ORIGINAL ARTICLES

Ranking of the Affecting Factors on Decision Making of Persian & Imported Domestic Appliances purchasers - Using AHP Technique (Case survey: Isfahan City)

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ABSTRACT

In this paper, we have proceeded to rank the affecting factors on decision making of Persian & imported domestic appliances purchasers in Isfahan city, Using Analytic Hierarchy Process technique (AHP). The present research is practical in goal, and is a survey method with the view of information collection. The device of information accessibility was questionnaire. The results of the research indicate that 3 factors including price, energy consumption and after sale services, have had most effect on choice of internal and imported domestic appliances. But more than 70 percent of purchasers have preferred imported domestic appliances, despite of cheapness, appropriate energy consumption and nearly proper after sale services of Persian domestic appliances. This shows focus exigency of manufacture companies producing Persian domestic appliances, to determine the positioning of their products.

Key words: Product positioning, Customer satisfaction, Brand, AHP.

Introduction

The industry section of a country, constitutes a very important share of that country economics, that must be stable on strong foundations to have a successful participation at economic growth. (Khachroum & cooperators 2012) Iran isn't excluded either. According to the published information by Iran statistics center, employment share of industry section, is 32.7 % in the summer of 1391. This phenomenon represents the importance of this industry in Iran. (source: official website of Iran statistics center: http://www.amar.org.ir)

Of important industries in many countries and also in Iran, there is the industry of domestic appliances. It can cause to be prospered if it is regarded, and It can lead to be weakened or even be exterminated if it is not attended enough. The industry of domestic appliances is significant from two viewpoints. First: regarding to increase of welfare and level of the country population, the requirement to domestic appliances is in enhancement. Second: regarding to parcel producer firms, primary materials used at above industry, and also expert servicemen & sellers of domestic appliances, the importance of domestic appliances industry is also considered. It happens while market share of Persian domestic appliances producers is decreasing with entry of goods made abroad.

One of the matters that people encounter with, is brand choice issue that comes up at domestic appliances purchase. In fact, people compare different brands existing in market with each other, by considering affecting factors upon choice and ranking them. Then they enterprise to select a brand which leads them to get favorable results or approximate them to it. In marketing researches, brand choice constitutes an important section. In oligopolistic markets while heterogeneous consumer preferences exist, it is so effective to comprehend the affecting factors on customer behavior , as well as choice of various brands by them. And It influences demand elasticity and thereby, intensity of competition at the industry. (Chintagunta and cooperatives, 2001) Therefore, nowadays , determination of why customers prefer to choose external brands of competitors instead Persian brands, can be helpful to prosper and improve Persian industry of domestic appliances. There is a problem in this manner: In the modern world professional managers must possess information about rules and principles dominated at internal and external markets, & take use of them in the competitive world. The managers of companies producing Persian domestic appliances are not excluded over this issue. They must consider the creation of constant competitive advantage as their such primary goals and strategies. Nowadays, we can not consider the only three elements including labor, investment & land, as main factors of production & main resources of wealth by relying on traditional literature of economics. In the modern competitive world, customers do not just buy a product, rather, according to darling studies, they buy a complete set containing product, after sale services, facilities concerning to transportation of products, product brand, product price, discounts on product price, credit facilities of payments, advertisements, accessibility of sale centers and
services. Thereby, all associations & also several of them which are productive firms of Persian domestic appliances, must attend sufficiently to all controllable organizational factors which are the same word: marketing mix, that includes product, price, distribution and promotional actions which successful organizations compound them at their target market to cause an expectable reaction in order to influence demand.

One of the most important factors that is affective upon success of a product in target market, is the taken position of a product in target market.( Kwong and cooperatives, 2011) This can also be too useful for Persian domestic appliances to success. Actually, it is possible to grab a market with respect to this principle that we identify market and we know who our customers are & what they want, So that we can gain a proper position on their minds. Positioning process gives this possibility to distinguish it's brand & product, and to provide it's customers' needs at target market, better than it's competitors.( Kalafatis & cooperatives 2009).

This is accepted at marketing concept that achievement to organizational goal, depends on definition and determination of needs and desires of target market & to provide customer satisfaction more favorably and more effective in comparison with competitors. Evidences indicate that If companies try to make a symbolic and sensitive relationship with customers, they succeed more in this modern competitive market. (Ballantyne and cooperatives, 2006) Customer's necessary values like satisfaction sense against paid cost, lead to more satisfaction sense over customers because of the purchasing product or receiving services. This sense can cause loyalty of customers to brand,( Varki & Colgate, 2001) These experiences and such other cases can be utilized at industry of Persian domestic appliances, and obtain a theme for it's growth and prosperity.

It is necessary to mention that in the case of choosing some goods, recognizing those features which are important for customer, can aid the process of product choice by customer, and promoting position of product on their minds, as it may happen for some goods i.e. fridge that causes almost lots of mental involvement to customer. It is not necessary for managers to optimize affecting factors upon customer's choice one by one. But the major subject must be determination of some features which are ranked as the most important characteristics from target market side. Accordingly, manufacturers must try inside such ways that are leading to create trust on the major subject must be determination of some features which are ranked as the most important characteristics noted for customers' minds, based on this point that, assigned product possesses expectable characteristics noted for customer.

Until several previous decades, products and services given by organizations, were as a result of engineer's inventive thoughts instead of matching with customers' needs & willingness. In other words, in many cases, customer's role was limited only as a convinced consumer. But this thought was continuing just until ended decades of last century. And some issues caused an enhance in attending and emphasizing on needs willingness of customers. These issues were: competitive market, extermination of global boundaries, universalization of economics and finally an increase in expectance & necessity of customers. Due to above articles, these days, it is of importance to determine affecting factors on the behavior of consumers who use various goods & services in many countries as in Iran.

Due to significance of the subject, a lot of researches have been accomplished about affecting factors on buyer's & consumer's behavior and also about the criteria which may influence reaction of customers while dealing with productive or service organizations. For example, Varki & Colgate in 2001, studied about the price efficacy as one of the most important factors upon purchasers' behavior. They discovered the important effect of price on customers' performance & their conception about organization, by receiving information from nearly 2800 individuals of different bank managers in the US & New Zealand, and analyzing the information. In an alike research, kallas and his cooperatives in 2010 started to investigate preferences of customers regarding to selection of restaurant foods in Spain by the two indirect methods: AHP and Choice experiment. They noted the importance of geographic location, brand, kind of food and price efficacy for their customers' behaviors. Khachroum and his cooperatives in 2010, at a similar research as the present one, proceeded to investigate the three factors involving advertisements, brand & value for domestic appliances producers in Syria, that is dealt with lots of issues and problems. They concluded that price element and quality have played an important role at buying products of domestic appliances firms on the given statistical Population, by using SWOT analysis and also by an interview with many managers of companies which are active in domestic appliances field. They also concluded that brand awareness factors & advertisements are at the next level of significance.

Another interesting research carried out by Sahin & his cooperatives in 2011, noted affecting factors on loyalty to global brand. This research in manipulated by Regression & Correlation Analysis and aid of statistical software SPSS on an statistical Population of 258 individuals. In this research, sorts of affecting factors on decision making of individuals are evaluated while choosing a brand, some factors like: age, education level, gender, marriage condition & etc. The results of the research indicate positive satisfaction of customers, experience of brand utilization, trust on brand and loyalty to it.

In another research manipulated by AHP technique by Ting & Yu in 2009, the major affecting factors on decision making of customers of wealth management organizations, have been studied in Taiwan. The two factors including security of received information from customer & growth of assets, are represented as important factors that influence decision of customers. These are obtained by analyzing 122 questionnaires with AHP method.
We can have a cue to Laforet research in 2012, to perceive the influence of culture at brand choice by customers. The nominated research is carried out among 400 chinese & britannic citizens who mostly were between 18 to 40 ages. The research name was "identifying chinese and britannic buyers of chinese and international brands & affecting factors on their brand choice". Face-to-face interview method has been utilized to collect data for this research. And the results indicate that chinese purchasers did not attend to product maker country, but in opposite, britannic citizens were sensitive for this problem whether their considered product is chinese or not. It was also influencing on chinese purchasers to be familiar with brand & to know brand value. This is while, brand reputation and trust to it, were more important for britannic purchasers.

Lihra & his cooperatives’ research is also remarkable. It is about identifying the preferences of customers regarding to customization of their considerable furnishing in the US. They carried out this research with aid of electronic questionaries & by utilizing choice-based conjoint analysis process & SPSS software. They concluded that 50% of customers cared price, 20% to customize considered product, 20% to delivery time and 10% of them, cared to necessary time to customize their considered product.

Regarding to need foreign exchange for imported domestic appliances & applied embargo opposite Iran & reduction of national currency value in this country, the emphasis is felt to perform a study to understand why domestic appliances customers tend less to the persian goods. The goal of this research is a survey about affecting factors on priorities of domestic appliances customers about choosing their considered brand in Isfahan city, by using AHP technique. At the present research, the effort is based on to identify affecting factors on decision making process of domestic appliances customers that leads to select a characterized brand. The reasons of customer's tendency to foreign domestic appliances is represented here in a greater & more accurate way in comparison with other previous corresponsive researchers, and appropriate suggestions will be represented for active artisans at this section.

Literature Review:

Product positioning:

Kotler and his cooperatives (1999), define product positioning as: "position of a product, is the place in it, product gets on customer's mind in comparison with competitor's products. There is no reason to buy a product if it is supposed to be the same with another existent product in market." In purview of Kotler and his cooperatives, product positioning is "the art of drawing company's picture & products at a discrete corner of customers' minds at target market."

Nowadays, concerning to existence of great capacity of information & large advertisements of some companies, customers are not able to revalue all brands for every time they do shopping. Also due to competitive market of domestic appliances, It is important to attend to product positioning at domestic appliances industry. Because customers will not be able to resist versus available foreign goods if Persian domestic appliances do not possess a proper competitive position on their minds. The reason is, as it is indicated about definition of product position, in a market such domestic appliances market, consumers must have an argument to prefer Persian domestic appliances in comparison with foreign ones, to buy Iran-made products. This subject requires a proper positioning for Persian domestic appliances. If Persian domestic appliances are not able to possess a valid & successful position on customers' minds, they will be condemned to fail.

![Fig. 1: Affecting factors on brand positioning.](image-url)

Occupations which possess a strong position, gain profit from their accurate concentration on market. This leads to become more effective & more efficient at their function and gives them more competitive advantages.
Positioning is always generated after segregation & determination of target market. We can not begin to positioning without goal determination. (size of competitors, their growth & their profitability, their brand picture & position, their mission & warranties, their foibles & strengths, their current & prior strategies, their barriers & restrictions to exist, their organizational form & their organizational culture. (Jain, 1992). The most important affecting factors on brand positioning are exhibited in figure 1. (Gilligan & Wilson, 2005).

Regarding to figure 1, companies determine their product position by selecting an appropriate marketing mix & by considering obvious and unclear characteristics of their goods. (Konuk & Altuna, 2011)

Customer Satisfaction:

One of the indicators to determine company's success rate, is satisfaction of it's customers. Marketing-experts believe that customer satisfaction causes a change at customer taste and conducts growth and profit for stockholders, although some organizational experts are not agree with this opinion. (Blythe & Megicks, 2010 / Nazari & cooperatives)

Kotler & his cooperatives express that customers' satisfaction of buying a product depends on the expectances they have had of purchasing that product. A purchaser may get different percentage of satisfaction levels. A purchaser will catch dissatisfaction if the percentage of the buy-action is less than the expectance. But the purchaser will be satisfied & pleased if the percentage of the buy-action is more than the expectance.

To determine what may make customer well-satisfied, it is important to measure the percentage of customer satisfaction. For this order, designing a proper system to determine customer satisfaction percentage, causes a lot of direct & indirect effects on need's obviation and common problems of businesses. It consists of following stages:

1. Designing & developing a business plan in main market.
2. Designing, investigating, & utilizing performance evaluation indexes.
3. Designing & developing product
4. Evaluation of presented service efficiency
5. Frequent improvement
6. Evaluation & control

A necessary issue is that, most of internal industries & among them, Persian domestic appliances industry, must attend enough to customer satisfaction. Since, regarding to competitive market of domestic appliances, lack of attendance to customer satisfaction leads absolutely to buy more imported goods & extermination of internal domestic appliances industry. Because as Philip Kotler's opinion, these days, customers succeed to maximize advantages of their own purchase. They have financial & time restrictions and choose a product in market which causes more value for them & fulfils their expectance better.

Brand:

Brand is a name, term, sign, symbol, or a combination of them which specifies seller of goods or services. As Kotler & his cooperatives' opinion, brand is a major part of product from viewpoint of customers. So it can increase product value. The significance of product brand is insofar as Macdonald recognizes it, as the first issue which must be informed by customer.

It is felt to strengthen brands in Iran too. The managers & marketing-experts of Persian domestic appliances will not be able to compete with imported domestic appliances if they can not stabilize their considered brands.

Brands are key elements for company to make a communication with customers. Brands indicate perception & feeling of customers towards product & it's efficiency. Product or service may create everything on consumer's mind. Desigment of a brand imposes arguable decisions to marketing-experts. The basic decisions about brand approach includes stabilization of brand situation, brand choice, brand support & brand extension. (Philip Kotler & cooperatives, 1999)

Stabilization of Brand Situation:

In this stage, marketing-experts closely specify situation of their considered brand on minds of target customers. Situation of brand can be stabilized based on one of the three levels. In the lowest level, brand situation can be stabilized based on product features. But there is a problem here that at this condition, competitors can easily copy the product. More significant point is about consumers who are not enthusiast to such features, rather they want to know what benefits these feature may bring them. The second stage for stabilization of brand is to make it corresponsive with a favorable status & to emphasize on advantages it possess, instead of emphasis on product features. The third level of brand stabilization is to stabilize it based on believes & values. At this stage, brand influences customers deeply. (Philip Kotler & cooperatives, 1999)
Trade Name Choice:

A trade name of a product is sum of things accompanying product & it leads to classify product on customer's mind. (Megicks, 2010) name of a product is some descriptions about quality, reliability of delivery, money-value of product, & something suchlike, that customer perceives of brand.( Kotler & Pfoertsch 2006).

To choose a proper name for product, we have to review the product & it's preferences, target market & suggested marketing-strategy attentively & selecting a proper name for product by using science & art. The influence of properly product naming is more signalized & it is more significant to attend to cultural issues of different countries , if an industry also thinks of exportation.( Kotler & cooperatives, 1999/Blythe & Megicks, 2010). Of this viewpoint, managers of Iran domestic appliances industry must take necessary care to achieve success.

Brand Support:

Producers have 4 ways in front, to support their considered brand. One way is to supply product with manufacturer's brand or national brand. In this way, product is supplied with the name of manufacturer company. In another way, producer sells it's product to another seller & that one, uses private brand. This way is called also as store brand or distributer brand. Although many manufacturers use their own brand but some, proceed to marketing for licensed brands. The last manner is that, two companies can unite their forces & supply product with a co-brand.( Kotler & cooperatives, 1999)

Domestic appliances industry of Iran should thinks internationally to success, regarding to this: It can utilize all above ways. An issue stands, It can be helpful to use licensed brands, distributer brands & co-brands to get experiment at first. & It is necessary for manufacturers of domestic appliances to use a private brand for long time status by supplying appropriate products & dominating the market.

Brand Extension:

A company deals with 4 options while brand extension is presented. The first option is line extension & it occurs when a company supplies extra items accompanying similar brand names in a given group of products. This happens where company feels that product extension accompanies less risk in comparison with producing a new product. Second option is brand extension that means utilizing a successful brand to supply new products or to supply changed product in new classification. This causes to determine the product immediately & to accept it quickly. Third option is to use multi brands that may provide the possibility of presenting various features & tendencies for various motivations of purchase. Fourth option is to use new brands. The company utilizes this method, where it realizes that current power of it's brand is going to be weakened or where it intends to enter to a new category of products while no existent brands are appropriate for this order.( Kotler & cooperatives, 1999)

Each company can use each above options concerning to what situation it possess & how large it is able to risk & how it's product position is through customers. Manufacturer companies of Persian domestic appliances are not excluded either.

Analytic Hierarchy Process Method (AHP):

Analytic hierarchy process that represented first time by Saaty, T.L is: a public method of measurement which based on mathematics & psychologic principles. It possesses the ability of solving complex qualitative & quantitative problems.

Principally, each AHP problem handles 3 general level. First level contains the main goal of problem, Second level contains evaluation criteria & Third level is options (choices) of problem. In each level of decision hierarchy the components are compared pairwise with each other so that determines each comparative preference in step to other choices. Total scale is obtained for each choice concerning to main goal. That option which possesses maximize scale must be chosen as the best option. ( Pohekar & Ramachandran, 2004)

Of AHP method features that leads to utilize it widely in solving multi-criteria decision making problems, we can mention the followings:
1. Segmenting large & complex problems to various levels & elements by hierarchy structure.
2. Simplicity of the method & lack of need, to have advanced engineering knowledge.
3. Lack of need, to provide & form a decision making matrix (criteria measurement).
4. Capability for modeling qualitative & quantitative criteria simultaneously.
5. Participating decision maker's feelings & thoughts in the model.

Nowadays, AHP method is perhaps one of the most significant methods in multi-decision making, which may aid gregarious & individual decision makings. (Madadian & cooperatives) AHP method possesses many usages & is utilized in order to various aspects in researches. As instance, we can point some articles following:
issues concerning to designment & decision making, resource allocation, optimization, ranking, etc. (Vaidya & Kumar, 2004) In the present research, AHP method can be also adaptable to perform this intention, since the purpose is to rank Affecting factors on decision making to buy domestic appliances. It must be considered that, one of the softwares implementing AHP is "Expert Choice" & we have to utilize it in this research.

Theoretical Framework:

Decision making of customers is different while purchasing, and depends on many various factors. But generally, we may assume a five-stage process of decision making for purchase. It has been summarized in figure 2. Each customer usually pass these stages. Although these stages may not be passed, or maybe accomplished vice versa. (Furaiji & cooperatives, 2012)

![Fig. 2: Five-stage process of buy decision.](image)

Buy decision process starts by problem recognition. Customer in this stage identifies problem, need, or marketing stimulus. In the second stage, customer estimates the amount of necessary information for decision making. Decision making process is performed quickly if need is violent or considered product or service is simply ready. But if not, information search process is started from various sources. For customer, sources of information collection are different. First, private sources i.e. family & friends. Second, trade sources i.e. advertisements, retailers, & goods packing. Third, public sources i.e. newspapers, magazines, the radio, television, & the internet. The significance and utility of each, depends on customer & considered product. (Furaiji & cooperatives, 2012) At third stage, customer should choose considered product or service through existent options. Customer involvement degree relies on customer sense. A level of customer involvement indicates why the customer wants to get information about a special brand or product, and ignores the rest. Customer involvement grade is affected by one of the three kinds of consumer's buy behavior at evaluation part, and also other affecting factors on individual decision making. 1. routine response behavior, 2. limited decision making, 3. extended decision making. Table 1, represents a comparison through consumer's response behavior. (Furaiji & cooperatives, 2012).

<table>
<thead>
<tr>
<th>Level of involvement</th>
<th>Routine response behavior</th>
<th>Limited decision making</th>
<th>Extended decision making</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product cost</td>
<td>low</td>
<td>low to moderate</td>
<td>high</td>
</tr>
<tr>
<td>Brand preference</td>
<td>more than one is acceptable although one may be preferred</td>
<td>several</td>
<td>various-ordinarily high</td>
</tr>
<tr>
<td>Search effort</td>
<td>little</td>
<td>little to moderate</td>
<td>extensive</td>
</tr>
<tr>
<td>Time spent</td>
<td>short</td>
<td>short to medium</td>
<td>long</td>
</tr>
</tbody>
</table>

Decision making to buy domestic appliances is usually categorized among extended decision making, due to approximately high price, great variety of products, not-routine purchase (Furaiji & cooperatives, 2012). Thus, the customer needs to search for almost much information, to spend almost much time & to pay almost high costs.

![Fig. 3: Affecting factors upon decision making process during purchase.](image)
Purchasing a product does not always follow a similar decision making process. Some purchasers do an impulse buying. Impulse buying happens in form of buying a product or service, without a prior plan. It occurs with influence of personal characteristics of individuals, manner of product show, easy payment, etc. For instance, most of the time, it happens impulsively to buy chocolate, candy & chewing gum. (Karbasivar & Yarahmadi, 2011 / Furaiji & cooperatives, 2012)

A lot of internal & external factors influence upon decision making process of individuals. They have summarized in figure 3. (Rudd & cooperatives, 2012 / Furaiji & cooperatives, 2012).

As figure 3 indicates: Affecting factors on customer preferences are great. Internal & external various aspects also influence it. But in the present research, internal effective factors which are less controllable for managers of domestic appliances manufacturer companies, are not attended & we have mostly emphasized on controllable aspects of marketing-managers, various brands of domestic appliances & features of products. Because there are some restrictions & the study is accomplished on a special limited statistical Population (Isfahan city). More significant point is the purpose of the research that is an aid to managers of manufacturer companies of Persian domestic appliances.

Research Variables:

Regarding to above explanations, in this research some variables are chosen as affecting factors on customer preferences: brand reputation, outward beauty, variety of models, energy consumption, advertisements, seller relationship with customer, price, after sale services & availability. These factors are more controllable by marketing-managers of domestic appliances manufacturer companies, in comparison with other affecting factors on purchase.

- Brand reputation: Is defined as determination of quality that is accompanying an imagination of product name on customer's mind. (Selnes, 1993)
- Outward beauty: This variable depends on aesthetic viewpoint of individuals including internal & external pieces & components at domestic appliances which plays a role in their beautification.
- Variety of models: The purpose in this research is numbers of brand models which exist at domestic appliances stores.
- Energy consumption: Energy consumption is defined based on various levels of energy consumption existed on most of domestic appliances as energy label.
- Advertisements: In this research, the purpose of advertisements is the amount of remembrance of product to customer & how many times a customer deals daily with a special brand advertisement.
- Seller relationship with customer: This criterion relies on the manner of behavior & seller dealing with customer. This is a part of quality of services offered to customer.
- Price: Is considered from customer viewpoint.
- After sale services: In the present research, the purpose of after sale services, is quality of service offering, not the number of service agents.
- Availability: The last criterion in this research points the number of stores selling considered brands.

Decision making tree contains 3 stages in this research. First level is selecting a brand among existent brands at customer's considered market. This level in fact, is goal of each customer while buying a considered domestic appliance. Second level of decision making tree, consists controllable factors influencing brand choice among domestic appliances brands. Third level of decision making tree consists general options of choices, that means imported & internal domestic appliances. Hierarchy tree of decision making during domestic appliances purchase is demonstrated in figure 4.

Methodology:

Type of Research:

The goal of this research was practical & method of it, was descriptive-cognitional. This research has proceeded to rank preferences of buyers while buying Persian & imported domestic appliances. We have used a researchist-made questionnaire to investigate preferences of buyers. The questionnaire has proceeded to compare criteria of purchasers in a pairwise comparison method while purchasing domestic appliances. We have utilized AHP technique to determine the significance of criteria.
Fig. 4: Hierarchy Tree Of Affecting Factors On Customers' buy decision.

Statistical Population, Sampling Method & Content of Sample:

As the purpose of this research was determination & rank of affecting factors on purchasing the imported & internal domestic appliances in Isfahan city, we have chosen buyers of domestic appliances living in Isfahan, as the statistical Population. Due to the wide statistical Population and also time & cost barriers, it was not possible to implement the research all through the statistical Population. That's why, amount of statistical Population has restricted to those domestic appliances stores which possess at least one kind of imported & internal domestic appliances. Thus, fourteen stores are selected randomly at various parts of the city. Questionnaires of research are distributed through some of their customers & regarded information has been collected.

Since amount of the statistical population is unlimited, the necessary amount of sample is obtained from equation (1).

\[
n = \frac{Z^2 \times p \times q}{E^2}
\]  

(1)

\(Z\): Extent of standardized variable in corresponded unit with trust level  
\(p\): Estimating of obvious characteristic in Population  
\(E\): Extent of permissible fault in measuring variable observation over statistical Population.

Thereby, if \(p=0.5, q=0.5, e=0.08\), regarding to equation (2), we will have "150" for "n".

\[
n = \frac{Z^2 \times p \times q}{E^2} = \frac{1.96^2 \times 0.5 \times 0.5}{0.08^2} = 150
\]  

(2)

Data collection:

In this research we have utilized cognitional method to gather information and also library-access (studying books, essays & theses) to create the questionnaire.

Tool of gathering information is questionnaires consisting 6 public questions about characteristics of buyers i.e. gender, age, marriage status, educational degree, rate of income & also type of purchased product by them(Persian & imported), 36 questions about identification of their preferences to buy domestic appliances. As section 1.3 indicates, purchase preferences of domestic appliances customers are proceeded in this research by use of investigating 9 criteria including: trade name reputation, outward beauty, variety of models, energy consumption, advertisements, seller relationship with customer, price, after sale services & availability. Therefore, questionnaires consist some questions about pairwise comparison of each above criterion with another one. In figure 5, used spectrum for answers of questionnaire are represented. Selecting each number, shows preference rate of buyer regarding to each of considered criteria.
Investigating Validity & Reliability of Questionnaire:

There are two main criteria including validity & reliability, to examine the accuracy & nicety of considered indexes in a research. (Ranjit Kumar, 2005) Due to likeness of general formation of questionnaires, similar questionnaires are commonly distributed to gather data. In this research, formal validity of questionnaires is confirmed by opinion of experts & studying relative researches.

Questionnaire reliability performs a pairwise comparison for affecting factors on imported & internal domestic appliances, and relies greatly on validity of AHP technique. Inconsistency rate can be a proper scale to determine reliability of answers. Thereby, the questionnaire will possess enough reliability if inconsistency rate is less than 0.1 at pairwise comparison tables. (Saaty, 1980)

In this research, inconsistency rate was 0.04 for all pairwise comparative matrixes, So reliability of examination is confirmed.

Locational-Time Domain of the Research:

Implementation place of this research was agents & stores of imported & internal domestic appliances in Isfahan city. And it's accomplishment time is also during "November" & "December" months in 2012.

Questions of the Research:

1. How do we rank affecting factors on decision making of internal domestic appliances buyers?
2. How do we rank affecting factors on decision making of imported domestic appliances buyers?

Results:

Among 150 questionnaires distributed to perform this research, information of 30 questionnaires have been entered incompletely. That's why, 120 questionnaires were checkable. Among people answering the questionnaires correctly, 35% were men & 65% were women. Perhaps the reason of why number of women was more than men, is that, women participate more at choosing & buying domestic appliances. Also 67% of under-study population were included by married people & 33% of them were single. Since major domestic appliances are bought by married people to use in houses. Of educational level viewpoint, 2% of considered statistical sample is formed by people with middle degree, 14% with high school degree, 7% with associate's degree, 56% with bachelor's degree, 18% with master's degree, and 3% with doctorate's degree of education. Income status of considered statistical sample is also exhibited in diagram 1, as an affecting factor upon decision making of domestic appliances purchasers.

Diagram 1: Income status of considered statistical Population.

As indicated in diagram 1, most amount of statistical Population are with 5'000'000 Riyals income & less.
Individuals who have bought Persian domestic appliances, were 34 people. While 86 people of statistical sample were buyers of imported domestic appliances. Diagram 2 exhibits the percentage of purchase of imported & Persian domestic appliances.

Diagram 2: Percentage of purchase of imported & Persian domestic appliances.

As exhibited in diagram 2, more than 70% of purchasers have chosen imported domestic appliances. Data concerning to purchasers' preferences of imported & Persian domestic appliances, are obtained by pairwise comparison about 9 factors influencing considered product choice. In this research, the data have been entered to "Expert Choice" software & existent information have been brought in diagram 3 & 4 to show, in sequence, priority of factors influencing purchase of Persian & imported domestic appliances.


Diagram 4: Ranking of affecting factors on selection of imported domestic appliances.

As indicated in diagrams 3 and 4, three factors consisting price, energy consumption & after sale services, are the most important factors influencing choice of both imported & Persian kinds of domestic appliances. After above 3 factors, product availability & brand reputation were of more significance for imported domestic appliances buyers. This is, while it was more important for Persian domestic appliances buyers to be dealt by seller, in comparison with product availability. Outward beauty, variety of products & advertisements are also represented as the last affecting factors on choice of imported & internal domestic appliances.
Answering the Research Questions:

Answer to the first question is obtained from diagram 3, that is about determining the most important purchase factors from viewpoint of internal domestic appliances buyers. As exhibited, among 9 considered factors in this research, 3 factors including price, energy consumption & after sale services, are the first affecting factors on decision making of Persian domestic appliances buyers. After that, brand reputation (but with a little difference from "after sale services"), was more important factor about decision making of Persian domestic appliances customers. The quality of seller dealing & product availability, were the two next more significant criteria for purchasers of this group of domestic appliances. Finally, among considered factors in this research, 3 criteria consisting outward beauty, variety of model & advertisements are, in this research, as last affecting factors upon purchasers' decision making of internal domestic appliances.

Answer to the second question about how to rank the affecting factors on decision making of imported domestic appliances customers, is obtained from diagram 4. In this case, 3 factors including price, energy consumption & after sale services, have possessed greatest priority for purchasers of imported domestic appliances. But at this category of customers, instead brand reputation, the product availability factor has allocated the next factor to itself. After product availability, the next important factors were brand reputation & quality of seller dealing. And lastly, 3 factors consisting outward beauty, variety of models & advertisements were in priority as the same, about the priority of these factors in respect to purchasers of imported domestic appliances.

Discussion:

Decision making is not easy for customers before their choice, specially where there are various options with different advantages & foibles. As pointed in section 3, the process of decision making about purchase of domestic appliances also causes almost a great amount of anxiety to buyers, because decision making about such goods is classified as extended decision making due to nearly high price, nearly large variety and lack of daily purchase. Although priority of purchase factors are almost similar to buyers of both imported & internal domestic appliances. But existence of several partial differences may indicate significant issues to active artisans of Persian domestic appliances part.

As indicated in research results, the price was of the most important priority for buyer's decision making to purchase both kinds of imported & Persian domestic appliances. In the other side, although the price of internal domestic appliances is low & this problem, that more than half of under-study buyers are people with approximately low income, But more than 70% of buyers have preferred imported domestic appliances to buy. This subject is a larum to manufacturers of Persian domestic appliances, and represents that position of Persian brands is weak on customers' minds. Priority of energy consumption & after sale services criteria were similar to both categories of imported & internal domestic appliances buyers. With respect to this, we have to find the existent weakness about lack of appropriate position for domestic appliances. And it is clear to have a search mostly round incompetency of other affecting factors upon decision making of purchasers. That is, because Persian domestic appliances are approximately convenient with the view of energy consumption & do not possess great infirmity at this aspect, due to some preparations happened in industry to improve energy consumption. After sale service is also offered in an approximately proper way. Since these products are generated inside. And their fragments & spare accessories are existent. There is not much weakness appeared at this case in comparison with brands of imported-to-Iran domestic appliances.

There is a subject here that must be observed: Product availability & brand reputation were more important to buyers of imported domestic appliances, after the criterion: "after sale services". But brand reputation & quality of seller's behavior, were more significant criteria to purchasers of internal domestic appliances in comparison with product availability. Product availability was more important to purchasers of domestic appliances, despite of embargo, existent tariff on domestic appliances importation, high rate of foreign exchange, and such other elements. This problem indicates the weakness of manufacturer companies of Persian domestic appliances, at positioning their products appropriately in Iran market of domestic appliances. If active companies at Persian domestic appliances section of industry, prosper in positioning their product, It can be greatly helpful to increase the motivation of customers about internal-made domestic appliances. Success at this order, may lead to eliminate or reduce the pessimism to internal domestic appliances brands. Because people try to influence choice of each other by affecting one another believes.( Hamilton, 2003) selecting a commensurate trade name with culture, can be a start point for product positioning to be successful, Since a cultural coordination between a brand & a product, can influence at determination & proper realization of customers.( Torelli & Ahlowalia, 2012) In other hand, stabilization & extension of a brand must be accomplished by focusing on various components of marketing mix. Indeed, we can remove many of existent weaknesses at Persian domestic appliances market by concentrating on various components of marketing mix, including price, product, distribution & promotional actions. Or at least, it leads to decrease unsuitable competitive situations for
Iran-made domestic appliances. We can influence choice of customers by creating fair and competitive prices. Although some of researchers indicate that consumers tend to consider the price of a product as more than it's fairly price (Bolton & cooperatives, 2003). But we can justify the customer about quality of Persian domestic appliances & assure them to offer after sale services, so that we would persuade customer about fair price of the products. The significance of fair price conception by customer, is great insofar as, some of researchers consider it's importance, more than importance of after sale services. (Hanif & cooperatives) To solve many existent problems at this industry, we have to produce desirable, beautiful, various & ideal domestic appliances, that hints another component of marketing mix. Since perceptive quality of manufactured product, pertains directly to satisfaction level of customer. (Marta Pedraja Iglesias & M. Jesus Yague Guillen, 2004) In this research, the criterion "quality of seller's dealing" is described as an effective & important element specially for internal domestic appliances purchasers. This criterion can be improved if manufacturer companies of domestic appliances concentrate on another factor considered at marketing mix, that is "promotional activities". In fact, above companies should investiture appropriate & exhortative plans to sellers & agents of their products and also try to modify their viewpoint about Iran-made domestic appliances, so that encourage them to endeavour to position Persian domestic appliances properly. Albeit in this research, the priority of advertisement factor for internal & imported domestic appliances purchasers, is obtained at a lower level, in comparison with other elements, but we must not ignore the important role of advertisements in proper positioning for products of the considered companies. Since advertisements may play a significant role to improve the viewpoint of customers about interior-made domestic appliances. It is necessary to mention that, evaluation of a brand is affected by advertisements which introduce product and it's privileges from a different aspect. (Nam & Sternthal, 2008) For example, producers of Persian domestic appliances & their associated agents, can create the "installment plan" possibility to buyers of Persian domestic appliances, and put this offer over their advertisements. By this facility, they are able to create a competitive advantage for their products & encourage purchasers to choose domestic appliances made in Persian companies. However installment plan is not easily possible if there is inflationary condition. Moreover, above companies must attend to other brands which may normally come to purchasers' minds, while choosing an advertising message for their considered brand. (Kwon & Dew, 2010)

**Research Limitations:**

One of the restrictions of this research was time-locational domain. Present research has implemented through domestic appliances buyers in Isfahan city & in domain, November & December months. Thus, regarding to influence of cultural, sociological & behavioral elements & also life style upon purchase behavior, We have to be aware to generalize the results of this research to other cities of Iran & other time periods. Second restriction of this research is where we have only considered external & controllable factors in short-term & mid-term influencing decision making of purchasers. Because, regarding to section 4, the goal of this research accomplishment was aid to artisans who are active in production part of Persian domestic appliances. This is, while psychological elements play a significant role at brand choice & create a positive or negative sense on customer's mind. (Pilevari & cooperatives, 2012) Third restriction is caused by prolix AHP questionnaires & unfamiliarity of some responders to answer style about AHP questionnaires.

**Suggestions for Future Researchers:**

Researchers can perform the present research also in other cities. Since different sociological, behavioral & cultural contexts of other cities may represent multiple results. In several cases, it has been realized that culture effects on purchase, more than sociological variables like age, gender & income. (Tifferet & Herstein, 2010) Researchers can also consider affects of external significant factors on decision making i.e. personality, life style, approaches, believes, motivations, etc. in their researches. Moreover, to perform their research, they can determine the affecting priorities on decision making of purchasers by analysis methods of statistical tests, Kano model analysis, Fuzzy analytic hierarchy process, etc.

**Conclusion:**

This research, with the purpose to investigate buyers' priorities while choosing imported & Persian domestic appliances, has been performed by utilizing AHP technique. In present research, we have proceeded to investigate 9 factors of affecting factors upon decision, consisting: price, energy consumption, after sale services, product availability, brand reputation, quality of seller's dealing, outward beauty, model variety & advertisements. The research results indicate that 3 factors including price, energy consumption & after sale services have reserved the first three priorities for both buyer groups of imported & Persian domestic appliances about the effects on purchaser's decision making. For imported product buyers, 3 factors consisting product availability, brand reputation & quality of seller's dealing, were in sequence, the most important affecting factors...
on their decision making, after the three previous factors. This is, while brand reputation, Quality of seller's dealing & product availability were fourth to sixth priorities to influence their decision making. At last, among considered factors in this research, the most significant factors influencing decision making of purchasers, were 3 factors including outward beauty, model variety & advertisements. The above results indicate that only less than 30% of purchasers have bought Persian domestic appliances despite of cheaper prices of Persian domestic appliances & their approximately proper after sale services in Iran. This problem expresses the weakness at brand positioning for Persian domestic appliances on customers' minds & in market. Therefore, manufacturers of this kind of products in Iran, are recommended to fortify their activity to perform marketing mix components, rightly and appropriately. And also, they are recommended to try to promote this industry & during fortification of their product position in market, try to positively change the mentality of customers about Persian domestic appliances.

References


