Ç.Ü. Sosyal Bilimler Enstitüsü Dergisi, Cilt 14, Sayı 2, 2005, s.417-432

SEGMENTING YOUTH MARKET BASED ON BELIEFS RELATED TO HIGH TECHNOLOGY: A STUDY FROM TURKEY

Yrd.Doç.Dr.Tülin URAL
Mustafa Kemal University
Faculty of Economics and Adm. Sciences
Antakya-Hatay, Turkey
tulin57@yahoo.com

ABSTRACT
High technology-based products and services require different marketing strategies because the consumer behavior for a technology-based product and service differs from a more conventional one. The study aims to explain the significant segments of consumers based on their beliefs related to advance technology. The research findings show that five consumer segments (optimistics, followers, distrustfulers, skeptics, and pessimists) are profiled with regard to their beliefs of optimistic, innovativeness, discomfort and insecurity. According to directions of findings, the important insight to formulate marketing strategies satisfing consumers are suggested to marketing managers.

***Key words**: Consumer behavior, Consumer segmentation, Techno-ready marketing, E-marketing, Technology readiness index.*

ÖZET
Tüketicilerin ileri teknolojiye dayalı ürün ve hizmetleri satın alma davranışı, geleneksel ürün ve hizmetlere olandan farklıdır. İleri teknolojiye dayalı ürün ve hizmetler farklı pazarlama stratejileri gerektirir. Çalışma, ileri teknolojiye ilişkin inançlar temelinde tüketicileri anlamlı bölümlere ayırmayı hedeflemektedir. Araştırma sonuçları iyimserlik, yenilikçilik, rahatsızlık ve güvensizlik inançları ile ilgili beş ayrı tüketici bölümü (İyimserler, Takipçiler, Güvenensiz olmayanlar, Şüpheciler ve Kötümserler) olduğunu göstermektedir. Bulgular ışığında, pazarlama yöneticilerine, müşteri tatmini sağlayacak pazarlama stratejilerinin oluşturulmasına yardımcı olacak önemli içerikler önerilmektedir.

***Anahtar Kelimeler:** Tüketici davranışı, Tüketicilerin bölümlendirilmesi, Teknolojiye uyum pazarlaması, e-pazarlama, teknolojiye uyum indeksi.*

1.Introduction

Rapid advances in current technologies and the accelerating emergence of new ones are flooding the market-place with innovative products and services. The marketing of technology-based products and services, however, is by and large being guided by traditional principles that may not be as effective for high-tech offerings as they are for their low-tech counterparts. Companies collectively possess a far bigger reservoir of

technological savvy, the primary force behind the proliferation of innovations, than of the marketing savvy necessary for fully capitalizing on those innovations. "There is a virtual vacuum of sound, research-based guidelines for effectively marketing innovations and leveraging technology to strengthen relationship with customers" (Parasuraman and Colby, 2001, p.10). According to findings of a research carried out by Türkiye İş Bankası A.Ş. in Turkey, approximately half of consumers referred that understanding of desire and requirements of consumers was very important for achievement of business success (Türkiye İş Bankası A.Ş., Cultural publications, 2001, p.125). Additionally, thirty five percent of them referred to need applying marketing strategies taking into consideration the consumers' behaviors.

Marketing management has carried out tasks to achieve desired exchanges with target markets. Marketing management philosophies determine the way of achieving these tasks. One of the philosophies is product-orientation or product concept. The product orientation holds that consumers will favor products that offer the most quality, performance, and innovative features. Marketing management have guided the product-orientation in traditional business models. However, they have needed a new concept because of the developments at the e-business and e-commerce. This is the customer-orientation (Ozmen, 2003, p.32). The goal of the customer orientation is to create customer satisfaction profitably by building value-laden relationships with customers. Organizations gain market leadership by understanding consumer needs and finding solutions that delight customers through superior value, quality, and service. (Kanıbir, Aydın, and Nart, 2003, p..345). In recent years, the customer-orientation is implemented easily because the customer data can be obtained via internet.

Although millions of dollars have been spent on high technology-based products and services, reports on this subject show that potential users may not be using the systems, despite their availability. According to a research findings implemented in Turkey, 5.6% of Internet users shopped any product and service over the Internet (Türkiye İş Bankası-Culture publications, 2001, p.126). Thus, research is needed to identify the factors determining users' acceptance of high technology-based products and services. While there have been considerable researchs on the technology acceptance model (TAM), such as Davis (1989, p.319), Featherman (2001, p.758), Kim and Prabhakar (2000, p.537), Paviou (2001, p.816), that predicts whether individuals will accept and voluntarily use information systems, limitations of the TAM include the omission of an important beliefs-based construct in the context of electronic commerce.

Following the idea of market segmentation, a marketer has the different segmentation variables, alone and in combination, to find the best way to view the market structure. The efforts of segmentation based on several demographics and socio-economic factors have emerged (Crips et al., 1997; Donthu and Garcia, 1999, p.52-58). However, demographic and socio-economic descriptors have been insufficient for effectively developing segments (Wedel and Kamakura, 2000). Parasuraman and Colby (2001) added the component of the people's technology readiness as a new descriptor in their study. Until the last decade, for understanding whether customer will buy via internet or not, and what to buy, and how much to spend, the demographic variables (like age, gender, education, income etc..) have been insufficient. The attitude and behavior of consumers towards technology is the major factor determining the answers of these questions. Marketer should know consumer beliefs about technology. When a

marketer is introducing a cutting-edge product that replaces more of the human element, a whole set of special consumer beliefs comes into play. This approach includes a varying level of optimism about technology, a tendency to innovate, a problem of discomfort with technology, and an inherent insecurity (Parasuraman and Colby, 2001, p.10).

People's ***technology-readiness (TR)*** -their propensity to embrace and use new technologies for accomplishing goals in the home life and at work-is an overall state of mind rather than a measure of competency. The concept of technology-based products and services refers to products and services based on information technology such as computer, e-commerce, e-banking, e-mail, ATM, (etc.) in this study.

"The technology-readiness construct can be viewed as an overall state of mind resulting from a gestalt of mental enablers and inhibitors that collectively determine a person's predisposition to use new technologies" (Parasuraman, 2000, p.307). People can simultaneously harbor favorable and unfavorable beliefs about technology. The various technology beliefs can be categorized into four distinct components. Two of these components-optimisim and innovativeness-are "contributors" that increase an individual's technology readiness, while the other two-discomfort and insecurity-are "inhibitors" that suppress technology readiness.

The optimism facet of TR can be defined as a positive view of technology and a belief that it offers people increased control, flexibility, and efficiency in their lives. The innovativeness facet of TR refers to a tendency to be a technology pioneer and thought leader. The discomfort facet is an inhibitor of TR and pertains to a perceived lack of control over technology and a feeling of being overwhelmed by it. Insecurity, another inhibitor of TR, can be defined as distrust of technology and skepticism about its ability to work properly (Parasuraman and Colby, 2001, pp.34-45).

When a new technology is introduced to the market, consumers will react in different ways depending on their beliefs. Four dimensions of beliefs influence technology adoption. It's important to recognize that these four dimensions are independent, such that an induvidual can possess any combination of motivations or inhibitions. The fact that an induvidual is driven to adopt technology in one area does not mean that he or she is equally driven in another area, nor does it mean that he or she would lack inhibitions. A person can be a technology "innovator", prone to experimentation, but skeptical about the value of technology, or can believe strongly in technology but also fear it. The market can be segmented into various distinct groups with different combinations of optimisim, innovativeness, discomfort, and insecurity (Parasuraman and Colby, 2001, p.58).

This study aims to segment Turkish youth market according to four dimensions of beliefs effecting technology adoption. The objectives of the study are shown in below,

-to measure the level of optimism, innovativeness, discomfort and security beliefs of customers,

-to measure the psychographics patterns and desirability of using high technology-based products/services of customers in the future,

-to segment Turkish youth market based on the compenents of beliefs about high technology, demographics characteristics, psychographics patterns and desirability of using high technology-based products/services in the future.

This study will provide a better understanding of consumers and their behaviors in the market-place. Specifically, there is a need to evaluate the influence of the beliefs related to technology on consumer behavior. Thus, marketing managers can identify many strategies to satify consumers based on their beliefs and feelings about technology. Furthermore, the need for research involving technology readiness factors results from differences between consumers. If all consumers were the same there would be no need for segmentation nor different products and services because all stimuli could be identical.

2.Literature

Starting from consumers' motivations to use internet, McDonald (1996) segmented the internet audience as "avid adventureres," "fact collectors," "entertainment seekers," and "social shoppers." Vellido at al. (2000) investigated consumers' opinion on online purchasing and online vendors that consists of the underlying dimensions "control and convenience," "trust and security," "affordability," "easy of use," and "effort/responsiveness." Using these dimensions as a segmentation base, Vellido (2002) discerns seven segments: "unconvinced," "security conscious," "undecided," "convinced," "complexity avoiders," "cost conscious" and "customer service wary."

Using propensity to adopt internet shopping as a segmentation base, three segments can be discerned: a group that shops online, a group that has tried to shop online but did not succeed, and a group that has never tried and feels sceptial towards online shopping (Dahlen, 1999; Rangaswamy and Gupta, 1999). While researchers in the business named Forrester Research (1997) was examining consumers' behaviors related to buy PC in USA, they segmented consumers based on their views about technology and demographic factors. They found ten different segments. These are "new age nurturers", "fast forwards", "mouse potatoes", "techno-strivers", "gadget grobbers", "digital hopefuls", media junkles", "handshakers", sidelined citizens", and traditionalist" (Seckin, 2000).

In the research carried out by Brengman et al. (2005) in Belgium, they also found four online shopping segments (tentative shoppers, suspicious learners, shopping lovers, and business users) and four online nonshopping segments (fearful browsers, positive technology muddlers, negative technology muddlers, and adventurous browsers) based on web-usage-related lifestyle.

Kanıbir et. al. (2003, p.345) found five distinct consumer groups related to users of e-banking in Turkey: "Technology resistants," "technology madlers," "who trust to technology," "users of technology for saving of time," "who like to technology but not able to follow."

Based on literature relating to the theory of planned behavior (TPB) and the technology adoptation model (TAM), a study extends the applicability of the TAM in a mobile banking context, by adding one trust-based construct ("perceived credibility") and two resource-based constructs ("perceived self-efficacy" and "perceived financial cost") to the model. The results strongly support the extended TAM in predicting users' intentions to adopt mobile banking (Luarn and Hsin, 2005).

In a study of consumers' evaluations of and intentions to use technology-based self- services options, Dabholkar (1996) found that consumers have varied in terms of their beliefs/feelings about the various options and that those beliefs/feelings were positevely correlated with intentions to use.

Studies by Cowles (1989, 1991; Cowles and Crosby, 1990) pertaining to interactive media suggest the presence of distinct customer segments with differing perceptions about and acceptance of the media. Likewise, research by Eastlick (1996) revealed that people's attitudes and beliefs about interactive teleshopping were good predictors of their propensity to adopt this mode of shopping.

Mick and Fournier (1998) identified the people's reactions to technology. They found eight "paradoxes" of technology with which consumers have to cope: control/chaos, freedom/ enslavement, new/obsolete, competence/incompetence, efficiency/inefficiency, fulfills/ creates needs, assimilation/ isolation, engaging/disengaging. As these paradoxes imply, technology may trigger both positive and negative feelings.

TAM has received considerable attention of researchers in the information system field over the past decade. It is an adaptation of Theory of Reasoned Action (TRA). According to TRA, belief (an individual's subjective probability of the consequence of a particular behavior) influences attitude (an individual's positive and negative feelings about a particular behavior), which in turn shapes behavioral intention. Davis (1989) further adapted the belief-attidute-intention-behavior causal chain to predict user acceptance of information technology.

3.Methodology

In this study, the compenents of beliefs related to high technology, the demographics characteristics and the psychographics patterns of customers, and the level of desirability of using high technology-based products/services in the future are included as the segmenting criteria. Then, the characteristics of every each segment have been explained.

3.1.Data collection and sampling

The data of this study were gathered from the students of Business Department at the Mustafa Kemal University. The reason of the selection of students as survey subjects is that young people are more likely to recognize high technology-based products and services than adults (Efendioğlu and Yip, 2004). Additionally, PC and Internet are available at the universities in Turkey. The study population consisted of a total of 332 students. 200 students were selected by simple random sampling. Confidence level is 0.95 and tolerance level (error) is 0.07 (Formula: $n=p.q/ (e/z)^2$, max. variance p=q: 0.50, e:0.07, z:1.96). The sample size is found 208 students (n=208). We didn't arrive 8 students. Also, twenty two questionnaires were canceled because of mistakes. 178 valid questionnaires were generated. The response rate was 89%.

Personal interview was used for communication. The survey questionnaire was self-administered. The actual questionnaire consisted of 25 questions covering the variables proposed in the study.

3.2. Measures

The questionnaire contained questions designed to collect information on demographics, beliefs about high technology, psychographics patterns and desirability of using high technology-based products/services in the future.

Table 1.The Statements of Technology Readiness Scale

Beliefs	Statements
The statements which measure **optimism** facet	* I like the idea of doing business via computers because you are not limited to regular business hours. * Technology gives people more control over their daily lives. * Technology makes me more efficient in my occupation.
The statements which measure **innovativeness** facet	* I can usually figure out new-hi-tech products and services without help from others. * In general, I am among the first in my circle of friends to acquire new technology when it appears.
The statements which measure **discomfort** facet	* New technology is often too complicated to be useful. * When I get technical support from a provider of a high-tech product or service, I sometimes feel as if I'm being taken advantage of by someone who knows more than I do.
The statements which measure **insecurity** facet	* I do not consider if safe giving out a credit card number over a computer. * I do not feel confident doing business with a place that can only be reached online. * If you provide information to a machine or over the internet, you can never be sure if it really gets to the right place.

Technology readiness scale (Parasuraman and Colby, 2001) is used for measurement of the beliefs related to high technology-based products/services. Technology readiness scale consists of composition of optimism, innovativeness, discomfort, and insecurity tendencies. The scale is shown in Table 1. A five point scale with responses ranging from "strongly disagree" (score of 1) to "strongly agree" (score of 5) was used. Psychographics patterns of study's participants are measured by following statement (Table 2);

Table 2. Psychographics Patterns of Consumers.

Statements
*Like to explore world and try new things
*Prefer cerebral pursuits to physical activity
*Success-oriented
*Impulsive
*More likely to take control of life
*Conscious of own image and symbolism of products they buy
*Brand loyal
*Prone to keep up with fashion.

A five point scale with responses ranging from "strongly disagree" (score of 1) to "strongly agree" (score of 5) was used for these statements.

Desirability of engaging in a variety of "futuristic" high technology-based product/services is rated on a six point desirability scale (1=very undesirable, 6=very desirable) by respondents.

4.Data Analysis and Findings

11. version of SPSS is used for all analysis. The characteristics of the university students sample are described in Table 3.

Table 3. Characteristics of The Student Sample

	n	%
Gender		
Male	98	55.6
Female	79	44.4
Age		
17-20	55	30.9
21-24	109	61.2
25-28	14	7.9
Education		
1.class	50	28.1
2.class	33	18.5
3.class	42	23.6
4.class	53	29.8
Income		
Less 249 YTL.	91	51.1
250-499 YTL.	72	40.4
500-999 YTL.	14	8.5
Desirability of using high technology- based products/services in the future.		
Strongly undesirable	10	5.6
Somewhat undesirable	12	6.7
Neutral	8	4.5
Somewhat desirable	90	50.6
Strongly desirable	58	32.6

Approximately, fifty-six percent of the respondents were men and 44% were female. Sixty-one percent of respondents were between 21 and 24 years old. Twenty-eight percent of respondents had first level and 18% held second class. Twenty-four percent of respondents had third level and 30% held fourth class. More than half of respondents (51%) had less 259 YTL (monthly income). Eighty-three percent of respondents desired to use high technology-based products and services in the future, too.

To identify a relatively small number of psychographics patterns of the study participants is used exploratory factor analysis. We evaluated the appropriateness of the factor model with some tests. KMO Measure of sampling adequacy is found 55%. This is found acceptable (Kaiser, 1974). Bartlett's test of sphericity is found as chi square 84.154, significant 0.000. Thus, it appears that the population correlation matrix is an identity matrix and the model is suitable (Norusis, 1993).

One of the indicators of strength of the relationship among variables is the partial correlation coefficient. If variables share common factors, the partial correlation coefficients between pairs of variables should be small when the linear effects of the other variables are eliminated. The partial correlations are then estimates of the correlations between unique factors and should be close to 0 when the factor analysis assumptions are met (because the unique factors are assumed to be uncorrelated with each other) The negative of the partial correlation coefficients is called the anti-image correlation. In this study, we checked the anti-image correlations according to the matrix of anti-image correlation, we have seen that the coefficients is very low. Therefore, the factor analysis assumptions are met.

The proportion of variance accounted for by common factors, or the communality of a variable, shown in Table 4 for all the variables.

Table 4. Communalities

	Initial	Extraction
1	1,000	,339
2	1,000	,630
3	1,000	,617
4	1,000	,478
5	1,000	,579
6	1,000	,231
7	1,000	,654
8	1,000	,613

A three-factor solution was identified based on the eigenvalues greater than one, screeplot, the interpretability of factors. A varimax-rotated factor analysis extracted three factors that explained %51 of variance (Table 5).

Table 5. Total Variance Explained

Component	Total	% of variance	Cumulative %
1	1.682	21.022	21.021
2	1.366	17.071	38.092
3	1.093	13.664	51.756
4	0.963	12.034	63.790
5	0.942	11.777	75.567
6	0.764	9.546	85.113
7	0.619	7.735	92.849
8	0.572	7.151	100.00

Extraction method: Principal Component Analysis.

The "success–oriented," "prone to keep up with fashion," "prefer cerebral pursuits to physical activity" were determined as the factors of study (Table 6). These factors were also used as segmentation criterias in the cluster analysis.

Table 6. Rotated Component Matrix- Psychographics Patterns.

	Compenent		
	F1	**F2**	**F3**
•Like to explore world and try new things	0.449	7,0E-02	-0.365
•Prefer cerebral pursuits to physical activity	0.335	-0,307	**0.651***
•Success-oriented	**0.766***	0.159	-7,E-02
•Impulsive	-0.186	0.340	0.572
•More likely to take control of life	-0.722	-2,E-02	0.240
•Brand loyal	-2,E-02	-0.170	-0.449
•Conscious of own image and symbolism of products they buy.	8,1E-02	0.760	0.265
•Prone to keep up with fashion	0.110	**0.775***	-3,E-02

Rotation Method:Varimax with Kaiser Normalization.

Cluster analysis was used for segmenting customers. In marketing research, cluster analysis is used to identify people with similar buying habits. By examining their characteristics, we may be able to target future marketing strategies more efficiently (Nousis, 1993). The analysis included a two-step clustering process. Hierarchical clustering and K-means or non-hierarchical clustering. Hierarchhical clustering was used to determine the appropriate number of clusters and K-means clustering was used to determine the technology readiness factors that best represented the clusters. Ward's method with squared Euclidean distance was used to cluster the respondents. To determine the appropriate number of cluster, the researcher examined several output including the agglomeration schedule, icecle plot, dendogram and cluster membership (Hair, et.al., 1998). Number of clusters was spesified by using the coefficents which indicate the squared Euclidean distance between two cases in the agglomeration schedule. Small coefficients indicate that fairly homogenous clusters are being merged. Large coefficients indicate that clusters containing quite dissimilar members are combined. These coefficients can be used for guidance in deciding how many clusters are needed to represent data (Norusis, 1993, p.91). Because there is a fairly large increase in the value of distance measure from a fifth cluster to sixth cluster, we accepted five cluster solution. On the other hand, according to Lehmann (1989) "there is generally no way to get reliable clusters of size less than 30 to 50 from consumer data. Therefore, n/50 gives a tentative boundary on the maximum number of clusters. Also, the problem may be one in which many clear segments can be expected to exist or one where everything is "mush" . Because of this problem and our prefering to see whether many segments can reasonably be generated or not, we determined number of cluster based on coefficents in agglomeration schedule. After examining the output, a five-

cluster solution was selected to describe the respondents' tendecies. Then, K-Means cluster analysis to produce only one solution was used.

Various variables are used for segmentation. These variables are shown as below:

-Desirability of using high technology in the future
-Gender
-Income
-Age
-Optimism
-Innovativenes
-Discomfort
-Insecurity
-Success–oriented
-Prone to keep up with fashion
-Prefer cerebral pursuits to physical activity.

The scales of these variables can be seen totally in Table 10. Technology readiness variables (optimism, innovativeness, discomfort and insecurity) was taken based on "mean of variables". The last three variables, psychographics patterns of study's participants, was included based on largest loading-variable in cluster analysis. Destrictive statistics of the segmentation variables are shown in Table 7.

Table 7. Descriptive Statistics of Variables

Variables	N	Mean	Std.Dev.	Variance
Desirability	178	3,98	1,073	1,152
Income	178	1,57	,645	,416
Age	178	1,77	,580	,336
Gender	178	1,56	,498	,248
Optimism	178	4,0974	,80129	,642
Innovatıvenes	178	3,3876	,89491	,801
Discomfort	178	3,4326	,86746	,752
Insecurity	178	3,7360	,99032	,981
Success-ori.	178	4,66	,766	,586
Fashion	178	3,22	1,408	1,983
Cerebral	178	3,85	1,081	1,169

The number of cases in each cluster is shown in Table 8. Five clusters could be identified: "optimists", "followers", "distrustfulers", "skeptics" and "pessimists". These clusters are named according to their most different characteristic (Technology readiness scale variables) relatively to the other clusters. The first group was named the "optimists" because of having highest optimistic feelings about technology. They are the most of keeping up with fashion in all groups. The second group was named the "followers" because of having high optimistic feelings about technology and least keeping up with fashion among others groups. The third group was named the "distrustfulers" because of having average optimistic feelings about technology, but they have least level of discomfort and insecurity. The fourth group was named the

"skeptics" because they have highest level of discomfort and insecurity. The fifth group was named the "Pessimists" because of having least optimistic feelings about technology. The largest cluster is "skeptics" (53%) in the five clusters. The other clusters are ranked respectively such as "distrusfulers (26%)." "optimists (10%)," "followers (7%)" and "pessimist (4%) ".

Table 8. Number of Cases Each Clusters

Cluster	N	%
1.Optimists	18	10
2.Followers	13	07
3.Distrustfulers	46	26
4.Skeptics	94	53
5.Pessimists	7	04
Total	178	100

According to Table 9, the "age", "gender", "innovativeness" and "cerebral activities" variables are found insignificant for clasification. The variables, desirability, income, optimism, discomfort, insecurity, succes-oriented and fashion, have less variability within a cluster than variability between clusters.

Table 9. Anova

	Cluster		**Error**			
	Mean square	**df**	**Mean square**	**df**	**F**	**Significant**
Desirability	35,134	4	,366	173	95,908	,000
Income	2,151	4	,375	173	5,730	,000
Age	,215	4	,339	173	,633	,640
Gender	,118	4	,251	173	,470	,758
Optimism	5,971	4	,519	173	11,509	,000
Innovativenes	,906	4	,798	173	1,135	,342
Discomfort	4,815	4	,659	173	7,312	,000
Insecurity	4,536	4	,899	173	5,048	,001
Success-ori.	14,935	4	,255	173	58,679	,000
Fashion	69,026	4	,433	173	159,413	,000
Cerebral	,499	4	1,184	173	,421	,793

Note: The F testshould be used only for descriptive purposes because the clusters have been chosen to maximize the differences among cases in different clusters. The observed significant levels are not corrected for this and thus can not be interpreted as tests of the hypothesis that the cluster means are equal.

Table 10 shows the beliefs about high-technology, psychographics patterns and demographics characteristics of each segment. The young people are distinct not only in their beliefs but also in their perspectives on life. The clusters are defined by examination of differences in mean values on only significant variable separately (Lehmann, 1989, p.636).

Table 10. Profil of the Different Consumer Segments for High Technology Products and Services.

Segments' Name	Optimist	Follower	Distrustfuler	Skeptic	Pessimist
Clusters	**1**	**2**	**3**	**4**	**5**
Desirability of using high technology in the future	4	4	3	2	4
Gender	2	2	2	1	2
Income	2	1	1	2	2
Age	2	2	2	2	2
Technology beliefs patterns of users:					
Optimism	4.26	4.25	3.41	3.89	2.71
Innovativeness	3.43	3.17	3.42	3.64	3.57
Discomfort	3.51	3.40	2.38	3.92	3.29
Insecurity	3.78	3.84	2.73	4.14	3.29
Psychographics patterns of users:					
Success–oriented	5	5	5	5	2
Prone to keep up with fashion	4	1	2	3	3
Prefer cerebral pursuits to physical activity	4	4	4	4	4

Scales:
Desirability of using high technology in the future: 1=very undesirable, 6=very desirable
Gender: 1 Female, 2 Male
Income: 1 Less 249 YTL., 2 250-499 YTL, 3 500-999 YTL.
Age: 1 17-20 ages, 2 21-24 ages, 3 25-28 ages
Optimism: 1=strongly disagree, 5=strongly agree
Innovativenes: 1=strongly disagree, 5=strongly agree
Discomfort: 1=strongly disagree, 5=strongly agree (the mean of this variable must be interpreted as reverse because of negative statament)
Insecurity: 1=strongly disagree, 5=strongly agree (the mean of this variable must be interpreted as reverse because of negative statament)
Success–oriented : 1=strongly disagree, 5=strongly agree
Prone to keep up with fashion : 1=strongly disagree, 5=strongly agree
Prefer cerebral pursuits to physical activity: 1=strongly disagree, 5=strongly agree

Cluster 1, the *optimists* are true belivers. They are the most optimistic about technology in all clusters. However, they exhibit a moderate degree of discomfort and insecurity about technology. These consumers are concerned with having a successful career. They are particularly interested in keeping up with new styles and fashions.

They highly desire to use high technology in the future. They have avarage income. Optimists believe in the ability of technology to provide them freedom, control and efficiency. They have the potential to influence the acceptance of a new product. They like to do business via computers because they are not limited to regular business hours. They trust new technologies but perceive risk to their security. They consider a successful career to be an important life goal. They are an easy group to attract when a new technology is introduced.

Cluster 2, the *followers* are motivated but hampered. They recognize the benefits of technology but they possess discomfort and insecurity about technology. These consumers are also concerned with having a successful career. They are rarely interested in keeping up with fashions. They highly desire to use high technology in the future. They have low income. They believe that technology makes them efficient in their occupations, but these consumers wait longer to make an acquisition. With this mindset, they will probably wait until benefits of a new techno-offering are proven and demostrated to them. Followers are important consumers to a technology marketer because of their positive views. Followers have averagely resistance to technology. They tend to believe that technology systems are not designed for "ordinary people". Sharing characteristics of other consumers with discomfort about technology, they don't trust to technical support. They need some reassurance about new technology.

Cluster 3, the *distrustfulers* need to be motivated. The third people to arrive are "distrustfuler", who are average optimistic. However, they consider that technology is comfortable and safe. They think a successful career to be an important life goal. They are less interested in keeping up with new styles and fashions. They averagely desire to use high technology in the future. They have low income. They consider that safe giving out a credit card number over a computer. They feel confident doing business with a place that can only be reached online. They rarely doubt that information sent through the internet will fail to reach its destination. The lack of interest towards new technology is only problem of these consumer.

Cluster 4, the *skeptics* need to be convinced. They have a moderate degree of optimism. However, they have high level of discomfort and insecurity. Technology is important for achieving their life goals. They are averagely interested in keeping up with new styles and fashions. They don't desire to use high technology in the future. They have average income. They sometimes believe in technology. They believe in that technology will fail them at the worst possible time. They find technology overwhelming, complicated to use and wonder if technology systems are really designed for use by ordinary people. Skeptics fear that information they send over the internet will be seen by other people, and they fear giving out a credit card number over the computer. If they provide information to a machine or over the internet, they can never be sure if it really gets to the right place. These consumers are hardest sell for a technology marketer. Therefore, the best way is to move toward other new opporunities.

Cluster 5, the *pessmists* have least optimistic feelings about technology, but they also exhibit a moderate degree of discomfort and insecurity. They don't consider a successful career to be an important life goal. They are averagely interested in keeping up with new styles and fashions. They highly desire to use high technology in the future. They have average income. They don't believe in that technology gives them

more control over daily lives. They don't also do business via computers. Because they don't need a successful career.

In general, the optimists, followers and pessimists have higher desirability of using high technology in the future than other two clusters, distrustfulers and skeptics, do. Followers and distrustfulers have low income. Optimists and followers have highest optimistic feelings about technology. Apart from distrustfulers, other four clusters believe in that technology is unsafe. They also feel discomfort. Apart from pessmists, all clusters believe in that technology plays an important role in their success at life. Optimists are the most keeping up with fashion, while followers are least keeping up with fashion. The "age of students", "gender of students", "tendency of innovativeness of students" and "prefering cerebral activities" variables are rather homogenous for the sample.

5.Discussion and Conclusion

The market can be segmented into five distinct groups with different combinations of innovativeness, optimisim, discomfort, and insecurity.

A technology marketer must achieve a tendency to try new things. Innovative consumers, who are primarily optimists, play an essential sociale role of dispensing advice to consumers. Marketer can describe any positive word-of-mouth strategy for disseminating information about high technology-based product and services. This strategy can be effective, particularly in the early market stages of a new technology.

Optimists and followers have optimist tendency about high technology. Marketer can switch followers to be an innovator. Optimists engage in innovative behaviors sooner because they are more optimistic. Followers and skeptics will wait longer because of their skepticism. Additionally, skeptics may also wait until their more-techno-ready friends have tested technology and indicated their approval. As a result, a marketer engage in a dialogue with the consumer and be ready them for the future.

Because the largest groups are distrustfulers and skeptics, marketing manager should convince them. A marketer must send a message to consumer about the benefits of the technology. He can demonstrate how it can have a positive impact on their life. Marketers can explain what it means in practical terms. Many consumers who feel the need to acquire a new technology will possess a high level of discomfort in using it, while others will feel in secure about it working safely and properly. The solution is to focus on these consumers to learn how to design, support, and talk about a technology. Therefore, the customers feel comfortable when using high technology based products and services. Customers will be satisfied by easier usage of new products. Marketers can implement various strategies for customer satisfaction such as guarantees, responsive customer care and customer-focused orientation.

There are no the perfect paradigms for describing marketplace. But, it's important to explain that the typology is based on empirical research. It goes beyond the other technology theories by adding new dimensions related to beliefs. The study also provided insights by explaining a case from Turkey, a developing country.

This study has some limitations. Firstly, the results of this study should be cautiously generalized to all customers because the sample was not representative. The sample consists of only young people. It is rather homogenous. Future consumer

researchers may improve the ability to generalize the results by obtaining a sample that better represents the population such as other age groups and other professions groups. Second, the sample size is small. This limitation result from time and cost restrictions. In addition, future researchers may improve the study by refining the variables. For future research, this study can be done with different variables such as trust, market orientation of business, quality of product/services, easy of use, etc…

This study is supported financially by Mustafa Kemal University.I would like to thanks to the anonymous referees for adjustments improving the study.

REFERENCES

Brengman M. and Geuens M., Weijters B., Smith SM. and Swinyard W.R., (2005); Segmenting internet shoppers based on their Web-usage-related lifestyle: A cross-cultural validation*," Journal of Business Research,* 58, 79-88.

Cowles D. (1989); Consumer perceptions of interactive media, *Journal of Broadcasting and Electronic Media,* 33 (Winter), 83-89.

——, (1991); Retail Bankers: Marketing may not be enough, *Bank Marketing*, 23 (January), 22-25.

——,and Crosby (1990); Consumer acceptance of interactive media in service marketing encounters, *Service Industries Journal*, 10 (July), 521-40.

Crips CB, Jarvenpa SL. and Todd PA., (1997); Individual differences and internet shopping attitudes and intentions, Working paper. Austin (YX): University of Texas.

Dabholkar, P., (1996); Consumer evaluations of new technology-based self-service options: An investigation of alternative models of service quality, *International Journal of Research in Marketing*, (13/1); 29-51.

Dahlen M., (1999); Closing in on the Web consumer, In: Bohlin, Brodin, Lundgren, Thorngren, (editors), Convergence in Communications and Beyond, Amsterdam: Elsevier, ([chapter 12] http://www.nns.se/fdr/research/internet/Closing.paf.).

Davis FD. (1989); Perceived usefulness, perceived ease of use, and user acceptance of information technology, *MIS Quarterly* 13 (3), p.319-341.

Davis FD., Bagozzi RP., and Warshaw PR. (1989); User acceptance of computer technology: A comparison of two theoretical models, *Management Science*, 35 (8), 982-1003.

Donthu N. and Garcia A., (1999); The Internet shopper. J Advert Res, 39,52-58.

Eastlick MA. (1996); Consumer intention to adopt interactive teleshopping, Marketing Science Institute working paper, Report no. 96-113 (August), Cambridge, MA.

Efendioğlu A.M. and Yip V.F., (2004); Chinese culture and E-Commerce: An exploratory study, *Interacting with Computers*, www.ElsevierComputerScience.com.

Featherman M.S. (2001); Extending the Technology Acceptance Model by Inclusion of Perceived Risk, *in Proceedings of the Seventh Americans Conference on Information Systems*, p.758-760.

Hair, J.F. Jr., Anderson, R.E. Tatham R.L. & Black, W. (1998); *Multivariate Data Analysis*, Prentice Hall, New Jersey.

Kanibir H., G. Aydin ve S. Nart, (2003); Teknolojik yeniliklere dayali bankacilik hizmetlerini kullanim ozelliklerine gore musteri profillerinin belirlenmesi uzerine bir pilot calısma, 8.Ulusal Pazarlama Kongresi, 345.

Kim K. and B. Prabhakar, (2000); Initial trust, perceived risk and the adoption of internet banking, *in Proceedings of the Twenty-first International Conference on Information Systems*, p.537-543.

Lehmann D.R., (1989); *Market Research and Analysis*, Irwın, third ed., Boston.

Luarn P. and Hsin HL. (2005); Toward an understanding of the behavioral intention to use mobil banking, *Computer in Human Behaviors*, Vol.21, ıssue 6, November, 873-891.

McDonald WJ., (1996); Internet customer segments: an international perspective, In: Droge C. Calantone R. Editors., "Enhancing Knowledge Development in Marketing," Chicago (IL): American Marketing Assocation, 338-44.

Mick D.G. and Fournier S., (1998); Paradoxes of technology: consumer cognizance, emotions and coping strategies, *Marketing Science Institute Monograph*, Report No. 98-112.

Nousis MJ. (1993); *SPSS for Windows, version 6, Professional Statistics*, Chicago, IL 60611, 83-111.

Ozmen, Ş. (2003); *Ag ekonomisinde yeni ticaret yolu, e-Ticaret,* Istanbul Bilgi Üniversitesi Yayinlari, Istanbul, 32.

Parasuraman A., (2000); Technology Readiness Index (TRI), A multiple-ıtem scale to measure readiness to embrace new technologies, *Journal of Service Research*, May, 307.

—— ,and Colby C.L, (2001); *Techno-ready marketing: How and why your customers adopt technology*, (The Free Press, NY.)

Paviou P.A. (2001); Integrating trust in electronic commerce with Technology Acceptance Model: Model development and validation, *in Proceedings of the Seventh Americas Conference on Information Systems,* p.816-822.

Rangaswamy A.and Gupta S., (1999); Innovation adoption and diffusion in the digital environment: Some research opportunities, E-Business Research Center Working Paper, 02, Penn State University.

Seckin, Sedef, (2000); *Journal of Capital*, October.

Türkiye İş Bankası-Cultural Publications (Turkiye Is Bankasi Kultur Yayinlari), (2001); Change.tr-Turkey, Development Wia Internet , prep: Arthur Andersen, Management and Counseling of Human Resources, pub.I, Istanbul, 125-126.

Vellido A., (2000); A Methodology for the characterization of business-to-customer E-commerce, Ph.d thesis. Liverpool John Moores University, September.

—— ,and Lisboa PJG, and Meehan K., (2002); Segmentation of the on-line shopping market using neural networks, *Expert Systems Apply*.17,303-14.

Wedel M. and Kamakura W., (2000); *Market segmentation : Conceptual and methodological foundations.* 2nd ed. Dordrecht: Kluwer Academic Publishers.