

## CONSUMERS' "BRAND PERSONALITY" PERCEPTION OF GLOBAL BRANDS IN INFORMATIONAL TECHNOLOGY: AN AMPIRICAL RESEARCH ON HITIT UNIVERSITY STUDENTS

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### Abstract

*The study aims to determine the factors that influence consumers' attitude towards the global brands in information technology products. For this purpose survey questionnaire applied to 400 students of which 377 valid were analyzed. Factor analysis was used to determine the factors affecting consumers' attitude towards the global brands and at the result of analysis realized that such factors as – demographic factors( $\alpha=0.70$ ), the use of global brand related to information technology products( $\alpha=0.67$ ) and brand personality perception level related to global brands ( $\alpha=0.66$ ), are effective on the attitudes. Hypothesis developed appropriate to the model of the study was tested by Chi-square analysis and the hypothesis were accepted.*

**Keywords:** Brand Personality, Information Technology, Consumer Behaviour, Global Brand, Consumer Attitude.

### INTRODUCTION

Global brand is a brand that can be exchanged constantly (Lee,2006). Factors as quality level, cultural myths, the social problem endeavour can be classified as important reasons of consumers' choice and purchase of global brands(Holt et al., 2004; Ille, 2009). Besides these reasons brand personality perception related to global brands can be expressed as a purchase criteria . The aim of the study is to identify the effective factors on consumers' attitude towards the global brands in information technology. In the research work, brand personality perception level takes place among the factors, affecting attitude. In this scope, firstly, information technology and latter, global brand personality will be examined in details in the section below.

### INFORMATIONAL TECHNOLOGY

Informatics is a resultant, obtained by using knowledge and technology together.

(<http://bilgielpazesi.blogcu.com/bilisim-nedir-bilisimin-tanimi-bilim-ve-teknoloji-haftasi-ile/4984727>).

Information technology comprises the technology that contains all the technology, including communication and computer, used for collecting, processing, storing knowledge to put into users' service, carrying from one place to another, through webs. Information technology is a concept that can be connected with the communication and computer systems, used for all information services

(<http://www.msxlabs.org/forum/muhendislik-bilimleri/99585-bilisim-teknolojileri.html>).Accordingly, Information technology has got a great amount of components, such as computer hardware, software, networks, communication technology, human power sufficient in this field, processes, the Internet, internet and computer devices(Durmaz, 2005). Quantum mechanics, information theory, molecular biology, oceanography, ecology, and space sciences and the development experienced in these areas has a major contribution to the progress and the emergence of information. Information technology products are not restricted only to computers. It covers a much wider range. These can be expressed as followings:

- Computing and accounting devices used in offices and companies.
- Insulated metal and wire products
- Electronic valves and tubes products and other electronic components
- Television and radio transmitters and related products, devices, telephone and telegraph lines
- Television and radio receiver products, audio and video recording equipment, duplication equipment and auxiliary products
- Out of industrial processes vehicles, measuring, checking, testing, to determine the route etc. tool and equipment products used for different purposes

- Machinery and equipment wholesale and supplies
- Telecommunication
- Computer-related services

Information technologies lead to qualified revolutionary changes. These technologies are of great importance to determine the countries to be first or third class. Technological developments have become the determining factor in the growth of countries in the last fifty years. Information technology has launched a major transformation over the economic structure. First, the globalization of economic activities and then, investment in these technologies will effect the growth rates of national-scale economies and all the other sectors. Period extending from 1960 to the future of information technologies have been three distinct phases. These can be named as "data processing period", "micro-time" and "network era". The data processing era, shaped by the industrial products that support main computers. The micro-period is also known as a period, the information technology is staged. This period is intended to use information technologies by employees. However, the network period is an expression of the need for computer networks. During this period, the organization of work as the network has become a necessity. Thus, inter-organizational variety of network structures composed. Wide Area Network (WAN) and Local Area Network (LAN) have been quite widespread. This distinction based on technological development also includes three separate economic stages as, industrial economics, transition economics and the economics of information. 1975-1980 period, is considered to be "period of creative structural change" and the period extending from 1995 to 2010s as "a transformational period of business" (<http://www.msxlab.org/forum/muhendislik-bilimleri/99585-bilisim-teknolojileri.html> ). The following sections describe more detailed information on issues of global brands and brand personality, in accordance with purpose of the study.

### **GLOBAL BRAND**

According to Lee, any brand, which has a large global presence and the ability to affect consumer behavior globally and consistently trades around the globe, is a global brand (Lee, 2006). Global brand ranking made by Interbrand in 2007, such American brands as Coca-Cola, Microsoft, IBM, General Electric, Nokia and Intel share leadership (Interbrand 1, 2007).

Among other studies on this topic include The World Brand Laboratory (2007) as well as "Top 500 World's 500 Most Influential Brands" (Lan, 2005). In 2004 by Holt and colleagues conducted a research project dealing with global brands. A research project conducted on 3300 consumers in 41 countries. The authors found that most people choose one global brand over another because of differences in the brands' global qualities. Consumers base preferences on three dimensions of global brands:

1. Quality signal (signaled by a company's global stature or subjectively perceived by the users);
2. The cultural myths (brands, created on emotional satisfaction bases).
3. Companies' efforts to address social problems. (such as environmental protection for sustainable development, corporate social responsibility activities such as the labor force behavior.)

A fourth variable can be added to these three main variables: the amount and quality of communication on marketing or corporation level. Holt, examined the impact on the purchasing decisions of the country where the global brand was and encountered a surprising result. Generally, enterprises assumes the impact of the country where the global brand issues on consumers' purchasing decisions. However, consumers point out the causes of preference while purchasing global brands as: "I hate the country, but I love their products." (Holt et al., 2004; Ille, 2009).

### **BRAND PERSONALITY CONCEPTUAL FRAMEWORK**

The past twenty years of literature on consumer behavior have produced a number of studies associating human characteristics and/or personality with brands (Belk, 1988 and Sirgy, 1982). Brand perceptions are attitudes, perspectives, and views consumers' hold toward a brand, Various traits concerning the brand may influence the development of a positive brand attitude. Brand personality is defined as "a set of human characteristics associated with a brand " (Aaker, 1997:347). Brand personality which includes product-related attributes and symbolic associations consumers have with a brand or product, influences brand image and brand perceptions. Using a brand personality scale, Aaker (1997) defined five dimensions of brand personality.

1. Sincerity
2. Excitement

3. Competence
4. Sophistication
5. Ruggedness

Each of these five dimensions encompasses several corresponding adjectives. For example, the sincerity, includes adjectives, such as honesty and genuineness, whereas ruggedness is described by strong and outdoorsy. Brand personality can be used to differentiate a brand within a product category. Brand personality provides characteristics that can be used to market a brand. These characteristics defined and developed by marketers in hopes that consumers will associate certain their brand with specific adjectives or imageries. When purchasing a brand, consumers are purchasing a symbolic meaning associated with the product in addition to the physical product. In essence, they are purchasing the brand image they perceive to be attached to the product (Guthrie, Kim and Jung, 2008).

Aaker in his study done in 1997, measured the “personality” of a brand in five core dimensions, each divided into a set of facets. Each facet in turn measured by a set of traits. The trait measures are taken using a five-point Likert scale (1=not at all descriptive, 5=extremely descriptive) rating the extent to which each trait describes the specific brand of interest.

In the studies done the following years, this measure was applied in different contexts on brand identity such as brand personality features’ tests, validity and reliability of the dimensions. (Azoulay and Kapferer, 2003; Wee, 2004). No studies have examined the use of possible alternatives to the five-point scale (Romaniuk, 2008). The common method used to measure brand connotations in the commercial marketing research is the double-option approach. Here, the consumers are shown the brands in market and they are require to associate series of features of these brands. For example, listing 'best value' providing brands consumers could be asked which features can be associated. Quality – shall be the response. This method is different from the other evaluation methods by which the brand is associated and classified. Being easier for consumers to complete, it takes less time to administer the survey. (Driesener and Romaniuk, 2006). This method is more cost effective. In addition, during interviews comparatively to other approaches, free choice (open-ended questions) can be made (Joyce, 1963). These findings indicate to the attractiveness of the idea of binary format questions for commercial researches. In order to increase effectiveness and simplicity of the data collection process the new ones are added constantly, to the personality features. These features are more traditional image attributes related to quality and price perceptions.

Brand personality can be used to convey one’s ideal self or different versions of the self, as well as, one’s perceptions and evaluations of the brand. For example, brand personality can be applied to an individual’s own personality. Previous researches has suggested consumers prefer certain brands when the brand personality parallels the consumer’s own personality or the personality they hope to achieve. (Malhotra, 1981 and Sirgy, 1982).

For example, Craik (1993:162) stated that, “from the consumers' point of view, buying cosmetics is a process of matching the attributes of products with the ideal self (persona)” Brand personality also indicates how consumers judge the brand itself and value certain characteristics over others, which may ultimately influence their brand choice. For example, Kim (2000), found that although personality expectations for apparel brands differed, the brand personality of “competent” was found as a common characteristics for brands that were perceived favorably. Brand personality has many advantages for marketers including an increase in consumer preference and usage (Sirgy, 1982), an increase in consumer’s trust and loyalty, and the ability to produce emotional responses in consumers (Biel,1993)

Aaker (1997), provides numerous implications for brand personality research. First, for a brand to be successful, its personality must match the consumer’s current or ideal human personality. This can be done by identifying the brand dimension that describes the brand, and insuring the personalities of this dimension are adequately portrayed to the consumer. The ultimate goal is to insure the brand personality influences the consumer’s preference for a brand in a specific product category. Additionally, the Brand Personality Scale (Aaker, 1997) can be used to benchmark one’s brand against competitors’ brands in the same product category. Companies can easily identify the most successful brands in a product category, learn personalities this brand conveys, and copy or adjust their marketing strategies to capture the same or other market segments. Brand personality, all the human characteristics associated with a brand contains.

Brand personality and human characteristics of all the relevant definitions of this concept beyond the means covers all the human characteristics. For example, according to Levy (1959), brand personality, consists of demographic characteristics such as, age, citizen, gender and social class. Similarly, Batra et al., (1993) state that brand personality includes demographic characteristics, such as age, cityfolk, gender and social status. In addition, Davis (2000), suggests that brand personality contains such human characteristics as: appearance, values, personality, mental ability. there are many examples of brand personality that it passed beyond the limits of the human identity. Age (Pepsi-young), gender (Virginia Slim-feminine), socio-economic status (Saks Fifth Avenue-upper class), the view description (Diet Coke-thin) may be given as an example (Lee and Rhee, 2008).

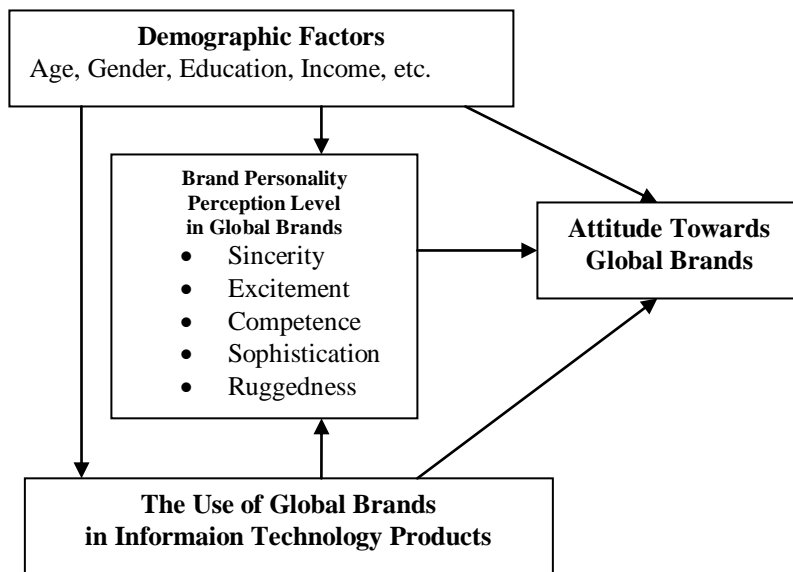
### **METHOD**

This study aims to determine factors affecting consumers' attitudes towards global brands in information technology products. For this purpose, the study takes students from Hitit University as a participant individuals. Sample size of the study 0:05 the level of making a mistake and using estimation method through rates of 95% the confidence interval,  $n = N (pq) Z^2 / (N-1) E^2 + (pq) Z^2 = 355$ , respectively. Taking into consideration that there may be incorrect applied, from the 400 survey questionnaires, the current 377 were evaluated. The data used in this study, were obtained using the questionnaires and interviews technique. Questionnaire used to access the primary data, aiming to determine the factors that impact consumers' attitudes towards global brands in the information technology products, consists of 4 parts. The first part is relevant the participant's demographic characteristics. These demographic characteristics consists of multiple choice questions relevant: gender, age, monthly family income, parents' educational level and monthly expense account. The second section consists of multiple-choice questions in order to determine the usage level of information technology products.

The third part is composed of multiple choice questions on determination of consumers' brand personality perception level related to global brands of information technology. The fourth section consists of 14 items to determine the elements that are effective on consumers purchase of information technology products and causes. These items are ranged by five-point Likert scale, changing between "Very Important" and "Not Important at All". In determination of these items are used mainly the studies conducted by Ille (2009), Aaker (1997), and Guthrie, Kim and Jung (2008). Cronbach's Alpha were used in order to identify if there is a correlation between the elements of the questionnaire collected under 4 sections and 32 sub-title in total, assessed by Likert scale and given the information above. In order to be able to state the reliability analysis, the value for Cronbach's Alpha should be more than 60% (Nakip, 2006:146). Analysis was conducted in this direction for the scale reliability used in the study and related coefficient calculated as 0.79. According to this result, the questionnaire can be said to be reliable.

### **MODEL OF THE STUDY**

In the literature there are many research works and developed models on the brand personality done by different researchers (Levy, 1959; Malhotra, 1981 and Sirgy, 1982; Belk, 1988 and Crain, 1993, Batra et al., 1993; Aaker, 1997; Azoulay and Kapferer, 2003; Wee, 2004; Driesener and Romaniuk, 2006; Guthrie, Kim and Jung, 2008; Romaniuk, 2008). Conceptual model of determination of factors affecting consumers' attitudes towards the global brands in information technology has been developed using the studies of Ille (2009), Aaker (1997), and Guthrie, Kim and Jung (2008). According to this model, consumers' attitudes toward global brands are influenced by demographic factors, global brands levels of use, brand personality perception levels related to global brand. Demographic factors influence both the level of use of information technology global brands and, brand personality perception level. Brand personality perception level is influenced by demographic factors as well as by information technology level of global brand usage. Consumers' global brand attitudes are affected by the demographic factors, information technology global brands level of use and brand personality perception level relating to global brands. Figure 1 shows the conceptual model of the study:



**Figure 1. Conceptual Model of Brand Personality Perception Level relating to Global Brands of Information Technology**

### Study Hypothesis

- H1: There is a relationship between consumers' demographic characteristics and global brands oriented brand personality perception level.
- H2: There is a relationship between consumers' demographic characteristics and usage level of global brands of information technology.
- H3: There is a relationship between consumers' usage level of global brands in informational technology products and global brands oriented brand personality perception level.
- H4: There is a relationship between consumers' usage level of global brands in informational technology products and attitudes towards global brand.
- H5: There is a relationship between consumers' demographic characteristics and attitudes towards global brands.
- H6: There is a relationship between consumers' global brands oriented brand personality perception level and attitudes towards global brand.

### DATA ANALYSIS AND FINDINGS

The raw data obtained as a result of the survey technique was evaluated with the SPSS 16.0 package program. Descriptive statistics showing the percentages, and frequencies were used to analyze the data. Hypotheses developed in accordance with the model of the study were tested by Chi-square analysis method. The factor analysis was used to determine the impact of global brands oriented brand personality perception level in information technology products on attitudes toward global brands. Results of the analysis presented in detail in the following sections.

### Descriptive Statistics for Model of the Study

In Table 1 are given percentage and frequency distributions of descriptive statistical measures relating to demographic variables of consumers surveyed.

**Table 1. Demographic Characteristics of Participants.**

Gender	n	%	Educational Level of Parents				
			Mother		Father		
			n	%	n	%	
Female	143	37.9					
Male	234	62.1					
Total	377	100.0	Prime School	247	65.5	147	39.0
Age	n	%	Secondary School	64	17.0	72	19.1
18-26	360	95.5	High School	50	13.3	98	26.0
27-35	17	4.5	High School- License	14	3.7	43	11.4
Total	377	100.0	Graduate Student	2	0.5	11	2.9
Family Monthly Income			Doctorate	-	-	6	1.6
	n	%	Total	377	100.0	377	100.0
Family Monthly Income			Monthly Expenses Amount				
0-500	52	13.8		n	%		
501-1000	125	33.2					
1001-1500	110	29.2	0-50	9	2.4		
1501-2000	53	14.1	51-100	46	12.2		
2001-2500	21	5.6	101-150	61	16.2		
2501-3000	2	0.5	151-200	71	18.8		
3000+	14	3.7	201-250	62	16.4		
Total	377	100.0	251+	128	34.0		
			Total	377	100.0		

While analyzing Table 1, we can see that 38% of consumers surveyed, are woman, 62% are men, 96% of them are younger than the age of 27 and monthly expenditure of 34% of participants are over 250 million. While examining the educational status of participants' parents, appears that, 66% of mothers and 39% of fathers are of at least primary school education. When the level of monthly income of the participants families examined, we see 47% of them are under 1000 TL, the income of 53% are over 1000 TL.

Table 2, includes descriptive statistics showing the percentage and frequencies relating to participants' usage levels of information technology products and global brands:

**Table 2: The Report of Participants' Use of Information Technology Products and Global Brands.**

What type of Information Technology Products do You Use?	n	%	What is Your Best Brand Preference in Information Technology Products		
				n	%
Mobile Phone	57	15.1	Nokia	153	40.6
Mobile Phone + mp3	37	9.8	Samsung	68	18.0
Mobile Phone + computer	141	37.4	Kodak	4	1.1
Mobile Phone + camera	39	10.3	Apple	30	8.0
Mobile Phone + vcd&dvd	20	5.3	Hewlett-Packard	11	2.9
Mobile Phone + iPod	21	5.6	Toshiba	19	5.0
All	62	16.4	Sony	16	4.2
Total	377	100.0	Casper	12	3.2
			Motorola	8	2.1
			Casio	2	0.5
			Creative	6	1.6
			Acer	2	0.5
			Canon	6	1.6
			Vestel	16	4.2
			Arçelik	24	6.4
			Total	377	100.0

As can be seen, analyzing Table 2 consumers surveyed use all of the information technology products, as listing 15% of participants have only cell phone, 37% of them have got cell phone and computer, 16% have got cell phone, mp3, computer, camera, VCD & DVD and iPod. When examining the participants' preferences of global brand in information technology products we found top three brands were Nokia 41%, Samsung 18% and Apple 8% of them., Percentage frequency values of consumers' descriptive statistics relating to information technology products are given in Table 3.

**Table 3: Participants' Definitions for Information Technology Products**

<b>By which of the followings , do you think, information technology can be defined best?</b>	<b>n</b>	<b>%</b>
Sophistication	10	2.7
Technology	166	44.0
Rate	31	8.2
Indispensability	29	7.7
Ease of access to information	106	28.1
Practicability	35	9.3
Total	377	100.0

Examining Table 3 it can found out that 44% of the respondents define information technology products by the technology, 28% identified as ease of access to information. Participants' brand personality perception levels, relating to global brands, they choose when purchasing information technology products take place in Table 4:

**Table 4. Participants' brand personality perceptions.**

<b>Which of the followings does the brand you preferred seem reminiscent .</b>	<b>n</b>	<b>%</b>
Sincerity	56	14.9
Excitement	24	6.4
Competence	64	17.0
Sophisticated	10	2.7
Ruggedness	178	47.2
All	45	11.9
Total	377	100.0

Analyzing Table 4 can be seen, 47% of the participants find ruggedness in the global brand they use, 17% of them, competence, and 15% of them sincerity, 6% exciting and 3% of them find the brand sophisticated. 12% of the participants expressed that, they define the global brand they use by all above mentioned features. Table 5 includes descriptive statistics showing the percentage and frequencies relating to participants' attitudes towards brand personality characteristics of global brands.

**Table 5: Participants' Attitudes Towards Brand Personality Characteristics of Global Brands .**

<b>By which of the followings, do you think, brand sincerity in informatics technology products can be defined best?</b>	<b>n</b>	<b>%</b>
The use of my favorite celebrity in brand promotion	22	5.8
The use of brand by the people closed to me	68	18.0
Closeness feeling to the brand owner country	14	3.7
The brand's advertising music is of my favorite style	4	1.1
To find the brand's logo sympathetic	6	1.6
To find the brand's name sympathetic	1	0.3
Trust to the brand	251	66.6
I used the brand previously	2	0.5
The durability of the products	7	1.9
The warranty given to the product by the brand	2	0.5
Total	377	100.0
<b>By which of the followings, do you think, brand excitement in informatics technology products can be defined best?</b>		
Feeling of acquisition the brand	46	12.2
Technological superiority of the brand	170	45.1
To have technical knowledge about the brand	71	18.8
The image of the brand	19	5.0
Product design	43	11.4
The prestige provided by the use of the brand	25	6.6
Quality	2	0.5
High features	1	0.3
Total	377	100.0
<b>By which of the followings, do you think, brand competence in informatics technology products can be defined best?</b>		
Product specifications	178	47.2
Functionality of the product	93	24.7

Ease of use of the product	60	15.9
Ease of finding replacement parts for the product	37	9.8
Product-accessory compatibility	9	2.4
Total	377	100.0
<b>By which of the followings, do you think, brand sophistications in informatics technology products can be defined best?</b>		
Product user guide	120	31.8
Usage menu of the product	117	31.0
Product design	90	23.9
The brand’s consumer base	47	12.5
Product series	3	0.8
Total	377	100.0
<b>By which of the followings, do you think, brand ruggedness in informatics technology products can be defined best?</b>		
Sense of trust to the brand owner country	29	7.7
Product design	38	10.1
Product specifications	82	21.8
Product warranty rules	151	40.1
Typical brand users recommendations	22	5.8
Earlier experiences related to the brand	55	14.6
Total	377	100.0

Analyzing Table 5, you can see, 67% of survey participants define brand sincerity by the trust to the global brand; 45% of them, define the excitement that global brand makes to feel, by technological superiority of the brand; 47% of them, define competence that the brand possesses, by the product specifications; 32% of them, define sophistication by the product user guide and 31% by usage menu of the product and 40% of survey participants define ruggedness that the brand possesses, by the product warranty rules. Percentage frequency values of descriptive statistics relating to the survey participants’ motive to prefer information technology products are given in Table 6.

**Table 6: Participants’ Motive to Prefer Information Technology Products**

Denote your motives to prefer information technology products	Very Important n/%	Important n/%	Uncertain n/%	Unimportant n/%	Not Important at All n/%	Total n/%
Family habit	53/14.1	95/25.2	89/23.6	81/21.5	59/15.6	377/100.0
A friend’s recommendation	48/12.7	154/40.8	96/25.5	55/14.6	24/6.4	377/100.0
A strong company image	125/33.2	119/31.6	84/22.3	31/8.2	18/4.8	377/100.0
To be a campaign product	84/22.3	97/25.7	111/29.4	54/14.3	31/8.2	377/100.0
The use of the product provides prestige	103/27.3	117/31.0	83/22.0	39/10.3	35/9.3	377/100.0
Ease of use	192/50.9	125/33.2	44/11.7	7/1.9	9/2.4	377/100.0

Table 6 shows in choice of informational technology products, survey participants admitted the “very important” and “important” motives of choice as followings: 84% ease of use, 65% a strong company image, 58% the use of the product provides prestige, 54% a friend's recommendation, 48% to be a campaign product, 39% family habit. Descriptive statistics are given in Table 7, indicating the percentage frequency values relating to the elements survey participants attach importance, when purchase informational technology products..

**Table 7. Elements Survey Participants Attach Importance, When Purchase Informational Technology Products.**

What do you attach importance to, when purchase?	Very Important n/%	Important n/%	Uncertain n/%	Unimportant n/%	Not at All Important n/%	Total n/%
Appearance	172/45.6	152/40.3	33/8.8	13/3.4	7/1.9	377/100.0
Advanced technology	249/66.0	93/24.7	24/6.4	6/1.6	5/1.3	377/100.0
Accessories	110/29.2	142/37.7	66/17.5	39/10.3	20/5.3	377/100.0
Brand Image	130/34.5	120/31.8	78/20.7	37/9.8	12/3.2	377/100.0
Second hand market	91/24.1	83/22.0	100/26.5	56/14.9	47/12.5	377/100.0
Price	216/57.3	122/32.4	23/6.1	5/1.3	11/2.9	377/100.0
Model	188/49.9	115/30.5	53/14.1	12/3.2	9/2.4	377/100.0
Brand sponsorship activities	47/12.5	75/19.9	113/30.0	64/17.0	78/20.7	377/100.0



Table 7, among the factors participants attach importance, when purchase information technology products, 91% are advanced technology, 90% the price, 86% external appearance, 80% model, 67% accessories, 66% brand image, 46% the second hand market and 32% the brand sponsorship activities are considered to be “important” and “very important” factors. The aim of the study is to determine the factors of consumers’ brand personality perception levels, relating to global brands, that affect consumers' attitudes toward global brands. Factor analysis conducted with this objective included in the section below.

### Descriptive Statistics on Determination of Factors Affecting Global Brand Attitudes

In this section take place evaluations on reliability and factor analysis in order to determine what factors are affecting surveyed consumers' attitudes towards global brands. Reliability analysis, aims to identify variables that do not share a common value as equal and to increase the consistency of the scale, excluding these variables from the analysis. In this context primarily, reliability of the variables were investigated on the basis of factor, later the reliability of all the scale were tested. In determination of variables that do not represent the common value which is desired to be measured, during the analysis alpha Cronbach and Item-Total Correlation were used (Baş, 2006:193). Factors affecting the global brand attitude, demographic factors replaced to the model of the study in Figure 1, defined as brand personality perception level relating to the use of information technology products and global brand and these factors have been identified to be reliable, by testing internal reliability each of them. Reliability factors, found as 70.2%, 67.3% and 66.6%, respectively. Also total reliability described by these three factors were found to be 70.73%. Accordingly, the factors that influence consumers' attitudes toward global brands observed to be reliable.

After conducting reliability analysis, factor analysis was used in order to verify quantitatively the factor structure that impacts the attitude toward global brands. Appropriateness of factor analysis is determined by sampling adequacy measure KMO (Kaiser-Meyer-Olkin). This measure is a test indicating to the validity of factor analysis from the beginning. This test, being used for measuring adequacy of sampling, is concerned with the size of the sample. Smallness of the derived value of this test indicates that correlation as a couple, between variables can't be described by other variables. In this case, factor analysis is not right to be continued. KMO is a ratio that is desirable to be over 60% (Nakip, 2006:429). KMO value was 62.0% in the study. KMO sampling adequacy is over 60% and it indicates to its appropriateness to the variables of factor analysis in the scale. Results of factor analysis is shown in Table 8.

**Table 8: Factors Affecting Attitudes Towards Global Brands**

	Demographic Factors $\alpha = 0.70$	The Use of Global Brand in Informatics Technology Products $\alpha = 0.67$	Global Brand Oriented Brand Personality Perception Level $\alpha = 0.66$
Your parent's education (Mother)	<u>0.847</u>		
Your parent's education (Father)	<u>0.822</u>		
Annual income level of your family	<u>0.730</u>		
Age	<u>0.628</u>		
Gender	<u>0.624</u>		
Monthly expenses amount	<u>0.549</u>		
Which brands do you prefer in informatics technology products		<u>0.799</u>	
What kind of information technology products do you use?		<u>0.670</u>	
What is the best way to define brand competence in information technology product?			<u>0.787</u>
What is the best way to define brand sophistication in information technology product?			<u>0.696</u>
What is the best way to define brand ruggedness in information technology product?			<u>0.678</u>
What is the best way to define brand excitement in information technology product?			<u>0.656</u>
What is the best way to define brand sincerity in information technology product?			<u>0.591</u>
<i>Kaiser-Meyer-Olkin sampling adequacy</i>	<i>0.620</i>		
<i>Barlett's Test</i>	<i><math>X^2 = 564.881</math> <math>sd = 78</math></i>		
	<i><math>p = 0.000</math></i>		

Factor analysis, carried out using principal assumption analysis and varimax vertical rotation technique. With the help of principal components analysis during factor reduction, variables have been eliminated, of which factor loadings are below 59.1%. Also, taken from the purpose of looking up at appropriateness to normal distribution of the variables, subjected to the factor analysis; skewness and lowness values were revised, values derived to be about between -1 and +1; and the data was suitable to the normal distribution. The result of the analysis shows that Eigen values of three factors of which the internal reliability has been tested, is above 1 and factor structure are confirmed quantitatively. Factor 1, formed of demographic characteristics describe 39.8% of total variance; factor 2, formed of the usage level of global brand in information technology 9.2% of total variance; factor 3, formed of brand personality perception level relating to global brands describe 8.7% of total variance. Analyses results of hypothesis developed appropriate to the model of the study, take place in the following section.

### Hypothesis Tests of the Study

The aim of the study, to determine the factors that influence consumers' attitudes toward global brands. Hypothesis determined appropriate to the model of the study, that developed in the scope this purpose, under the working has been tested by the method of Chi-square analysis. Analysis results are summarized in Table 9.

**Table 9: Hypothesis Test Results**

		Variable	S.D.	A.D.
H1: There is a relationship between consumers' demographic characteristics and brand personality perception level relating to global brand.	Chi-square Test	20.456	5	0.001
	Chi-square correlation coefficient	20.701	5	0.001
H2: There is a relationship between consumers' demographic characteristics and global brand usage levels in informational technology products.	Chi-square Test	19.544	6	0.003
	Chi-square correlation coefficient	19.312	6	0.004
H3: There is a relationship between consumers' global brand usage levels in informational technology products and brand personality perception level relating to global brand.	Chi-square Test	85.527	56	0.007
	Chi-square correlation coefficient	87.193	56	0.005
H4: There is a relationship between consumers' global brand usage levels in informational technology products and attitudes toward global brands.	Chi-square Test	1.366E2	70	0.000
	Chi-square correlation coefficient	134.254	70	0.000
H5: There is a relationship between consumers' demographic characteristics and attitudes toward global brands.	Chi-square Test	52.158	25	0.001
	Chi-square correlation coefficient	57.349	25	0.000
H6: There is a relationship between consumers' brand personality perception level relating to global brand and attitudes toward global brands.	Chi-square Test	1.394E2	20	0.000
	Chi-square correlation coefficient	51.431	20	0.000

Analyzing the research work hypothesis were developed appropriate to the model of the study, they are found to be positive and significant in significance level  $p < 0.01$ . Accordingly, it can be said that demographic characteristics, defined as a result of factor analysis, the use of global brands in information technology products and brand personality perception level relating to global brands are affecting consumers' attitudes toward global brands and there are positive and significant relationship between them. In addition, a positive and significant relationship between the demographic characteristics of consumers and brand personality perception level relating to global brands and global brand usage levels in informational technology products was identified as a result of hypothesis testing.

There is also positive way relationship between global brand usage levels in informational technology products and brand personality perception level relating to global brands. In this case, global brand usage levels in informational technology products is affecting brand personality perception level relating to global brand, can be said.

### **CONCLUSION**

The aim of the study is to identify the factors that influence consumers' attitudes towards global brands of information technology products. The main mass of the study consists of the Hitit University students. The survey questionnaire was developed, according to the intent of the study applied to the 400 students and valid 377 of them were analyzed by using SPSS 16.0 package program. Students surveyed preferences of global brands in information technology, the top three places are formed by Nokia with 41%, Samsung with 18% and Apple with 8%. Defining the concept of information technology products determined the expression of their choices as by 44% of the students technology, 28% of them ease of access to information. Examining students' brand personality perceptions related to global brands, the students' definitions with personality characteristics were determined as followings: 47% of them "ruggedness" of global brands, 17% "competence", 15% "sincerity", 6% "excitement" and 3% "sophisticated". When students' attitudes toward global brands relating to the brand personality characteristics are examined, their definitions were seen as followings: 67% sincerity of the global brand with brand trust, 45% excitement that global brand possesses with the brand's technological superiority, the ability to have 47% brand competence with product specifications, 32% sophisticated brand with product user guide, 31% with that of product menu, 40% product ruggedness with warranty rules.

According to the model of the study demographic factors, global brand usage levels in informational technology products and brand personality perception level relating to global brand is effective on consumers' attitudes toward global brands. Model of the study tested with factor analysis and all three factors determined to be effective on consumers attitudes. Hypotheses developed in accordance with the model of the study, has been tested by chi-square analysis method and all the hypothesis were accepted. Accordingly it can be said that, demographic factors, global brand usage levels in informational technology products and brand personality perception level relating to global brand is effective on consumers' attitudes toward global brands. Moreover, it can be said that, there is a positive relationship between demographic characteristics and brand personality perception level; between global brand usage level and attitudes toward global brands; between consumers' global brand usage levels and brand personality perception level; between global brand use and attitudes toward global brands; between brand personality perception level and attitudes toward global brands.

**Acknowledgement:** The research work includes the Hitit University students. Accordingly, result obtained as an issue of the study limited with Hitit University students' global brand perception level in information technology. The research work is of important as an exemplification for future studies can be done in this regard.

### **REFERENCES**

- Aaker, Jennifer L. (1997), "Dimensions of Brand Personality", *Journal of Marketing Research*, 34(August), 347-356.
- Azoulay, Audrey, ve Jean-Noel Kapferer (2003), "Do Brand Personality Scales Really Measure Brand Personality?", *Journal of Brand Management*, 11(2), 143-155.
- Baş, Türker (2006) *Anket Nasıl Hazırlanır?*, Seçkin Yayıncılık, Dördüncü Baskı, Ankara.
- Batra, R., Lehmann, D. R. ve Singh, D.(1993), "The Brand Personality Component of Brand Goodwill: Some Antecedents and Consequences" In Aaker, D.A. ve Biell, A.L. (Eds) "Brand Equity and Advertising", Lawrence Erlbaum Associates, Hillsdale, N.J., 83-97.
- Belk, Russell W. (1988), "Possessions and the Extended Self", *Journal of Consumer Research*, 7 (August), 139-168.
- Biel, A. (1993), "Converting Image Into Equity", In Aaker, D.A. and Biel, A. (Eds), *Brand Equity and Advertising*, Laurence Erlbaum Associates, Hillsdale, NJ.
- Craik, J. (1993), *The Face of Fashion: Culturel Studies in Fashion*, Routledge, London.
- Davis, S. M. (2000), "Brand Asset Management", Jossey-Bass Inc, San Francisco.
- Driesener, Carl ve Jenni Romaniuk (2006), "Comparing Methods of Brand Image Measurement", *International Journal of Market Research*, 48(6), 681-698.

- Durmaz, Alparslan (2005) [http://www.slidefinder.net/b/bili%C5%9Fim\\_teknolojileri\\_msc\\_alparslan\\_durmaz/3964195](http://www.slidefinder.net/b/bili%C5%9Fim_teknolojileri_msc_alparslan_durmaz/3964195), Eriřim: 02.02.2005.
- Guthrie, M., Kim, Hye-Shin ve Jung J. (2008), "The Effects of Facial Image and Cosmetic Usage on Perceptions of Brand Personality", *Journal of Fashion Marketing and Management*, 12(2), 164-181.
- Holt, D. B., Quelch, J. A. ve Taylor, E. L. (2004), "How Global Brands Compete", *Harvard Business Review*, September, reprint R0409D.
- Ille, R., Francis, (2009), "Building Chinese Global Brands Through Soft Technology Transfer", *Journal Of Chinese Economic and Foreign Trade Studies*, Vol 2, No 1, ss. 47-61.
- Interbrand I, "Ranking of 2007 Best Global Brands" available at: [www.interbrand.com/best\\_brands\\_2007.asp](http://www.interbrand.com/best_brands_2007.asp)
- Joyce, Timothy (1963), "Techniques of Brand Image Measurement", in *New Developments in Research*, London: Market Research Society.
- Kim, H. S. (2000), "Examination of Brand Personality and Brand Attitude Within The Apparel Product Category", *Journal of Fashion Marketing and Management*, 4(3), 243-252.
- Lan, X. (2005), "Getting Recognized. There is Stil A Long Way To Go For Chinese Brands To Become World Famous", *British Journal Review*, 23 November.
- Lee, G. (2006), 40th International Advertising Agency World Congress Records, ADOI, Sledgehammer Communications, Singapore.
- Lee, Eun-Jung ve Rhee, Eun-Young, (2008), "Conceptual Framework of Within-Category Brand Personality Based on Consumers' Perception (WCBP-CP): The Case of Men's Apparel Category In South Korea", *Brand Management*, June, 15(6), 465-489.
- Levy, S. J. (1959), "Symbols For Sales", *Harvard Business Review*, 37(4), 117-224.
- Malhotra, N.K. (1981), "A Scale to Measure Self-Concepts, Person Concepts, and Product Concepts", *Journal of Marketing Research*, 23, 456-464.
- Nakip, Mahir (2006) *Pazarlama Arařtırmaları*, 2. Baskı, Seçkin Yayıncılık, Ankara.
- Romaniuk, Jenni (2008), "Comparing methods of Measuring Brand Personality Traits", *Journal of Marketing Theory and Practice*, 16(2) Spring, 153-161.
- Sirgy, M. Joseph (1982), "Self-Concept in Consumer Behavior: A Critical Review", *Journal Of Consumer Research*, 9 (December), 287-300.
- Wee, Thomas Tan Tsu (2004), "Extending Human Personality to Brands: The Stability Factor", *Brand Management*, Apr., 11(4), 317-330.
- World Brand Laboratory (2007), "List of 500 top World Brands", available at: [www.icxo.com](http://www.icxo.com)  
.....<http://bilgiyelpazesi.blogcu.com/bilisim-nedir-bilisimin-tanimi-bilim-ve-teknoloji-haftasi-ile/4984727>,  
Eriřim:14.05.2010.  
.....<http://www.msxlabs.org/forum/muhendislik-bilimleri/99585-bilisim-teknolojileri.html>), Eriřim: 08.06.2010.