionnaires used are adopted from the questionnaires developed from past researches. In order to describe the sample characteristics in the data analysis report,

demographic data such as age, gender, ethnicity, religion, place of living and education level are included in the questionnaire. In the subsequent sections, all the study variable scales are measured using Likert scale rated varying from 1 to 5 (highly disagree to highly agree). Purchase intention was constructed in ten measurement items and innovative food in five measurement items.

Besides that, another four more variables were included (for inferential analysis) in the study such as freshness in five measurement items, presentation in five measurement items and taste in four measurement items.

Pre-Testing of the questionnaire was made during the pilot study.

3. RESULTS AND DISCUSSION

This section presents the findings of this study. The data are interpreted using the mean, factor analysis and regression methods of SPSS.

3.1 Pilot Study

There was no improvement required to the questionnaires as the respondents' feedbacks were satisfactory and appropriate.

3.2 Demographic Profile

The result of the demographic profile shows that majority of the respondents are male (69%), age from 21 until 30 years old (61%), single status (74%), Chinese race (50%), working in private sector (40%) and income ranging from RM2,000 to RM3,000 (51%). Furthermore, it was also discovered that most of the respondents visited the restaurants more than 10 times (43%) during breakfast (23%) and lunch (39%).

3.3 Factor Analysis

This study has utilized two types of factor analysis namely exploratory and confirmatory. Exploratory factor analysis attempts to determine the number of factors, while confirmatory factor analysis attempts to test how well the measured variables represent the number of constructs. From the result of exploratory factor analysis, all five factors can be accepted for the rotation component matrix. In confirmatory factor, items with the result of less than 0.5 were omitted and disregarded from data analysis. This reduction is possible because the attributes are related and the rating given to any one attribute is partially the result of the influence of other attributes.

Based on KMO measure of sampling adequacy test in table 1, it was found that the factor analysis data was appropriate with the value of 0.783, which falls between the ranges of being great and appropriate of factor analysis data. KMO should be 0.60 or higher in order to proceed with factor analysis. Bartlett's Test was utilized with the result which indicates a highly significant result with $p=0.000$ ($p<0.05$) and therefore factor analysis is appropriate and accepted.

Table 1 : Factor analysis result

KMO and Bartlett's Test	Result
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.783
Bartlett's Test of Sphericity (Sig.)	.000

3.4 Reliability Analysis

From the reliability analysis in table 2, all factors including independent and dependent variables were found to be good reliability with all the Cronbach's Alpha result are of above 0.6. The result of reliabilities

that are under 0.6 is considered to be poor, while in the range of 7.0, the result can be acceptable and if the result show range between 0.8, it is considered as a good result (Sekaran, 2003).

Table 2 : Reliability analysis result

Factor	Variable	Cronbach's Alpha Result
Freshness	Independent Variable	.699
Presentation	Independent Variable	.812
Taste	Independent Variable	.685
Innovative food	Independent Variable	.697
Purchase Intention	Dependent Variable	.747

3.5 Regression Analysis

Table 3 shows the R-Square and Durbin-Watson test. R-Square test result of 0.597 can be accepted for the regression analysis. The Durbin-Watson test result of 1.687, an indicator that the autocorrelation is almost reaching to zero (no autocorrelation) or there is a significant difference which exists between the dependent and independent variables. From the ANOVA test in table 4, it appears that the four predictor variables are not all equal to each other and could be used to predict the dependent variable, customer purchase intention as is indicated by F value of 15.887 and strong significance level of 0.000 ($p < 0.05$). Furthermore, as shows in table 5, the results show that out of four factors, only freshness and presentation have significant ($p < 0.05$) influence towards purchase intention with high Beta 0.308 and 0.286 respectively. However, taste and innovative food have less significant impact ($p > 0.05$) with low Beta of .170 and .046 respectively. The VIF value of less than 10 for all variables show that the problem of multi-collinearity have not existed and all data are mutually exclusive. As for the interpretation, the test indicates that food freshness, presentation and taste have significant influence towards the customer purchase intention of fast food product. By examining the t statistic for all the independent variables it has apparently confirmed that these variables have significant relationship due to strong significant level ($p < 0.05$) with purchase intention. On the other hand, only innovative food has an opposite influence towards the customer purchase intention. Due to the lower t statistic value of 0.618 and insignificant relationship between the independent variable and dependent variable ($p > 0.05$), it is likely to state that the hypothesis for H_4 is wrong and can be rejected.

Table 3 : R-Square and Durbin-Watson Test

Test	Result
R-Square	.597
Durbin Watson	1.687

Table 4 : ANOVA Test

Test	F	Significant
ANOVA	15.887	.000

Table 5 : Result of Coefficients

Variable	Standardized Coefficients			Collinearity Statistics	
	Beta	t	Sig.	Tolerance	VIF
Freshness	.308	3.737	.000	.827	1.209
Presentation	.286	3.164	.002	.686	1.458
Taste	.170	1.931	.046	.725	1.380
Innovative Food	.046	.618	.538	.992	1.008

3.6 Discussion

From the analysis of statistical data, the results show that Malaysian consumers place relatively high level of importance on food freshness, presentation and taste but less importance on innovative food in their

willingness to purchase fast food products. Here, customers are seen more interested in the output' (which is the end product) rather than 'input' (which is raw materials used in producing the foods) of food. This happened especially to the Malaysia market environment where the final food product is vital regardless of how it is being produced. To a certain extent, a main factor such as cleanliness (input) is less important as long as the food tastes good, presentable and fresh.

The results are inconsistent with most of the literature and past researchers. For example, according to a study done by Soriano (2002), most of the Spanish respondents had chosen quality of food as the most important reason to return to the restaurant. The quality of food in the study had incorporated the food innovation as one of the items tested in quality of food factor. In a broader scope, it was discovered in the past study that there was a positive relationship between regional economic performance and innovativeness (European Commission, 1999 and Roper, 2000). Due to this, innovation in the food industry is important including the small food firms (Avermaete et al., 2003). The more innovative the food being served, the better in drawing more demand to purchase the food. Customers nowadays prefer more innovative food to be served in restaurant as compared with the past.

Nevertheless, in a mature and slow-changing sector in Malaysia, customers are being served with ordinary food with most of the sellers are lacking in terms of creativity and new ideas. This is the reason why the customers see there is a little impact in the innovation towards their decision to purchase fast food restaurants. To the customers, the innovation is at no difference between the competing fast food providers serving them in almost similar kind of environment. For example, Subway Restaurant and O'Briens Irish Sandwich Bars for a product of sandwich while Mc Donald's and Burger King for a product of a kind of burger. On the other hand, Malaysian local restaurant, Radix Fried Chicken is offering almost similar business settings with Kentucky Fried Chicken selling a kind of similar product of fried chicken.

4. CONCLUSION

As a conclusion, Malaysian consumers are putting less importance on innovative food in their decision to purchase food product. In this context, the consumers are looking too narrowly at the innovation being only a technology-related innovations served to them either by international or local fast food providers. These kinds of innovations have already been in service to them and they see no less effect to the preparation of the food. Since the fast food providers are offering almost similar environment setting, the consumers are not able to differentiate and always perceived no difference between one to another. Furthermore, with the demand that emphasizes more on the 'output' rather than 'input', there will always be less concern on the process as long as the food has good taste, presentable and fresh.

As for recommendation, in order to produce the product that can create an intention from the consumer, the company should continuously do some new development in the production and also to the organizational structure. A consumer loves to experience an innovation in every product that he/she purchases. Innovation in food industry must come with creativity and new ideas have to be presented to the customers' expectation, thus it will create an intention to purchase food product in the market.

Future research should focus on the similar study with the extended scope to other fast food restaurants in Malaysia. This is because this study is limited to only three branches of Subway Restaurant in Penang, Malaysia, the results may not be applicable to all fast food consumers in Malaysia. It is also suggested that future research should compare the similarities of the result with the customers of typical restaurants without technology-related innovations. The comparison could be used to ascertain on the roles of innovation and its effects to the purchase intention of the slow-changing food sector in Malaysia. Eventually, a comparison can be made between the findings so that such constructible findings and conclusions can be made to the study. Furthermore, the tested factors and new variables also can be further examined in order to increase the accuracy of the research findings.

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