

Price Sensitivity-Consumer Satisfaction Relationship towards Electrical Appliances

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Consumer satisfaction has been long recognized in marketing thought and practice as a central concept as well as important goal of all business activities. While price sensitivity, has been observed as an important element affecting diffusion of products and services which irrefutable, proved to correlate in consumer satisfaction with other efficiency dimensions. By incorporating price information into the consumer satisfaction framework, this study is aimed to identify the relationship that is germane between the variables, and to investigate the influence of demographical characteristics, effect of ads, consumer loyal and disloyal behaviours towards price sensitivity, by adopting electrical appliances as the medium of this study. Itemized rating scales and multiple choices instrument were used in the questionnaire survey, by gathered opinions and preferences of a total 201 respondents in Klang Valley, Selangor, Malaysia through a quota sampling technique. The variables were tested via Statistical Package for Social Science (SPSS) and the results indicated that price sensitivity-consumer satisfaction relationship is significant in a positive way on electrical appliances purchasing. Meanwhile, effect of ad, consumer loyal and disloyal behaviours also proved to correlate with price sensitivity. Nevertheless, a hypothesis test on these variables via multiple regression analysis is only partially accepted, as the relative importance of affect of ads is below the significant level. As for demographic factors, age is proved to have a negative relationship with price sensitivity and consumer satisfaction whereas other demographic factors indicate differences and indifferences with price sensitivity and consumer satisfaction. In sum, consumer satisfaction depends on value to some extent, which in turn depends on price. The descriptive and inferential analysis of this study provides discernible trends on consumer purchasing behaviours in electrical appliances and a lucid explanation between variables proposed in the study. It also presents a concise and simple measure of price sensitivity that may open the door for more careful and empirical study of other aspects of price sensitivity. At the same time, this study provides a simple idea to marketers, researchers, advertisers and other parties who may interest to know more about the price sensitivity-consumer satisfaction relationship studies.

1. Introduction

The price of a product is one of the most important decision variables for both the consumer and the retailer. It has been observed as an important element affecting the diffusion of new products and services (Munnukka 2005). Competitive conditions in the marketplace have made price an even more important differentiating factor in formulating marketing and business strategies. As a result, price has increasingly become a focal point in consumers' judgements of offer value as well as their overall assessments of the retailer (Estelami & Bergstein 2006, Monroe 2003).

Existing research in marketing has documented several consumer shortcomings in dealing with retail prices. In general, price being a major contributor to dissatisfaction

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(Estelami & Bergstein 2006). According to Herrmann, Huber & Wricke (2001), satisfaction is essential as the satisfaction of consumers' wants is what lays the foundation for a company's long-term success. The challenge facing any company is thus to achieve the highest possible level of customer satisfaction. Customers who are satisfied with a purchased product will buy the same product again, more often, and will also recommend it to others.

Recent research supports the notion that there is a possible relationship between consumer satisfaction and financial performance, whereby firms that actually achieve high customer satisfaction also enjoy superior economic returns. This relationship is important because price is a key element in the profit equation and therefore is directly linked to profitability. Furthermore, the general belief that satisfied customers are willing to pay higher prices is typically based on anecdotal evidence (Homburg, Hoyer & Koschate 2005). The ability to provide competitive prices and to effectively resolve consumers; price concerns both before and after purchase has therefore become of interest for marketing managers. This showed that consumer satisfaction is depends on value to some extent, which in turn depends on price. Price information can be incorporated into the consumer satisfaction framework to increase the comparability of the results across products with different prices as well as across consumers with different incomes (Chan et al. 2003).

Even though there is a growing literature associated with price sensitivity of consumers, there is not much information or research inclined towards product than service sectors. Thus, electrical appliances would be the medium of this research that linked streams of research from two distinct domains, price sensitivity and consumer satisfaction, based on elements mentioned above, to further the understanding of their relationship and to analyse the implications that results for marketing policy.

According to Wikipedia, the free encyclopedia (2010), electrical appliances is part of home appliances, which accomplish some household functions, such as cooking or cleaning. Home appliances can be classified into major appliances (white goods), small appliances (brown goods), and consumer electronics (shiny goods). All these products are considered as durable goods, which do not quickly wear out, or more specifically, they yield services or utility over time rather than being completely used up when used once. Examples of durable goods include cars, appliances, business equipment, electronic equipment, home furnishing and fixtures, houseware and accessories, photographic equipment, recreational goods, sporting goods, toys and games. According to previous study conducted by Brucks, Zeithaml & Naylor (2000) in development of dimensions for durable goods, 10 durable goods are chosen in the study to represent the spectrum of durable goods, and the meaning of durable goods is provided. In order to express the meaning of durable goods distinctly, corresponding to Brucks, Zeithaml & Naylor (2000), 10 items will be selected in this study which includes television, radio, computer, washing machine, refrigerator, video players, hair drier, camera, microwave oven and mobile phone.

This study examines whether there is a relationship between price sensitivity and consumer satisfaction on electrical appliances. In the theoretical domain, answering these research questions provides an improved understanding of the link between consumer satisfaction and variables of price sensitivity (consumer demographic factors, effect of advertising, consumer loyal and disloyal behaviours).

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Previous study has focused primarily on the direct impact of advertising on sales (Krishnamurthi, Narayan & Raj 1986). Though the importance of the indirect effects of advertising has been emphasized in previous studies, empirical investigations in marketing generally have ignored these effects. Nevertheless, Krishnamurthi, Narayan & Raj (1986) proposed that, one of the indirect effects is the impact of advertising on price sensitivity, which linked advertising and price as two key marketing variables. Researcher of this study is therefore tending to investigate the relationship between advertising and consumer price sensitivity, especially towards electrical appliances which are highly demanded to fulfil the needs of consumers.

Generally, this study is important to marketers to recognize why and how individuals make their purchase decision in electrical appliances. With this information, marketers are able to determine better strategic marketing decisions. They will be able to predict how consumers are likely to react to various informational and environmental cues, and to shape their marketing strategies accordingly once they have understood consumer behaviour on electrical appliances purchasing. With no doubt, marketers who understand consumer behaviour have great competitive advantages in the market place (Schiffman et al. 2001).

To other researchers, this study of price sensitivity and consumer satisfaction on electrical appliances is merely the new phenomenon in the research fields. It will be the extravagance knowledge that most of the researchers hope to explore within these few decades since consumer satisfaction has long been recognized in marketing thought and practice as a central concept as well as an important goal of all business activities (Yi 1990, Anderson, Fornell & Lehmann 1994 and Chan et al. 2003). As more of this knowledge becomes available, those interested in developing consumer theory will be able to construct more complex models, propose more hypotheses, and provide more rigorous explanations for price sensitivity and consumer satisfaction relationship.

The result of this research showed that advertising has an effect on the price sensitivity of consumers and this indicated that an increase in advertising appear to an increase in the estimated price sensitivity of consumers. However, studies conducted by Kaul & Wittink (1995) and Krishnamurthi, Narayan & Raj (1986) rejected this research finding. Besides that, the result of this research also showed that consumer loyalty behaviour is proved to correlate with price sensitivity positively. This finding contradicted and against the notion that loyalty reduces price sensitivity which has been replicated in study conducted by Duke at al. (2006). Generally, the results of this research will provide the opportunity to the public policymakers who wish to understand the impact of consumer characteristics, advertising, as well as consumer loyalty behaviour towards electrical appliances in Klang Valley, Selangor, Malaysia.

In conclusion, measuring price sensitivity among samples of consumers is often a time-consuming and difficult task for applied and theoretical researchers. If new methods could be developed, both marketing management practice and consumer theory would benefit. This paper presents a concise and simple measure of price sensitivity that may open the door for more careful and empirical study of other aspects of price sensitivity, such as its impact on consumer satisfaction, how it is influenced by consumer characteristics, loyal and disloyal behaviours, as well the effect of advertising.

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This paper aimed to discuss and examine the price sensitivity and consumer satisfaction relationship towards electrical appliances in Klang Valley. It consists of five main sections where it begins with introduction, which basically gives an overview of the study, objectives of the study, and importance of the study. The second section is literature review, where the previous research findings that are related to the scope of this study are further explained. The third section is methodology which contains a description of research methods and techniques used for the research. The fourth section is findings and discussion which presents a complete account of the data analysis and results of the study in the form of texts, figures and tables so that the key information is highlighted. Finally the conclusion and recommendation section sums up the entire study and contains a brief description of the problem, research methodology, findings, limitation of the study, implication of the findings and recommendation.

2. Literature Review

2.1 Price Sensitivity

Generally, to understand the price sensitivity, it is important to know the price-quality effect. Price represents nothing more than the money a buyer must give to a seller as part of a purchase agreement. For some products, however, price means much more. In such cases, price sensitivity is influenced by the price-quality effect, which states that buyers are less sensitive to a product's price to the extent that a higher price signals better quality. This occurs when potential buyers cannot ascertain the objective quality of a product before purchase and lack other cues, such as known brand name, a country of origin, or a trusted endorsement to guide their decision. In another words, the buyer are relatively price insensitive when facing a new existing innovation on them. Besides that, the more the consumers must rely on price to judge quality, the less sensitivity they will be. For most purchase decisions, consumers can either examine a product before purchase or infer its quality from past experience with the brand. Studies indicate that under these conditions, price is not used as a quality cue (Nagle & Holden 2003). This price sensitivity approaches fulfilled the traditional view which based on the proposition that, for any given good, a low price must be more attractive to the consumer than a high price, and that any exception to this so-called law of normal demand must be due either to certain anomalous circumstances that can arise only at the two extremes of the social scale, or simply to ignorance on the part of the consumer (Gabor 1988).

The research findings of Suri & Manchanda (2001) showed consistency with the above statements, as price information is used to infer the quality of a product and the same price is also used to determine the monetary sacrifice associated with the purchase of that product. Consequently, when consumers make price-quality inferences, they view price in a favourable light, believing that higher price reflect better materials, workmanship and hence superior quality. However, instead of using price sensitivity, Suri and Manchanda (2001) used "price acceptability" as a proxy, and perceived the consumers whom "price plays a positive role" are more likely to find higher prices acceptable and hence have a high upper and a higher lower limit of price acceptability.

The research conducted by Herrmann, Huber & Wricke (2001) had demonstrated the relationship between customer satisfaction and price acceptance in the hotel

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industry. Measurement of consumer price acceptance represent a direct attempt to establish the potential buyers' willingness to purchase as function of various prices, and the level of acceptance can thus be defined as the maximum price which a buyer is prepared to pay for the product. One of the frequently named consequences of satisfaction is the increase of price sensitivity. This is based on the fact that companies with higher satisfaction values are able to receive higher prices from customers. In another words, the more satisfied a buyer is with a product or service, the more he or she is willing to pay, and the results is statistically significant.

In order to have a thorough understanding of price sensitivity and consumer satisfaction, the researcher is therefore defining the relationship of price sensitivity, price acceptance and willingness to pay. Homburg, Hoyer & Koschate (2005) experimental study revealed the existence of a strong impact of customer satisfaction on willingness to pay. When customers experience elevated of satisfaction, they perceive a high outcome of an exchange and therefore are willing to pay more because this results in an equitable ratio of outcome to input. Similarly, when satisfaction is low, customers perceive a low payment as adequate to establish a fair exchange. This lead to the hypothesis that the price that customers are willing to pay increase with the level of consumer satisfactions, and is proved the satisfaction influences a customer's willingness to pay positively.

By combining the empirical results of Herrmann, Huber & Wricke (2001) and Homburg, Hoyer & Koschate (2005), consumer satisfaction influences his/her price acceptance positively. Meanwhile, consumer satisfaction influences his/her willingness to pay positively. In another words, consumer satisfaction influences a consumer price acceptance and willingness to pay positively.

As for price sensitivity, Munnukka (2005) has mentioned that at an aggregated level, price sensitivity is often used as a synonym for price elasticity. Sensitivity of demand refers to how volume-sensitive a product or a service is to price changes. Sensitivity represents a valuable strategic took in pricing. Price sensitivity on the individual adopter level appears to be equivalent to the concept of price consciousness for a potential buyer of any product. Price consciousness is related to the price acceptability level as well as to the width of latitude of price acceptability (Lichtenstein, Blonch & Black 1988). Goldsmith & Newell (1997) defined price sensitivity as an individual differences variable describing how individual consumers react to price levels and changes in price levels. Consumer high in price sensitivity will manifest much less demand as price goes up (or higher demand as price goes down). Consumers low in price sensitivity will not react as strongly to a price change.

In term of satisfaction relationship, research findings by Stock (2005) indicated an inverse relationship between a customer satisfaction and price sensitivity in his study. This is supported by Blackwell, Engel & Miniard (2006); satisfaction lowers consumers' price sensitivity. The more consumers value something, the more they are willing to pay for it. Given that products that produce satisfying consumption experiences will be valued more than those that do not, greater satisfaction with a product should lower consumers' price sensitivity. In other words, the number of customers that switch to the competition in response to a company raising its price or competitors lowering their prices will be reduced as customer satisfaction increase. As consumers become less satisfied with the product, a company is less

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able to increase its price or have competitors lower their prices without losing customers.

Thus, findings of the studies by Stock (2005) and Blackwell, Engel & Miniard (2006) indicate that consumer satisfaction possesses a negative relationship with price sensitivity, while Herrmann, Huber & Wricke (2001) and Homburg, Hoyer & Koschate (2005) stated that consumer satisfaction possesses a positive relationship with price acceptability and willingness to pay. By using consumer satisfaction as the intermediate, the researcher of this study is therefore assumed that, higher consumer satisfaction will lead to higher price acceptance and willingness to pay; meanwhile, low price sensitivity occurred. Conversely, a low level of consumer satisfaction will affect price acceptance and willingness to pay positively, and lead to a higher level of price sensitivity.

2.2 Consumer Satisfaction

The most frequently mentioned outcome of the marketing process is a satisfied customer, with many definitions of marketing incorporating this important marketing concept. It has been long recognized in marketing thought and practice as a central concept as well as important goal of all business activities (Anderson, Fornell & Lehmann 1994 and Chan et al. 2003). According to Bennett & Rundle-Thiele (2004), a major market research firm states that customer satisfaction is the key to success and makes the emphatic statement that a satisfied customer is a repeat customer. Whereas Anderson, Fornell & Lehmann (1994) stated that a consumer satisfaction is generally construed to be a post-consumption evaluation dependent on perceived quality of value, expectations, and confirmation/disconfirmation – degree (if any) of discrepancy between actual and expected quality. This definition is similar to Yi (1990), as product-level consumer satisfaction can be generally defined as the consumer's "response to the evaluation of the perceived discrepancy between some comparisons (e.g. expectations) and the perceived performance of the product". Keillor, Parker & Cornwell (1998) found that high levels of satisfaction in both products and services results in less vulnerability from competition as well as having higher levels of repurchase and higher gross margins.

According to Blackwell, Engel & Miniard (2006), there is three major determinants of satisfaction, which are: a) product performance; b) consumption feelings; and c) expectations. A critical determinant of satisfaction is consumers' perceptions of the product's performance during consumption. Poor performance and unfavourable consumption experiences usually guarantee that consumers will be dissatisfied with the product unless there are extenuating circumstances. Consumption may lead to a variety of feelings of differing favourableness and intensity. The feelings experienced during consumption are important in determining satisfaction. Positive feelings enhance satisfaction while negative feelings reduce it. Consumers hold about the expectation of product and consumption experience. The most well known conceptualization in the satisfaction literature is Richard Oliver's expectancy disconfirmation model, which proposes that satisfaction depends on a comparison of pre-purchase expectations to consumption outcomes. In addition, expectations can influence consumers' interpretation of the consumption experience. Higher expectations would mean that consumers are more likely to form more favourable impressions about the product following consumption. Besides that, expectations

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may also depend on the product's price. A higher price usually leads to greater expectations about how the product will perform.

In term of price sensitivity, customers' price expectation and sensitivity are not a function of past prices alone, they are also influenced by the customer demographical characteristics (Marshall & Seow 2002). According to research findings by Munnukka (2005), demographic characteristics such as age, income, and gender are often assumed to affect one's level price sensitivity and price perception, and are therefore frequently used as the basis for market segmentation. Munukka (2005) anticipated that across service/product categories, significant variations in consumers' sensitivity of prices exist. However, the tested hypotheses on gender, age, marital status, occupation, educational and income level towards price sensitivity were rejected in his study. This drive to the conclusion on mobile service segment - customers' demographic background does not indicate statistically significant to their price sensitivity levels.

In summary, previous researchers found there are significant variances between consumer satisfaction and their demographical characteristics. However, arguments occurred on customer's price sensitivity and demographic variables. Thus, in this study, the researchers adopt demographical factors as one of the independent variables, with elements of age, gender, marital status, educational level, income level and occupation in order to run an inferential analysis of demographical factors towards price sensitivity, and demographical factors towards consumer satisfaction, objective to electrical appliances in market.

2.3 Advertising

According to Belch & Belch (2007), advertising is defined as any paid form of non-personal communication about an organization, product, service, or any idea by an identified sponsor. The paid aspect of this definition reflects the fact that the space or time for an advertising message generally must be bought. Keillor, Parker & Cornwell (1998) stated that consumer satisfaction has always been a dominating area of research within the advertising literature. They had concluded that both attribute and information satisfaction, such as that generally associated with advertising, help share the impact of expectations and desires as they relate to overall satisfaction.

Besides consumer satisfaction, advertising, apart from its numerous direct effects, also has an effect on the price sensitivity of consumers and on the prices of goods in a market (Kaul & Wittink 1995). This indicated that an increase in advertising appear to an increase in the estimated price sensitivity of consumers. According to Kaul & Wittink (1995), advertising for brands will lead to product differentiation, thus creating brand loyalty and lowering price sensitivity. This is supported by Krishnamurthi, Narayan & Raj (1986), as establishing the nature of the impact of advertising on consumer price sensitivity to brand purchase would provide a better understanding of consumer behaviour and also assist managerial decision making. One widely held managerial belief is that increased advertising will decrease consumer price sensitivity towards branded product. Nevertheless, Kalra & Goodstein (1998) proposed that the relationship between advertising and price effects is mostly depends on the positioning strategy adopted by an advertiser.

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In this research, advertising was used as one of the independent variables to identify its relationship with price sensitivity. Due to the time constraints, data collection which implemented by Krishnamurthi, Narayan & Raj (1986) on TV experiment to investigate individual-level behaviour in a field experiment setting will not be adopted. Conversely, structured questions in questionnaire will be used to specify the set of response alternatives with five-points Likert Scale.

2.4 Consumer Loyal and Disloyal Behaviours

In order to obtain a depth understanding of this topic, the pre-requisite is to gain information regarding buyer-seller relationship and trust. According to Monroe, Lan & Cox (2004), buyers' perceptions of price fairness and the sensitivity are influenced by different dimension of trust associated with the relationship. In the context of buyer-seller relationships, it is possible that buyers emphasize different dimensions of trust at different relationship stages. In their research, they suggested that at an early stage of a buyer-seller relationship, the two parties are regulated by the potential benefits of their promises and/or by the costs of cheating (i.e., calculus-based trust). Over repeated interactions, the relationship develops, and the two parties begin to know each other (i.e., knowledge-based trust). At this stage, predictability is the key to relationship, and each party anticipated the actions of the other party. When the relationship is fully developed, trust is based on a full internalization of the other party's desires and intentions (i.e., identification-based trust). At this stage too, the two parties "effectively understand, agree with, and endorse each other's wants". A party can be confident that its interests are fully protected by the other party. Thus, Monroe, Lan & Cox (2004) proposed that trust has a different meaning (i.e., emphasis on different dimensions) at different stages of a buyer-seller relationship. The nature of the influence of trust on price sensitivity perceptions may depend on the specific stage of a buyer-seller relationship.

Duke et al. (2006) analyzed the consumer loyal and disloyal behaviours towards price sensitivity. According to them, loyalty does indeed raise the price that customers are willing to pay for a brand. They also suggested that loyalty may permit brands to charge a premium over that which their competitors are priced; and this in addition to serving as a defence against lower-price competitors. The notion that loyalty reduces price sensitivity has been replicated in many studies. Other than such replication, however, there have been few attempts to investigate the relationship between loyal, disloyal behaviours and price sensitivity simultaneously, especially in the Business to Consumer (B2C) context. Duke et al. (2006) is then hypothesize that there will be a negative relationship between consumer loyal behaviour and price sensitivity, and a positive relationship between disloyal behaviour and price sensitivity. These hypotheses are found to be significant which lead to the conclusion that price sensitivity is negatively influenced by an increase in loyal behaviour, and positively influenced by an increase in disloyal behaviour.

2.5 Research Hypothesis

According to Kaul and Wittink (1995), an increase in advertising appears to trigger an increase in the estimated price sensitivity of consumers. This was supported by Krishnamurthi, Narayan & Raj (1986) in their study where they intended to test the relationship between effect of advertising and price sensitivity towards electrical appliances. Therefore, it was hypothesised that:

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Hypothesis 1: There is a significant relationship between effect of advertising and price sensitivity on electrical appliances purchasing.

The second and third hypotheses will be based study conducted by Duke et al. (2006). Their research findings concluded that price sensitivity is negatively influenced by an increase in loyal behaviour, and positively influenced by an increase in disloyal behaviour. Thus, hypothesis 2 and 3 are as follows:

Hypothesis 2: There is a significant relationship between consumer loyal behaviour and price sensitivity on electrical appliances purchasing.

Hypothesis 3: There is a significant relationship between consumer disloyal behaviour and price sensitivity on electrical appliances purchasing.

High consumer satisfaction can reduce the price elasticity, which similar to price sensitivity. This is supported by Chan et al. (2003) in their study. By assuming the direct negative relationship between consumer satisfaction and price sensitivity, they considered price as a determining factor of consumer satisfaction rather than the performance concept and subsequent recording of it. Therefore, it was hypothesised that:

Hypothesis 4: There is a significant relationship between price sensitivity and consumer satisfaction on electrical appliances purchasing.

Hypothesis five is multiplying the mean of effect of advertising, consumer loyal and disloyal behaviour in order to test the significant relationship with consumer price sensitivity. The result of regression is an equation that represents the best prediction of consumer satisfaction from these three groups of independent variables. Thus, hypothesis 5 is as follows:

Hypothesis 5: There is a significant relationship between effect of advertising, consumer loyal and disloyal behaviour towards price sensitivity on electrical appliances purchasing.

3. Methodology

In this study, questionnaires were used for data collection. The questionnaire is built up in seven sections. Section A is the profile of respondent, which consists of six demographical factors of consumer, includes age, gender, marital status, education level, income level and profession. Section B consists of four questions regarding the consumer behaviours toward electrical appliances. Set of questions in section C to G are regarding the effect of advertising, consumer loyal and disloyal behaviours, price sensitivity and finally, the consumer satisfaction towards electrical appliances that they have purchased. The questions are in the form of interval scale which the respondents could rate by selecting best option from the five point Likert scale (1 = strongly disagree to 5 = strongly agree). The questionnaire was pilot-tested before distribution to 201 respondents (101 males and 100 females) located in the Klang Valley, Selangor. The 201 respondents are adults ranging from age 21-39 (young adult) and 40-59 (middle-aged). They are chosen for this study because they are acting as change agents by influencing society and culture. Besides that, they are also more economic independent (Department of Statistic Malaysia 2005).

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Klang Valley has been selected for this study due to the development growth, which is rapidly changing as well its strong consumption power. Besides that, Klang Valley is the heartland of Malaysia's industry and commerce, represented 32.36% of industrial production in Malaysia (Department of Statistic Malaysia 2003) and it is considered to be a centre of business that is well developed in information technology (Wikipedia 2010).

Given the time and financial constraints, the quota sampling method was adopted for this study. The quota sampling method may be view as two-stage restricted judgmental sampling. The first stage consists of developing control categories, or quotas, of population elements. This is showed in sampling size above; as the researchers set the total respondents based on sex ratio and distributed to young and middle age adults based on age ratio from each gender, which are identified on the basis of judgment. These quotas ensured that the composition of the sample is the same as the composition of the population that the researcher is interested to investigate. In the second stage, sample elements are selected based on convenience, also called haphazard or accidental sampling (Zikmund 2003), which is the least expensive and least time consuming to conduct a research of 201 respondents. Judgmental sampling, which is a form of convenience sampling, in which the population elements are purposely selected based on the judgment of the researcher, is also be used.

Pearson's correlation is used to determine the relationship between independent variables and dependent variable. It is conducted to analyse the significant level, direction and strength of the relationships between two variables. If the two variables are very strongly positively related, the coefficient value is close to +1 (strong positive linear relationship) whereas if the two variables are very strongly negatively related, the coefficient value is close to -1 (strong negative linear relationship). No straight-line relationship is indicated by coefficient close to zero. As for multiple regression analysis, it is a technique used to measure and predict which independent variables is the most important and the least important factors to the dependent variable.

4. Findings and Discussion

4.1 Respondent Demographic Profile

For demographic profile of the respondents, six criteria are selected to define the respondents' characteristics, which are based on age, gender, marital status, education level, monthly individual income and profession. These demographic profiles are chosen because of the significance of the profile in describing the price sensitivity and consumer satisfaction, which objected to the electrical appliances purchasing in Klang Valley, Selangor. Table 1 indicates the demographic profiles of the collected data.

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Table 1: Respondent Demographic Profile

Demographic variables	Sample sizes (n) = 201	Percentage (100%)
Age groups		
21-39 years	121	60.2
40-59 years	80	39.8
Gender		
Male	101	50.2
Female	100	49.8
Marital status		
Single	135	67.2
Married	66	32.8
Education level		
SRP/PMR	13	6.47
SPM/ STPM	16	7.96
Bachelor Degree	104	51.74
Master Degree	57	28.36
PhD	4	1.99
Others	7	3.48
Monthly individual Income		
RM2000 below	64	31.84
RM2001-3000	48	23.88
RM3001-4000	27	13.43
RM4001-5000	31	15.42
RM5001>	31	15.42
Occupation		
Professional	62	30.85
White collar worker	75	37.31
Blue collar worker	9	4.48
Self-employed	8	3.98
Unemployed	47	23.38

4.2 Reliability Test

Reliability test is an assessment of the degree of consistency between the multiple measurements of a variable. In another words, consistency indicates how well the items or statements measuring concept hang together as a set (Sekaran 2003). According to Malhotra (2007), Cronbach's Alpha or the coefficient Alpha is the average of all possible split-half coefficients resulting from different ways of splitting the scale items. It varies from 0 to 1, and a value of 0.6 or less generally indicates unsatisfactory internal consistency reliability. As can be noted from Table 2, the Cronbach's alpha values ranged from 0.761 to 0.930, which indicates that the scales used in this study are reliable.

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Table 2: Result of Reliability Test

Variables	Number of items	Cronbach's Alpha
Effect of advertising	6	0.838
Consumer loyalty behaviour	4	0.761
Consumer disloyalty behaviour	4	0.765
Price sensitivity	6	0.812
Consumer satisfaction	6	0.930

4.3 Test of Demographic Variables toward Price Sensitivity and Consumer Satisfaction

The research findings indicate that facts from Monroe, Lan & Cox (2004) are supported on the influence of age and income level towards price sensitivity. Across electrical appliances, there are significant variations in consumers' sensitivity of prices, which reject the findings of Munnukka (2005), except for gender and income level. Hence, customers' demographic background for age, marital status, education level and occupation does indicate statistically significant to their price sensitivity levels.

The research findings also indicate that in general, four demographic variables proved to influence the consumer satisfaction on purchasing electrical appliances. Correspond to Chan et al. (2003), satisfaction is comparable across consumers through consumer socio-economic characteristics (age, education level, income level and occupation), whereas gender and marital status are proved to have no influence towards consumer satisfaction.

4.4 Test of Correlation

In this study, Pearson Correlation is used to test the relationship of effect of ad, consumer loyal behaviour, consumer disloyal behaviour, by each variable, towards consumer's price sensitivity. Relationship between price sensitivity and consumer satisfaction on electrical appliances purchasing is also tested. Table 3 below showed the value of Pearson correlation analysis.

Table 3: Pearson Correlation Analysis

Variables	Price sensitivity
Effect of ad	0.179*
Consumer loyal behaviour	0.359**
Consumer disloyal behaviour	0.418**
Consumer satisfaction	0.473**

Note: * Correlation is significant at the 0.05 level (2-tailed)

**Correlation is significant at the 0.01 level (2-tailed)

The finding proved that there is a significant relationship between effect of ad and price sensitivity ($r = 0.179^*$, $p < 0.05$), which also indicates a significant weak positive relationship. This shows advertising has an effect on the price sensitivity of

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consumers and the idea of an increase in advertising appear to an increase in the estimated price sensitivity of consumers is supported. Therefore, hypothesis 1 was supported. By reviewing the previous literatures, studies of Kaul & Wittink (1995) and Krishnamurthi, Narayan & Raj (1986) are rejected on this study of electrical appliances. Since the positive relationship is very weak, the approach of Kalra & Goodstein (1998) may be appropriate, as the relationship between advertising and price effects is most likely depends on the positioning strategy adopted by an advertiser.

As for consumer loyal and disloyal behaviours, hypothesis 2 and hypothesis 3 are supported. The findings showed that consumer loyalty behaviour is proved to correlate with price sensitivity positively ($r = 0.359^{**}$, $p < 0.01$), which means the increase of consumer's price sensitivity will lead to increase of loyal behaviour, or conversely. This is contradicted and against the notion that loyalty reduces price sensitivity which has been replicated in many studies. The conclusion of Duke et al. (2006) that price sensitivity is negatively influenced by an increase in loyal behaviour is not advocate in this study. However, the other finding of Duke et al. (2006) is supported, as price sensitivity is positively influences by an increase in disloyal behaviour ($r = 0.418^{**}$, $p < 0.01$).

Consumer's price sensitivity-satisfaction relationship tested using Pearson Correlation is the focus of this study. As mentioned in literature review, Stock (2005) indicated a presence of an inverse relationship between a customer satisfaction and price sensitivity and was supported by Blackwell, Engel & Miniard (2006) where they concluded that satisfaction lowers consumer's price sensitivity. However, hypothesis 4 proved to be significantly correlated in a moderate positive way ($r = 0.473^{**}$, $p < 0.01$), which means the higher the price sensitivity, the higher the consumer satisfaction in purchasing electrical appliances. Thus, hypothesis 4 was supported and this indicates that the findings of Stock (2005) and Blackwell, Engel & Miniard (2006) are not supported.

4.5 Test of Multiple Regressions

Multiple regression method is used to test the relationship between effect of advertising, consumer loyal behaviour and consumer disloyal behaviour towards price sensitivity. The result of regression is an equation that represents the best prediction of a dependent variable (price sensitivity in this case) from several independent variables (effect of ad, consumer loyal and disloyal behaviours). In this study, standard or simultaneous regression model will be conducted, as all independent variables will enter the regression equation at once in order to examine the relationship between the whole set of predictors and the dependent variable. From the result of SPSS, R Square value in Table 4 showed the three individual variables together explain 22.1% of the variance in price sensitivity on electrical appliances purchasing, which was not very good. There might be other factors or independent variables that had been left out in explaining the price sensitivity, such as product quality or eight factor models in Consumer Lifestyle Inventory (CSI) by Gan (2003).

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Table 4: Multiple Regression Analysis

Independent variables	Standardized Coefficient (Beta)	Significance
Effect of advertising	0.055	0.413
Consumer loyal behaviour	0.208	0.004
Consumer disloyal behaviour	0.326	0.000

Note: R. Square = 0.221, F = 18.621, p <0.05

From the ANOVA result, it shows that the linear combination of the variables included in the model are significantly related to the price sensitivity, where $F = 18.632$ where $p < 0.05$. Regarding the relative importance of each significant predictor in the analysis, the standardized coefficients shown that the susceptibility to consumer disloyal behaviour influence (beta = 0.326) had the biggest impact on price sensitivity, followed by consumer loyal behaviour (beta = 0.208) and effect of advertisement (beta = 0.055). An examination of the T-values indicated that only consumer loyal behaviour and disloyal behaviour contribute to the predictor of price sensitivity. Therefore, hypothesis 5 is partially supported.

5. Conclusion and Recommendations

From the descriptive analysis to inferential analysis, the findings manage to provide discernible trends on consumer purchasing behaviours and a lucid explanation between variables that are germane in this research. Begins from the frequency analysis, surprisingly, more than 80% of selected respondents whom approached by convenience sampling method are well-educated. The findings thus represent this urban cohort in heartland of Malaysia.

The research findings managed to prove the influence of demographic variables towards price sensitivity and to consumer satisfaction. However, the significant influence is only towards certain sub-variables than the whole sub-hypotheses. As in common, gender is proved to have no significant influence in price sensitivity and satisfaction, whereas age, education level and occupation, by each are proved to have a significant influence towards price sensitivity and satisfaction. These imply some meaning to the study, as these proven demographic factors are act as a common cause variable, which will affect the price sensitivity and consumer satisfaction in purchasing electrical appliances. In another words, it says that price sensitivity and consumer satisfaction are correlated because they shares the same cause hypothesis (demographic). This relationship is later proved by Pearson coefficient, as a positive relationship occurred between them.

Relationship between price sensitivity and consumer satisfaction is entitled to this study, though it involves other variables in the framework. From the tested hypothesis, findings of Stock (2005) and Blackwell, Engel & Miniard (2006) which proposed the reverse relationship between these variables is void. This indicated that the electrical appliances are not merely "pick and pay" items. They involve a higher value of cost that the purchaser needs to ponder and investigate before making their purchase decision. Thus, these consumers are sensitive to the price, and the products they choose, should have fix well with their expectation and demands that lead to satisfaction. This may explain the findings of positive

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relationship between price sensitivity and satisfaction in purchasing electrical appliances. The findings of this study shows that consumer satisfaction is depends on value to some extent, which in turn depends on price. By implemented this, local marketers may assume that higher consumer satisfaction will lead to higher price acceptance and willingness to pay; meanwhile, high level of price sensitivity occurred, or both in an opposite way.

Findings also proved that the consumer loyal and disloyal behaviour, both possess a positive and significant relationship with price sensitivity. As for consumer loyal behaviour, this positive relationship is against the notion that loyalty reduces price sensitivity which has been replicated in many studies, especially by Duke et al. (2006). A future study is therefore recommended, which involve largest sample size in order to double validate the relationship between loyal behaviour and price sensitivity in electrical appliances. From consumer disloyalty perspective, this finding however is matched with Duke et al. (2006).

In conclusion, this study incorporated the price elements into the consumer satisfaction framework which suggested by Chan et al. (2003) and is further narrowed to electrical appliances as there is not much information or research inclined towards product than service sectors, even though there is a growing literature associated with price sensitivity of consumers. Findings and hypotheses tests found to support and reject the statements in literature review. However, due to the times constraints, there are shortages in the study and a further research is needed.

5.1 Limitations of the Study

In conducting the study, there are few factors restricting in getting the best possible results as it can. First of all, the sample was focused on respondents living in Klang Valley, Selangor, heartland of Malaysia industry and commerce through a non probability sampling design, the research thus cannot be generalized and the findings are only true to represent the data.

As for the sample size, it is based on Malaysia sex ratio with male to female, 101:100. This study quoted the ratio and adopted the sum as the overall sample size, which is for the ease of researcher. In reality, the researcher should implements statistical approach to determine the sample size base on Malaysia population.

Besides, the questionnaires distribution in collecting the data is less efficient in studying the effect of an advertisement. The respondents cannot interact with a real advertisement, but the imagination of effect of ads on a five-point Likert scale. The ten selected items for electrical appliances in this questionnaire, do not accurately present the fact of a single electrical appliance that the consumer focus to, but act as a supporting study that describe the tendency of consumer behaviour towards electrical appliances.

5.2 Suggestion for Future Study

A larger pool of respondents in larger geographical locations, which is more representative, should be conducted for the future study. Sampling size should be based on statistical calculation for Malaysia population than merely adopted the sex

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ration. Since the questionnaires used is less efficient in studying the effect of an advertisement, therefore the data collection which implemented by Krishnamurthi, Narayan & Raj (1986) is recommended in order to improve the data collection in studying the effect of an advertisement.

As for the study of electrical appliances, ten items are narrowed down to present the study, as proposed by Brucks, Zeithaml & Naylor (2000). However, it does not accurately present the fact on a single electrical appliance that the consumers focus to and may confuse the respondents while answering the questionnaire. Thus, for the future research, it is best to specify the study on a single product or products that possess similar attributes in electrical product.

Besides that, the study would be more challenging and interesting if the price sensitivity acts as moderator rather than as dependent variable. Therefore, it is suggested to who may interest to know more about the price sensitivity-consumer satisfaction relationship studies to propose moderating effect of price sensitivity on the relationship between independent variables and customer satisfaction.

Acknowledgement

We would like to thank the Ministry of Science, Technology and Innovation, Malaysia for funding this research project through the Science Fund (Research Grant No. 06-01-04-SF1032).

References

- Anderson, EW, Fornell, C & Lehmann, RR 1994. 'Customer satisfaction, market share and profitability: findings from Sweden', *Journal of Marketing*, vol. 58, no. 3, pp. 53-66.
- Belch, GE & Belch, MA 2007. *Advertising and promotion: an integrated marketing communication perspective*, 7th edn, McGraw-Hill International Edition, New York.
- Bennett, R & Rundle-Thiele, S 2004. 'Customer satisfaction should not be the only goal', *Journal of Services Marketing*, vol. 8, no. 7, pp. 514-523.
- Blackwell, RD, Engel, JF & Miniard, PW 2006, *Consumer behavior*, 10th edn, Thomson South-Western, Ohio.
- Brucks, M, Zeithaml, VA & Naylor, G 2000, 'Price and brand name as indicators of quality dimensions for consumer durables', *Academy of Marketing Science*, vol. 28, no. 3, pp. 359-374.
- Chan, LK, Hui, YV, Lo, HP, Tse, SK, Tso, KF & Wu, ML 2003, 'Consumer satisfaction index: new practise and findings', *European Journal of Marketing*, vol. 37, no. 5/6, pp. 872-909.
- Duke, HC, Chul, MK, Sang, K & Soung, HK 2006, 'Customer loyalty and disloyalty in internet retail stores: its antecedents and its effect on customer price sensitivity', *International Journal of Management*, vol. 23, no. 4, pp.995-1002.
- Department of Statistics Malaysia 2003, *Monthly statistical bulletin Malaysia*, Department of Statistics Malaysia, Kuala Lumpur.
- Department of Statistics Malaysia 2005, *Mid-year population estimation by age and sex*, Department of Statistics Malaysia, Kuala Lumpur.

Wong & Tan

- Estelami, H & Bergstein, H 2006. 'The impact of market price volatility on consumer satisfaction with lowest-price refunds', *Journal of Services Marketing*, vol. 20, no. 3, pp. 169-177.
- Gan, FC 2003, 'Malaysia consumer decision-making styles on durable goods', MBA thesis, University Putra Malaysia, Malaysia.
- Gabor, A 1988, *Pricing, concepts and methods for effective marketing*, 2nd edn, Gower Publishing Company Limited, Cambridge.
- Goldsmith, RE & Newell, SJ 1997, 'Innovativeness and price sensitivity: managerial, theoretical and methodological issues', *Journal of Product and Brand Management*, vol. 6, no. 3, pp. 163-174.
- Herrmann, A, Huber, F & Wricke, M 2001, 'Customer satisfaction as an antecedent of price acceptance: results of an empirical study', *Journal of Product & Brand Management*, vol. 10, no. 3, pp. 160-169.
- Homburg, C, Hoyer, WD & Koschate, N 2005, 'Do satisfied customers really pay more? A study of the relationship between customer satisfaction and willingness to pay', *Journal of Marketing*, vol. 69, no. 2, pp. 84-96.
- Kalra, A & Goodstein, RC 1998, 'The impact of advertising positioning strategies on consumer price sensitivity', *Journal of Marketing Research*, vol. 35, no. 2, pp. 210-224.
- Kaul, A & Wittink, DR 1995, 'Empirical generalizations about the impact of advertising on price sensitivity and price', *Marketing Science*, vol. 14, no. 3, pp. 151-160.
- Keillor, BD, Parker, RS & Cornwell, TB 1998, 'Using advertising to manage consumer satisfaction in an international market', *Journal of Global Marketing*, vol. 12, no. 1, pp. 27-46.
- Krishnamurthi, L, Narayan, J & Raj, SP 1986, 'Intervention analysis of a field experiment to assess the buildup effect of advertising', *Journal of Marketing Research*, vol. 23, pp. 337-345.
- Lichtenstein, DM, Blonch, D & Black, W 1988, 'Correlates of price acceptability', *Journal of Consumer Research*, vol. 15, no. 2, pp. 243-252.
- Malhotra, NK 2007, *Marketing research: an applied orientation*, 5th edn, Pearson International Edition, New Jersey.
- Marshall, R & Seow, BL 2002, 'Price threshold and discount saturation point in Singapore', *Journal of Product and Brand Management*, vol. 11, no. 3, pp. 147-159.
- Monroe, KB 2003, *Pricing, making profitable decisions*, 3rd edn, McGraw-Hill Irwin, Boston.
- Monroe, KB, Lan, X & Cox, JL 2004, 'The price is unfair! A conceptual framework of price fairness perceptions', *Journal of Marketing*, vol. 68, pp. 1-15.
- Munnukka, J 2005, 'Dynamics of price sensitivity among mobile service customers', *Journal of Product & Brand Management*, vol. 14, no. 1, pp. 65-73.
- Nagle, TT & Holden, RK 2003, *The strategy and tactics of pricing: a guide to profitable decision making*, 3rd edn, Prentice-Hall, New York.
- Schiffman, L, Bednall, D, Cowley, E, O'Cass, A, Watson, J & Kanuk, L 2001, *Consumer behaviour*, Prentice-Hall, New Jersey.
- Sekaran, U 2003, *Research methods for business: a skill building approach*, 4th edn, John Wiley and Sons Inc., New York.
- Stock, RM 2005, 'Can customer satisfaction decrease price sensitivity in business-to-business markets?', *Journal of Business-to-Business Marketing*, vol. 12, no. 3, pp. 59-87.

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- Suri, M & Manchanda, RV 2001, 'The effects of acculturation on consumers' sensitivity to prices', *Journal of International Marketing*, vol. 13, no. 1, pp. 35-56.
- Wikipedia, the free encyclopedia 2010, *Durable goods*, viewed 15 August 2010, http://en.wikipedia.org/wiki/Durable_good.
- Wikipedia, the free encyclopedia 2010, Klang Valley, viewed 15 August 2010, http://en.wikipedia.org/wiki/Klang_Valley.
- Yi, Y 1990, 'A critical review of consumer satisfaction', in VA Zeithmal, *Review of Marketing 1990*, American Marketing Association, Chicago, pp. 68-123.
- Zikmund, WG 2003, *Business research methods*, 7th edn, Thomson South Western, Boston.