The relationship between culture and individual factors in appliance buyers

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Abstract

Culture as one of the important stimulus of marketing and the efficacy of this on individual factors is one of the challenges affecting marketer planning on decision model of consumer behavior. Therefore, this research was performed to determine the relationship between culture and individual factors on customers of top 10 home appliance manufactures. The information collection tool included two-part questionnaire in two variable with 28 questions about culture and 31 questions about individual factors, after doing validation and reliability (98 percent), 300 randomly customers purchasing appliances were selected for responding and with descriptive and inferential statistics and hypothesis testing, meaningfulness of the relationship between culture and individual were confirmed. Due to high levels of employment and foreign exchange revenues, this research as an applied one can be decision guide for managers in this industry.

Keywords: Cultural, individual factors, consumer behavior

Introduction

The aim of this study is to identify and describe the relationship between culture and individual factors in customers of appliances manufacturers. Culture as the deepest and most influential motivators in consumer behavior models and individual factors, influencing the consumer's perception of the motivator of culture to achieve the type of reaction in the purchase decision, is the main issue in this study.

Research is placed in marketing subgroup and the branch of consumer behavior and is much important as an applied research for managers of active companies in the field of appliances industry to decide about the consumers of home appliances.

Researches in the field of consumers' behavior is rooted in the business approach from 1950s and following that production oriented, manufacturing-oriented and sales-oriented approaches began their evolution and emphasis on needs, satisfaction and value creation in consumer behavior which replaced previous approaches. Consumer behavior, as a marketing strategy after 1950, was the consequence of the fact that if they produce the goods that consumers needed, they would sell them quickly and instead of costly attempts to persuade consumers to buy the goods that company already produced, it is better to concentrate on producing goods and services which consumers mainly need and desire. In line with these researches, marketers found out that consumers' needs with regard to human complexities is not just limited to physiological needs, rather another important aspect of human needs is related to psychological and sociological needs and consumers are influencedbycultural issues, social classes, personal and psychological factors and show special reaction to every stimulus with regard to psychological and personal factors. Using consumer behavior approach, the present study seeks to understand the relation between culture and personal factors in customers of companies producing home appliances with the following hypotheses:

Hypothesis 1: there is a relationship between culture and stage of life in customers of compa-

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nies producing home appliances

Hypothesis 2: there is a relationship between culture and job in customers of companies producing home appliances

Hypothesis 3: there is a relationship between culture and financial status in customers of companies producing home appliances

Hypothesis 4: there is a relationship between culture and style in customers of companies producing home appliances

Hypothesis 5: there is a relationship between culture and personality and personal characteristics in customers of companies producing home appliances

Theoretical background

In 1923, along with the rapid development of automobile, when Alfred Sloan as president of General Motors inherited a company with several small car manufacturers each producing some inappropriate and uncoordinated cars without a clear purpose. After a year, Sloan managed reorganization and produced automobiles with low cost models, from luxurious Cadillac to labor Chevrolet.

What mentioned above shows that about 30 years ago, Sloan understood one point, i.e. all consumers are not the same and launched the main cornerstonein modern marketing and in 1950s, marketers found that if they try to produce goods that consumers desired and needed, sale will encounter ease and large volume, therefore, this approach placed in the spotlight of companies.

However, at that time, because of the lack of proper knowledge of consumer behavior, they assumed consumers as financial and rational, a person who purchases to optimize his benefits, but subsequent more comprehensive studies indicated that human behavior was not totally economic andrational and consumer's decision to buy are influenced by cultural, psychological factors and referential groups and personal factors and their results turns into a reaction in buyer, therefore, all of these models form consumer behavior (Kotler and Armstrong, 2011).

Gideons (2009), as a famous sociologist, believes that culture include: people's lifestyle, traditions and goods they produce and norms they follow and Kotler (2002) know culture as the deepest and most influential factor in consumer behavior

and introduce it as one of the important motivators of marketing that influence personal factors and its result appears as a reaction in consumer behavior.

Literature Review

A study titled, "the impact of culture on the consumer behavior in the management organization and Excis institute of Netherlands was conducted by Professor Dixit (2011) and stated that; culture has the broadest and deepest influence on consumer behavior in a country like Netherlands and these effects were invisible and also culture not only influences consumer behavior but also reflects it.

Another study entitled "cultural effects on consumer behavior based on four aspects of Hofstede cultural behavior in state university of Singapore", was conducted by Kau and Jung (2004) and its results are as follows: culture is a powerful force in adjusting human behavior and in individualistic societies, individuals are less influenced by referential groups, people share less information, and they less use leaders' opinions and are less inclined to ethnic oriented behaviors and in front of people are more inclined to family rather than colonial culture and consider themselves as a part of integrated system.

This research is conducted in line with this issue i.e. is there a relationship between culture and individual factors in consumers of home appliances? In other words, this main hypothesis is tested: There is a meaningful relation between culture and personal factors.

Conceptual model of research

Conceptual model of research is derived from the study of Shifman and Kanok (2012) human behavior and marketing (Kotler and Armstrong, 2011) as follows:
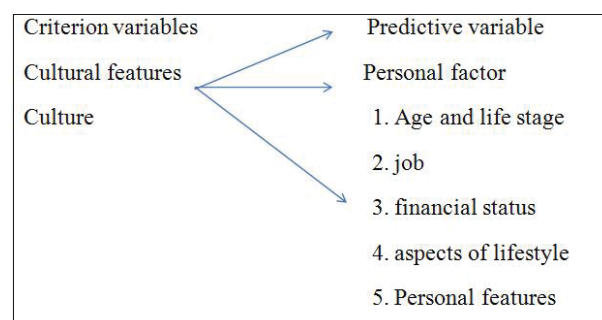
Culture variable

The variable of culture has the largest and deepest impact on consumer behavior, because culture is considered as a shaping factor of human behavior and his desires. When a child is born, he is under the influence of fundamental values, perceptions, attitudes, and family behaviors, relatives, and other cultural foundations. Cultural values include cases such as: success and progress, activity, learning, usefulness and practicality, promotion, financial relief, independence, freedom, external ease, philanthropy (Kotler & Armstrong, 2011).

Personal factor variable

Decisions of a buyer are influenced by his individual characteristics and these include: age and stage of life, job, financial status, aspects of lifestyle and personality characteristics (Kotler& Armstrong, 2011).

Financial status: Financial status of an individual influence greatly his choice and also boom or recession, interest rates, savings, earnings influencepurchasing (Kotler& Armstrong, 2011).

Lifestyle: Lifestyle is an individual life pattern which is stated in activities, interests and personal thoughts and also includes comprehensive pattern of action and reaction of individual in the world (Kotler& Armstrong, 2011).

Characteristic and personal image: characteristic is a series of psychological features which leads to rather stable reactions of a person to the environment (Kotler& Armstrong, 2011).

Age and stage of life: stage of family life period is divided into three periods of: A-youth, B- Midlife, C- old age and each of them requires different goods and services (Kotler& Armstrong, 2011).

Job: people with different jobs and different professional groups do different purchases (Kotler& Armstrong, 2011).

Methodology

Regarding methodology, this research is a descriptive research and with regard to objective it is an applied research whose data collection method is Field research.

Statistical population

Statistical population consists of 300 people, 10 manufacturers of home appliances (Samsung, Sony, Hardstone, Coke Song, LG, VMF, Delongi, Panasonic, Tefal, Beko) that have sales' agency in Kish Island and 300 people due to unlimited statistical population were considered 10 companies and 30 people for each company randomly.

Data collection tools

Data collection tools included a two-part questionnaire whose first part is the culture independent variable with 14 component, 28 items and dependent variable of individual factors with 5 components, 31 indicators, 31 items.

Validity of the questionnaire

Components of culture variable derived from the book of marketing by Kotler and Armstrong (1997) including 14 components and personal factors with 5 components and a two-part questionnaire with 59 questions, which 28 items were related to cultural factors and 31 factors related to personal factors in 5 item Likertscale was arranged and commented 4 university professors and 98% approval (table 1).

Table 1. Validity

Variable	Number of questions	XP
Culture	28	98
Individual factors	51	98

Reliability of the questionnaire

To evaluate the reliability of research data, internal consistency tools were used and the most important indicator of internal compatibility is Cronbach's alpha test. The results of Cronbach's alpha test were 92% for culture and 89% for individual factors and indicate a high correlation between internal components (table 2).

Table 2.Reliability

Variable	Cronbach's alpha	Number of questions	Number of tests
Culture	0.92	28	300
Individual factors	0.89	51	300

Data analysis method

In the present research, descriptive statistics like figures and the like and inferential statistics and hypothesis tests such as Kendall's and Spearman correlation test and for data analysis SPSS software version 21 was used.

Findings

Demographic indicators description

Distribution of population under study based on marriage statusis: of 300 people under study;154 married people (51.3%) with children, 92 married people (30.7%) without children and 52 people (17.3%) single. Distribution of population based on age: of 300 people under study; 29 people (9.7%) were under 20 years old, 77 people (25.7%) ranged 21-30 years old, 78 people (26%) 31-40 years old, 63 people (0.21%) 41-50 years old and 53 people (17.7%) had more than 51 years of age. The distribution of subjects by occupational group: from among 300 peopleunder study, 114 people (0.38%) were employees, 76 (25.3%) people were self-employed, 59 people (19. 75%) were workers and 49 people (16.3 %) were retired.

Quantitative description of variables of the questionnaire

This questionnaire includesa total of 28 items at the level of sequential evaluation and in the form of Likert scaleand in the form of 5-op-

tion that after calculating linear meanof ranking items of the resulted data in table 2, it can be claimed that the level of culture, from the viewpoint of respondents under study equals to the average grade and (mean = 4.17), the variable of stage of life consists of a total of 27 items at the level of sequential evaluation and in the form of Likert scaleand 5-option that after that by calculating linear mean of ranking items, the resulted data in (table 3) indicates that from respondents' point of view it almost equals the mean of grades and (mean=4.08). In order to evaluate the level of financial status from respondents' point of view, 3 items at the level of ranking measure was used as a 5-option Likert scale. According to research findings in table 3, the mean obtained from linear average of items for the people under study equals to 4, which indicated that respondents' view about financial status at the level of financial status. To evaluate the rate of lifestyle from respondents' point of view, 12 items at the level of ranking measure was used as a five-Likert scale option. Regarding research findings in table 3,the obtained mean from the linear average of items for the people under study equals to 3.96. In order to evaluate the level of personal characteristic from respondents' viewpoint, 12 items at the ranked measurement level is used as a five-Likert scale. With regard to research findings (table 3), the obtained mean from linear mean of items for the people under study equals to 4.18.

Table 3.Descriptive statistics forthe variables (n=300)

Variable	Mean	Standard Deviation	Median	Mode	Skew-ness	Strain	Mini-mum	Maxi-mum	No re-sponse
Culture	4.17	0.51	4.24	5	-0.59	0.17	2.31	5	1
Stage of life	4.08	0.51	4.11	4.41	-0.73	0.84	2	5	3
Financialstatus	4	0.62	4	4	-0.59	0.16	1.75	5	3
Lifestyle	3.96	0.67	4	4.25	-0.75	0.74	1	5	3
Personal characteristics	4.18	0.60	4.25	4	-0.77	0.96	1.5	5	4

Data Analysis

Evaluation of the normality of research variables

At first, before analyzing research hypotheses, normality of research variables should be evaluated by single sample Kolmogorov −

Smirnov (table 4).

H0: The variable under study has normal distribution and H1: The variable under study does not have normal distribution.

Based on findings of table 4 single sample Kolmogorov − Smirnov, the assumption

of normality for two variables under study was rejected. Since the assumption ofnormality of variables was rejected, to examine the research hypotheses Kendall and Spearman nonparametric tests were used.

Table 4. Single sample Kolmogorov−Smirnov for research variables.

Variable	Number	Mean	Standard deviation	Z Circumstantial evidence	Significance (P level)
Stage of life	297	4.08	0.51	1.469	0.026
Culture	299	4.17	0.51	1.395	0.037

Main hypothesis: There is a relationship between culture and stage of life.

H0: there is no relationship between culture and stage of life of customers of home appliances.

H1: there is a relationship between culture and stage of life of customers of home appliances

In order to examine the amount of relationship between culture and stage of life of customers of home appliances, Kendall and Spearman correlation coefficient was used (quantitative variables). Results of this study are mentioned in table 5. Based on the results obtained from correlation test, Kendall correlation coefficient equals 0.681 which indicates that there is significant relationship between culture and stage of life of appliances' customers (p<0.05), therefore the null hypothesis is rejected. And the relationship between these two variables is direct. In other words, changes in the culture level leads to changes in level of life of appliances' costumers and it is impliedthat positivity of Spearman and Kendall tests coefficients is the cause of the increase in this relation.

Table 5.Spearman and Kendall correlation coefficients between variables

Type of relation	Existence of relation	number	Significance (P-level)	Amount of correlation coefficient	Correlation Circumstantial evidence	Variables
Direct	Yes	297	<0.001"	0.510	Kendall	Culture and stage of life
Direct	Yes	296	<0.001"	0.681	Spearman	
Direct	Yes	297	<0.001"	0.227	Kendall	Culture and financial status
Direct	Yes	296	<0.001"	0.313	Spearman	
Direct	Yes	297	<0.001"	0.464	Kendall	Culture and lifestyle
Direct	Yes	296	<0.001"	0.602	Spearman	
Direct	Yes	297	<0.001"	0.467	Kendall	Culture and characteristic features
Direct	Yes	296	<0.001"	0.611	Spearman	

*At the 0.05 significance level** at the 0.01 significance level

Minor hypothesis 1

There is a relationship between culture and financial status of appliances' customers.

H0: there is no relationship between culture and financial status of appliances costumers.

H1: There is a relationship between culture and financial status of appliances' customers.

In order to examine the amount of relationship between culture and lifestyle of appliances customers,Kendall and Spearman correlation coefficient is used (quantitative variables). The results of this test are mentioned in table (6). Based on the results of correlation test, Kendall corre-

lation coefficient equals to 0.464 and Spearman correlation coefficient equals to 0.602 that indicates there is a significant relationship between culture and lifestyle of appliances customers (p<0.05); therefore,the null hypothesis is rejected. And the relationship between these two is direct. Thus, the second sub-hypothesis of the research is confirmed i.e. changes in the level of lifestyle of appliances' costumers leads to changes in culture and is tended to positivity (ascending), that the positivity of Kendall and Spearmantests coefficients is the reason for the increase in this relationship.

Minor hypothesis 3

There is a relationship between culture and personality and personal characteristics in appliances costumers.

H0: There is no relationship between culture and personality and personal characteristics in appliances costumers.

H1: There is a relationship between culture and personality and personal characteristics in appliances costumers.

To examine the relationship between culture and personality and personal characteristics of appliances costumers, Spearman and Kondell correlation coefficient is used (quantitative variable). Results of this test are mentioned in table (6). Based on results of correlation test, Kondell correlation coefficient equals to 0.467 and Spearman correlation coefficientequals to 0.611 which indicates that there is a significant relationship between culture and personality and personal characteristics in appliances costumers (p<0.05), therefore the null hypothesis is rejected. And the relationship between these two variables is direct. Thus, the third sub hypothesis of the research is confirmed i.e. changes in levels of personality and personal characteristics in customers of home appliances leads to changes in culture and intends to positivity (ascending), which the positivity of Spearman and Kondelltests coefficientis the reason for the increase in this relation.

Log-linear analysis

Log-linear analysis of three variables of culture and stage of life in appliances customers and marital status

In this section, in order to analyze the interaction between two variables of marital status and culture, Log-linear analysis is conducted. As it can be seen in table 6,the level of -Pof single or double effects (0.00) is less than significant level of (0.05). But triple effect with the level of -P(0.96) is higher than the significant level of (0.05). Therefore, triple effect does not exist in this model.

Table 6. Statistical calculation.

k	Degree of freedom	Circumstantial evidence	P-level
1	11	210.12	0.000
2	7	96.91	0.000
3	2	0.071	0.96

Log-linear analysis of three variables of culture and stage of life in appliances customers and age

As it can be seen in table 7 below, the level of $-P$ ofdouble and single effects (0.00) is lower than significant level (0.05), but triple effects with thelevel $-P$ (0.38) is higher than significant level (0.05). Therefore, triple effect do not exist in the model.

Table 7.Statistical calculations

P- level	χ^2Circumstantial evidence	Degree of Freedom	K
0.000	198.04	19	1
0.000	107.27	13	2
0.38	4.16	4	3

According to the level of $-P$ obtained (0.00), the assumption of culture independence and stage of life in appliances' customers at age level is rejected. Thus, there is a significantrelationship between two variables at least in one of the levels of age. With regard to correlation coefficient and their $-P$ levels at all levels, there is a significant relationship between two variables of culture and stage of life in customers of home appliances and it can be seen that at the range of 21-30 years, regarding correlation coefficient this increasing relationship gets stronger.

Log-linear analysis of three variables of culture and stage of life in appliances customers and job group

As it can be seen in table 8, -P level of single and double effects (0.00) is less than significance level of (0.05). But triple effects with $-P$ level (0.31) is higher than significant level (0.05). Thus triple effects do not exist in this model.

Table 8. Statistical calculations

P- level	χ^2Circumstantial evidence	Degree of freedom	K
0.000	221.26	15	1
0.000	131.37	10	2
0.31	3.56	3	3

According to $-P$ achieved (0.000), the hypothesis of culture independence and stage of

life in customers of home appliances at levels of job groups are rejected, thus,there is a significant relationship between two variables at least at the level one of job groups. Regarding correlation coefficient and their —p levels, there is a significant relationship between two variablesof culture andstage of life in appliances customersat all levels except retired level and it can be seen that at the workers level, with regard to correlation coefficient this ascending relationship gets stronger.

Results and discussions

In this research, results of the entire 59 question questionnaire "surveying consumers of home appliances" and results for 10 manufacturers of home appliances with 300 sample people were analyzed. A number of 28 questions related to culture and three questions about age and stage of life, a question related to job, three questions related to financial status, 12 questions about lifestyle, 12 questions is designed about the personal characteristics in form of a two-part questionnaire with regard to unlimited consumer statistical population between 300 people distributed.

The findings show that the culture level from theviewpoint of respondents under study is almost equal to average of grades (mean 4.17) and the relationship between culture and stage of life is confirmed with regard to positive coefficients and have direct relation. With this description, correlation coefficient between culture and consumer age ranging from 20 to 30 shows more correlation and the results obtained from demographic figure shows that most customers are at the ages 20 to 40. Another result is that in correlation between culture and marital status, there isa remarkable point that the highest correlation exists between culture and married people without children. Thus, we expect thathome appliances companies pay more attention to needs and desires ofcustomers at the ages 20 to 40 and also married people without children and their cultural features to achieve more success in marketing management.

With regard to positivity of the correlation coefficient, there is a direct relationship between two variablesof culture and job in consumers. By this description,the correlation coefficientbetween culture and different jobs has the highest correlation at the level of working class. Therefore, it is expected that companies of home appliances consider cultural features in this job to obtain beneficial results in the area of consumers' behavior.

With regard to positive coefficient between the variable of cultural features and financial status indicates thepoint that; there is a direct relationship between these two variables. Thus, it is expected that considering cultural features in home appliances behavior with regard to financial status of country by home appliances companies achieve beneficial results in the area of consumer behavior.

Regarding positive coefficient between cultural features and lifestyle, a direct relationship between these two is confirmed. Thus, it is expected thathome appliances companies achieve beneficial results in the area of consumer behavior if they pay enough attention to cultural features regarding their lifestyle.

Regarding positive coefficient between two variables of cultural features and personal characteristics, a direct correlation between these two variables is confirmed, thus it is expected home appliances companies attain beneficial results in the area of consumer behavior if they pay more attention to cultural features considering personal characteristics

Another general and peripheral result such as: most of consumers were, of married people with children (51.2%), at the age range of 20 to 40 (52%), employee class (38.26%), and the lowest number of customers, singles (17.3%), at the age range below 20, and retired class (16.44%).

In order to justify findings of this research,it can be referred to Kotler (1390) statement: culture as an important motivator in consumer behavior model has a direct significant relation with individual factors with five aspects, any changes in cultural factors leads to changes in individual factors and as a result different reactions by consumers and also culture is considered as one of the most important factors in forming behaviors and desires of people. Consumers purchase with different cultures which includedifferent values, beliefs, preferences and norms, traditions and this component of culture in the process of individual factors is influenced byfactors including; age and stage of life, job, financial status, lifestyle and personal characteristicsand leads to different reactions

in buyers of home appliances. Therefore, consumption behavior with all of its features is useful as a guidance for home appliances companies in order to identify main needs and desires of customers to recognize the kind of their behavior and before any policy, it would be better for marketers to identify consumers market and to recognize consumers need to know the culture and other enticing factors and also psychological and individual features of consumers.

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