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## **CONSUMER INNOVATIVENESS AND INFORMATION SEEKING BEHAVIOR AS OPPOSED TO RISK PERCEPTIONS ON PURCHASES OF HI-TEC**

### **Abstract:**

This study intends to find out the consumer innovativeness and information seeking behavior which are assumed to be negatively correlated with consumer risk perceptions. A survey on 880 respondents who are selected via stratified sampling of which 863 are found eligible to be analyzed. The respondents are required to answer 50 questions of which five are related to demographic characteristics of these respondents. The rest 45 are statements which are designed to reflect the innovativeness and risk perception of the consumers which are two controversial issues... The study consists of five parts. The first part is an introduction where the scope and the purpose of the study are concisely stated. The second part relates to the theoretical background of the subject matter and the prior researches carried out so far. The third part deals with research methodology, basic premises and hypotheses attached to these premises. Research model and analyses take place in this section. Theoretical framework is built and a variable name is assigned to each of the question asked or proposition forwarded to the respondents of this survey. 45 statements or propositions given to the respondents are placed on a five-point Likert scale. The remaining five questions about demographic traits as age, gender, occupation, educational level and monthly income are placed either on a nominal or ratio scale with respect to the nature of the trait. Five research hypotheses are formulated in this section. The fourth part mainly deals with the results of the hypothesis tests and a factor analysis is applied to the data on hand. Here exploratory factor analysis reduces 45 variables to eight basic components as "Online shopping risks, technology readiness, risk avoidance, physical risk perception, consumer innovativeness, functional risk perception, information seeking behavior, and social risk perception. Cronbach's Alpha for scale reliability is ( $\alpha = 0.731$ ) and the sample adequacy ratio (KMO) is 0.835. In addition non-parametric bivariate analysis in terms of Chi-Square is applied to test the hypotheses formulated in this respect. The fifth part is the conclusion where findings of this survey are listed.

### **Keywords:**

Consumer innovativeness, information seeking behavior, risk perception and risk avoidance, technology-proneness, functional and physical risks.

**JEL Classification:** M31

## 1. Introduction

Innovation, risk perception, information seeking and online shopping are some of the terms which found a wide acceptance by the consumer in the last three or four decades, especially when these terms refer to specialty items and high-technology products. The aim of this study is to examine the several aspects of the consumer behavior that they display during the time of purchase or decision to buy period. Consumers' familiarity with a sophisticated brand is often correlated negatively with their perceptions of functional, financial, physical, social, and psychological risks. On the other hand consumers' self-confidence and trust is positively correlated with the value or quality of that brand. This paper tries to find out the pros and cons of the consumer behavior in the realm of perceived risks.

## 2. Literature Review and Prior Research

There are more general marketing facts that everyone knows: as many as 90% of new products that are introduced into market each year fail. So, this factor leads to marketers to deal with risk minimization. Recent researches and articles on consumer perceptions of risk have found that consumers faced with uncertainty often view a new product as an either set of benefits or losses. (Cox, Cox&Zimet, 2006; Cox, Cox & Mantel, 2010; Philips & Hallman, 2013, Schiffmann & Kanuk, 2010). Actually at this point, it is needed to look the relationship between consumers' risk perceptions and innovativeness. Because these concepts are related with each other and assumed that consumer innovativeness is negatively correlated with consumer risk perceptions.

### Product and Consumer Innovativeness

What is innovation? Answer of this question is related to "new". A second question emerges in here. How new is new? Or, in terms of this study's focus, how innovate is innovation? According to Lowe and Alpert (2015), a better understanding of consumer perception of innovativeness may help to explain forecast consumers' unanticipated and often negative reactions new products that firms had expected would be successful. Researchers have studied consumer acceptance of innovations in relation to product innovativeness (Lowe & Alpert, 2015). In these studies, products may be new or radically new depending on whether they are marketing innovations or technology innovations and whether they are macro or micro level innovations (Garcia & Calantone, 2002).

In the literature, there are some definitions and terms on product newness. Product newness is *the extent to which the new product is compatible with the experiences and consumption patterns of potential customers* to Gima (1995). According to the definitions of Moorman (1995) and Moorman & Miner (1997) product newness also measures creativity at the product. However, Olshavsky and Spreng (1996) measure product newness as perceived innovativeness. Also, Alexander et al. (2008) focused perceived newness to explain product newness. (Lowe & Alpert, 2015)

Product innovativeness is related to (Danneels and Kleinschmidt, 2001):

- key innovation characteristics
- adoption risk
- The degree of change from established behavior patterns.

Also, both of consumer and product innovativeness are related to perceived innovativeness. In this way, a main approach has been to define perceived innovativeness by how new product is (Lowe & Alpert, 2015).. According to Cotte & Wood (2004) and Roehrich (2004), consumer innovativeness refers to the tendency to willingly embrace change and try new things and buy new products more often and more quickly than other people. In this point although this concept differs from early adopters, several researches have indicated have indicated that innovativeness as a discriminator of early adopters from late adopters in not entirely consistent (Hirunyawipada&Paswan, 2006). Consumer innovativeness actually depends on personality as such it can be defined in terms of a particular combination of traits.

Some of consumer innovativeness studies are shown in table 1.

Table 1: Review of empirical studies on consumer innovativeness and adoption

Author(s)/year	Findings	Context
Chau and Hui (1998)	Consumer novelty seeking can identify early from late adopters	Computer software
Citrin et al. (2000)	Domain-specific innovativeness and internet usage influence consumers' adoption of online shopping	Online shopping
Foxall (1988)	No significant relation between global innovativeness and adoption	Food product
Foxall (1994)	Global innovativeness fails to account for the evidence on which the notion of an innovation-prone personality is based	Food product
Foxall (1995)	Involvement in product category moderates the global innovativeness-new product adoption relationship	Food products and computer software
Foxall and Bhate (1991)	Global innovativeness is found to be significantly related to frequency of use	Personal computer
Foxall and Bhate (1993)	Global innovativeness correlates weakly with purchase and consumption	Food product

Foxall and Bhate (1999)	Product category interest and situation facilitation/inhabitation does not mediate the relationship between global innovativeness and adoption	Computer software
Foxall and Haskins (1986)	Global innovativeness has high validity in the prediction of adoption behavior	Food product
Goldsmith (2002)	Domain-specific innovativeness mediates the relationship between global innovativeness and online buying	Online shopping
Goldsmith and Flynn (1992)	Domain-specific innovativeness identifies consumers with higher number of shopping trip and greater spending from those who have less	Fashion
Goldsmith et al. (1995)	Domain-specific innovativeness is more highly correlated with number of new products adopted than global innovativeness	Clothing and electronics products
Goldsmith et al. (1998)	Domain-specific innovativeness positively correlated with consumers' knowledge about product and product involvement	Wine
Goldsmith et al. (2003)	Domain-specific innovativeness is a stronger predictor of behavioral criteria (time and money spent at shopping) than the market maven scale	NA
Im et al. (2003)	Personal characteristics (age and income) are stronger predictors of new product adoption than global innovativeness	Consumer electronics products
Lassar et al. (2005)	Global innovativeness is negatively related to online banking adoption	Online banking
Limayem et al. (2000)	Consumer attitude and intention mediate the relationship between consumer Innovativeness and internet shopping behavior	Online shopping

Manning et al. (1995)	Inherent consumer novelty seeking correlates to actualized novelty seeking and awareness (initial stages in adoption process), whereas consumer independent judgment making is related to the trials of new products (later stage in adoption process)	Food product, electronics product, etc.
Midgley and Dowling (1993)	Interest in particular product category and social communication networks mediate the relationship between global innovativeness and adoption	Clothing
Mowen et al. (1998)	Global innovativeness mediates the relationship between personal traits and domain-specific innovativeness	Electronic and food products
Ostlund (1972)	Global innovativeness extends across test product categories	Plastic bandage, disposable female undergarment, dessert mix, napkin, shampoo, and fabric treatment solution
Summers (1971)	Adoption may be a function of situational variables and behavioral considerations	Food, clothing, household cleansers and detergents, cosmetics and personal grooming aids, and appliances
Venkatraman (1991)	Global innovativeness dominates innovation types in determining the importance of innovation characteristics in adoption	Personal computer and VCR

Venkatraman and Price (1990)	Cognitive and sensory innovators differ in their proneness toward innovations	Personal computer, food processor, and VCR
Wood and Swait (2002)	Global innovativeness (need for cognitive and change) predict pattern of change behavior in adoption	Cellular phone

Table 1 is adapted from Tanawat Hirunyawipada and Audhesh K. Paswan, **Consumer innovativeness and perceived risk**, Journal of Consumer Marketing, Volume 23 · Number 4, 2006 , 182–198 (183)

Consumer innovativeness falls into subgroups as follow (Hirunyawipada&Paswan, 2006):

- **Global innovativeness:** The general assumptions of global innovativeness are anchored in personality inventory that determines behaviour, especially the adoption of new products. Actullay, global innovativeness is a personel trait at the highest level of separation. Although some researches have theorized global innovativeness trait as single construct, others suggest it to be multidimensional which is including sensory and cognitive traits. These dimensions of innovativeness trait underline the disparate lists of activities. (Leavitt and Walton, 1975; Ostlund, 1972; Midgley &Dowling, 1978; Pearson, 1970; Wood &Swait, 2002; Baumgartner & Steenkamp, 1996; Hirunyawipada&Paswan, 2006)
- **Domain-specific innovativeness:** Domain-Specific innovativeness aims to explicate the narrow facets of human behavior within a person's specific interest domain. It contains the individual's predisposition toward the product class and it refers to the inclination to acquire new products or related information. ( )
- **Actualized innovativeness:** Actualized innovativeness is the extent to which consumers are relatively early in adopting new products than others. At this point, the time of adoption behaviour is a major criterion that distinguishes early adopters than late adopters. (Rogers, 2003; Midgley &Dowling, 1978; Hirunyawipada&Paswan, 2006)

### Perceptions of Risk

Risk is a word that has many meanings. As stated above, perception of risk has found that consumers faced with uncertainty often view a new product as a either set of benefits or losses. Perceived risk is a function of the unexpected results (Fortsyhe & Shi, 2003; Hirunyawipada&Paswan, 2006). Perceived risk is defined as *the uncertainty that consumers face when they cannot foresee the consequences of their*

*purchase decisions. This definition highlights two relevant dimensions of perceived risk: uncertainty and consequences (Schiffmann & Kanuk, 2010).*

Risk perception is always measured in different scales. Risk perception is always measured according to the following scales:

- Lindell and Hwang (2008): Individual's expectations about likelihood of personally physical and social impacts caused by hazard
- Tepstra and Lindell (2013): People's perceptions of hazard likelihood
- Slovic et al. (2001): outrance factors
- Weyman et al. (2006): institutional trust

In general, consumer faces different kind of risk. These are functional, financial, physical, social, psychological and time risk. The amount of knowledge which is people have about a technology is related to people's risk perception on technology (Zhu, Wei & Zhao, 2016). Regarding to this, functional risk has some effects on consumer innovativeness. Namely, a number research studies support the view that consumers rely on price as an indicator of product quality, particularly in the absence of other available information. Also, well-known brand name and store information has been shown to positively influence perceptions of quality (Schiffman and Kanuk, 2010). In other words, purchasing perceived quality product implies that the consumer is employing risk-reducing strategy ( Simcock, Sudbury & Wright, 2006). To understand consumer perceptions of risk, it should defined antecedents and consequences of risk.

### **Antecedents and consequences of risk perceptions**

In general, there are two antecedents of risk: person's personality and trust. (Schiffmann & Kanuk, 2010). The way of understanding how consumers perceive risk is to handle risk perceptions as a trait characteristics. In this way, individuals fall into subgroups: those who have a tolerance for risk or would prefer to avoid risk. ( Goldstein, Johnston & Sharpe, 2008; Philips & Hallman, 2013). A person's personality traits are one of antecedents of risk perception. At the same time it refers to subgroups above mentioned. Another antecedent is trust. As known, consumer believe information that is provided by trusted sources (Kuttschreuter, 2006). According to Knight's research on new technology oriented product (2007), the perceived benefits of the new product mediated the effect of trust on support for the product. In other words, higher levels of trust in the source of information lead to higher perceptions of perceived benefits of the product and then lead to more positive evaluations of the product (Knight, 2007 from Philips & Hallman, 2013).

According to literature on consumer behavior, there are several consequences of forming risk perceptions as below (Zepeda, Douihitt & You, 2003; Cox, Cox & Zimmet, 2006; Knight, 2007; Cox, Cox & Mantel, 2010; Lindell & Perry, 2012; Philips & Hallman, 2013; Zhu, Wei & Zhao, 2016 ):

- **Information Seeking:** People in risky situations always need information because this information can help them assess the certainty, severity and immediacy of threatening events (Lindell and Perry, 2012) and search information from various sources (Zhu, Wei, Zhao, 2016). According to Eagly and Chaiken's (1993) defining, information insufficiency occurs when an inequality is found between the volume of information people require to make decisions and the volume of information they have. The process of information seeking is motivated by an information insufficiency assessment that arises from people's judgment of the need to obtain more information for their decision making (Lindell and Perry, 2012; Zhu, Wei & Zhao, 2016). According to Wilson (1999) and Robson & Robinson (2015), studies of information seeking and use date back at least as far as the Royal Society Scientific Information Conference of 1948. One of the major problems in the information seeking literature is the lack of a consistent definition of what behaviors constitute consumer information search (Kiel & Layton, 1981). Past studies have included the number of informational sources from which information was sought, the amount and types of information sought, the time dimension over which information was sought and deliberation occurred, and the manner in which the information was sought (Kiel & Layton, 1981). In this way, **Information Seeking and Communication Model** was developed by Robson & Robinson (2015). The model indicates an information user seeking and using information, and an information provider or providers communicating information. The part headed "seek information" in the model includes the activities involved in seeking information, such as using a search engine. It also refers to feelings and thoughts that an information seeker has and which may affect information behavior. These may include interest in concept of uncertainty or confusion as the search for information starts, and perhaps clear thinking and confidence during information search process as described by Kuhlthau (1991) (Robson & Robinson, 2015). Perceptions on risk have an impact on consumer's information seeking behavior. As stated above if consumers view the product as a set of benefits to be gained, they are likely to seek out more information on product; but if consumers view the product as a set of losses to avoid, they are less likely to seek out additional information. (Klerck & Sweeney, 2007; Philips & Hallman, 2013)
- **Cognitive Processing:** As Kim and Paek (2009) said that information processing is an antecedent changes. Risk perceptions also have an impact on how a person is likely to process information on product. In the Cox, Cox & Mantel's study (2010) on risk perceptions of new drug, it indicated that the severity of risk had a biggest impact on product perceptions and intentions.
- **Affect:** Cox, Cox & Mantel (2010) stated when consumers are in positive mood, their kinds of risks are more accurate. From another view, Foo (2011) referred that not only do risk perceptions impact affect, but affect also impacts perceptions of risk. In other words, if persons have experience emotions related certainty, they report lower of risk. (Philips & Hallman, 2013)



- **Behavior** : Philips &Hallman (2013) stated that *greater perceptions of risk lead more efforts to avoid risk*. For some new technology oriented products, greater perceptions of risk lead to a lower propensity to buy those products. (Zepeda, Douithitt & You, 2003; Klerck &Sweeney, 2007; Phillips &Hallman, 2013)

### 3. Research Model and Hypotheses

This field research is conducted in May 2015 in Ankara, Turkey, the Capital of Turkey with 4.500.000 inhabitants. A survey on 880 respondents who are selected via stratified sampling of which 863 are found eligible to be analyzed. The respondents are required to answer 50 questions of which five are related to demographic characteristics of these respondents. The rest 45 are statements which are designed to reflect the innovativeness and risk perception of the consumers which are two controversial issues. Seventy-five junior students taking a "Marketing Management" course are selected as pollsters and are given extra credits for collecting reliable information. 40 statements are placed on a five-point Likert scale type ranging from "1= strongly disagree" to "5= strongly agree." The survey also included one ordinal scale type and five nominal and interval type demographic questions.

#### 3.1 Variables Grouped into Components and with Parameters Assigned

The variables used in the analyses and their explanations are as follows:

**Table 1. Variables and Their Explanations**

Variable	Explanation	Mean	SD
<b>A - PERCEIVED RISKS IN ONLINE SHOPPING</b>			
JUDGEQUAL	In online shopping of the above mentioned products, it is difficult for me to judge product quality adequately.	3.81	1.01
COMPQUAL	It is difficult for me to compare the quality of the above-mentioned products in online shopping.	4.02	0.86
NOTPERFM	The above mentioned products if purchased online may not perform as expected.	3.55	1.02
NOTRECEIVE	I might not receive the product ordered online.	3.96	0.97
RELIABILITY	I am concerned about the reliability of online shippers.	3.43	1.15

CANTRECEIVE	I might not receive the product at appropriate time.	3.91	1.06
OVERCHARGE	I think in online shopping of the above-mentioned products, I may get overcharged.	3.79	1.09
GETCHEAP	It is almost not possible to get online a new introduced product at cheap prices.	3.39	1.25
NOTRUST	I do not trust discounts and offers that are available in online shopping for the above-mentioned products.	3.75	1.15
<b>B - TECHNOLOGY PRONENESS</b>			
NEWTECHN	The people come to me to get my advice on new technologies	3.77	1.24
TECHNOLOGY	Technology gives people more control over their daily lives.	2.79	1.41
CONVENIENT	Products and services that use new technologies are more convenient to use.	3.11	1.31
MOBILITY	Technology gives me the freedom of mobility..	2.39	1.30
MOREEFFIC	Technology makes me more efficient in my occupation.	2.70	1.50
<b>C- RISK PERCEPTION AND RISK AVOIDANCE</b>			
NOPROJECT	When I start a project of my own, I sometimes think that it is better to leave them alone rather t make a mess of them.	4.05	1.05
NOTREMOVE	I always follow manufacturers warnings before moving the back plates of electronic products.	4.00	1.16
DIRECTIONS	By using exact directions in the manuals about usage of a sophisticated product I seldom succumb into trouble.	4.43	0.97
FAMILIAR	I need not much instructions to use a product which I am familiar with.	4.18	1.03

AFRAIDTOBY	I am afraid to buy a product which I don't know how to use exactly.	4.31	1.27
FEELUNEASY	I mostly feel uneasy to set myself on projects which I am not very much accustomed.	4.48	0.98
FOLLOWINST	I always follow the instructions of the manufacturers when I start to use a sophisticated product.	4.10	0.98
ASSEMBED	I always buy furniture in assembled form, even though unassembled forms costs much cheaper.	3.66	1.70
IMPROVE	I constantly try to improve whatever I do.	3.39	1.29
NEWPRODUC T	I seldom buy a product which is just introduced to the market since it might be expensive and apt to product failures.	4.09	1.79
	<b>D - PHYSICAL RISK PERCEPTION</b>		
DANGEROUS	May be dangerous for me or some of my family members.	2.95	1.39
DMGHEALTH	Cheap hi-tech products could damage my health.	2.88	1.44
NOTSAFE	Such products would not be safe for me or my family.	2.53	1.28
PHYBCHRM	I think an Apple iPod may cause me some physical harm.	2.53	1.29
OLDTECHN	Old technologies can be risky to human health.	3.54	1.29
	<b>E - CONSUMER INNOVATIVENESS</b>		
GETADVICE	Other people come to me to get my advice on new hi-tech products..	3.12	1.27
NEWERTECH N	It is evident that I am more adapted to newer technologies than my friends.	3.30	1.34

INNOVATOR	In general, I am amongst the first in the cycle of my friends to acquire new technologies when they appear.	3.25	1.38
NOTEHELP	Generally I can figure out new technologies without getting help from others.	3.21	1.40
KEEPUPWITH	I can keep up with the latest technological developments in my area of interest	2.29	1.31
LITTLETROUB	I am confronted with little trouble with respect to other people in making technology work for me.	3.61	1.32
	<b>F- FUNCTIONAL RISK PERCEPTION</b>		
SAFEPURCH	Purchasing a well-known manufacturer brand is safer than purchasing a well-known store brand.	3.21	1.40
PERFBETTER	A product with a “famous” manufacturer brand will perform better than an store brand, even if the store brand is from a reorganized establishment	2.90	1.40
WORSEPERFM	Store brands have worse performance than manufacturer brands	3.01	1.41
	<b>G – INFORMATION SEEKING BEHAVIOR</b>		
INFORSRCH	I often search for information about new products and brands.	2.21	1,41
NEWBRNDS	I frequently learn about new products and new brands.	2.81	1.27
MAGAZIN	I like to read magazines which give place to new products.	2.31	1.27
INFORMATION	I like to visit places where I can find information about new products and new brands.	3.16	1.44
NEWPREXP	I continuously look for new product experiences.	2.59	1.39

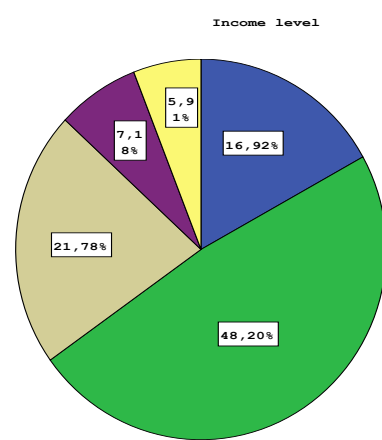
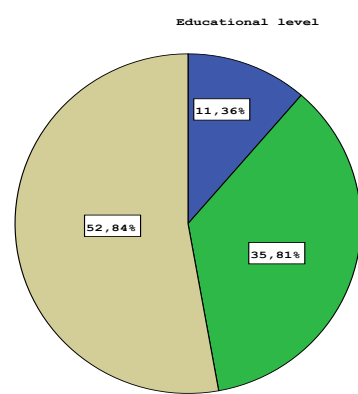
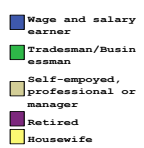
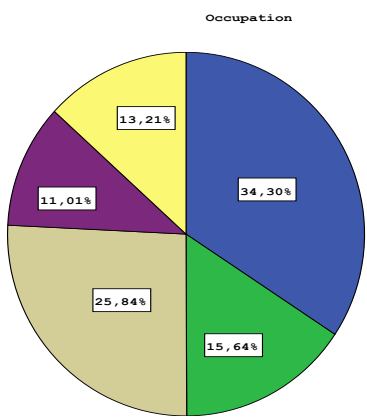
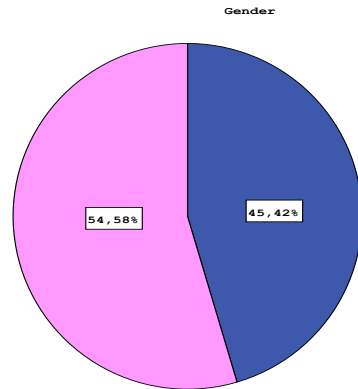
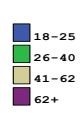
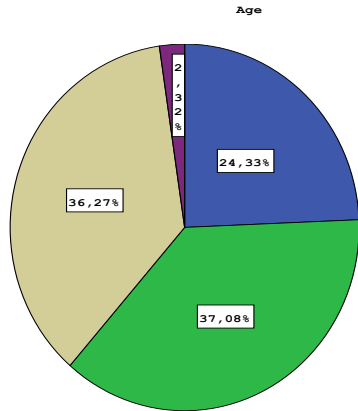
	<b>H – SOCIAL RISK PERCEPTION</b>		
LOOKDOWN	Continuous using of new technologies and sophisticated products may make others look down upon me.	2.49	1.4 4
NEGTHOUGH	Using too much sophisticated and expensive products may negatively affect what the people think of me.	3.48	2.0 2
	<b>PART 6 CONSUMER DEMOGRAPHICS</b>		
AGE	Age	2.17	0.8 3
GENDER	Gender	(X)	(X)
OCCUPATION	Occupation	(X)	(X)
EDUCATION	Educational level	2.42	0.6 9
INCOMELV	Income level	2.37	1.0 4

**(X) Placed on nominal scale**

It is evident from the table above that if the mean values assigned to variables are 3.00, the respondents generally agree with the proposition given. On the other and, if these values are below 3.00, then the majority of them disagree.

### 3.2 Distribution of Consumer Demographics

As far as the consumer demographics are concerned, the following pie charts show how they are distributed as to the respondents:



### 3.4 Hypotheses

Several research hypotheses are developed to be tested as follows:

*H1: There is a Significant Negative (Inverse) Relationship Between Perceived Risks in Online Shopping and Technology Proneness.*

*H2: There is a Significant Positive Relationship Between Consumer Innovativeness and Information Seeking Behavior.*

*H3: Information Seeking Behavior is Negatively Correlated With Risk Perception and avoidance.*

*H4: Technology Prone Consumer Succumbs Least into Functional Risk Perception.*

*H5: Demographic Characteristics of Consumers Differ Significantly With Respect to Innovativeness, Information Seeking Behavior and Risk Perception.*

## 4. Analyses and Results

### Hypotheses Tests Results

Bi-variate analysis of test results proved the following results:

*4.1 The Relationship Between Perceived Risks in Online Shopping and Technology Proneness.*

**Table 2. Relationship Between Perceived Risks in Online Shopping and Technology Proneness**

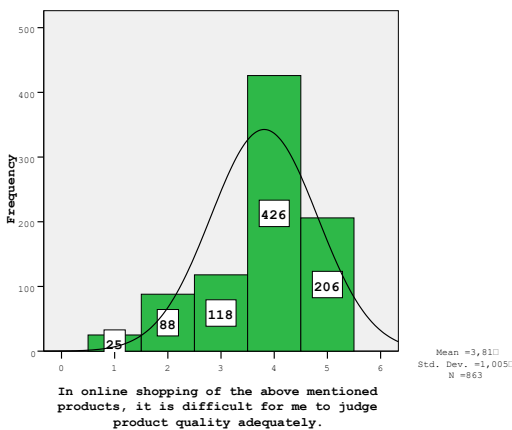
	Technology Proneness					
	Other people come to me to get my advice on new technologies		Technology gives people more control over their daily lives		Products and services that use new technologies are more convenient to use.	
	Agree %	Disagree %	Agree %	Disagree %	Agree %	Disagree %
<b>Perceived Risks in Online Shopping</b>						
<b>In online shopping of the above mentioned</b>	<b>61.6</b> <b>83.9</b>	<b>24.0</b> <b>10.7</b>	<b>26.2</b> <b>74.8</b>	<b>56.0</b> <b>10.7</b>	<b>42.2</b> <b>77.5</b>	<b>36.0</b> <b>14.5</b>

products, it is difficult for me to judge product quality adequately.						
It is difficult for me to compare the quality of the above-mentioned products in online shopping.	62.8 89.3	45.5 7.2	24.1 85.2	54.6 6.2	51.0 83.4	36.4 12.3
The above mentioned products if purchased online may not perform as expected.	60.9 73.2	27.8 10.7	25.2 81.7	66.6 14.4	64.1 39.1	17.0 43.4

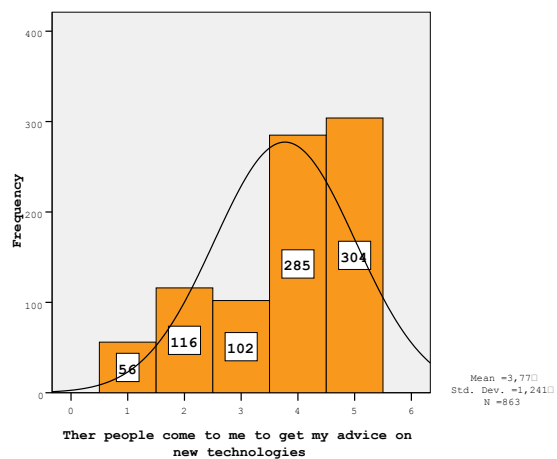
Accepted at  $\rho < 0.01$

H1 is accepted at all levels of online shopping risks and technology proneness. This conclusion is also revealed in the following histograms of the two s variables with the factor loadings from each component:

In online shopping of the above mentioned products, it is difficult for me to judge product quality adequately.



Ther people come to me to get my advice on new technologies





#### 4.2 The Relationship Between Consumer Innovativeness and Information Seeking Behavior.

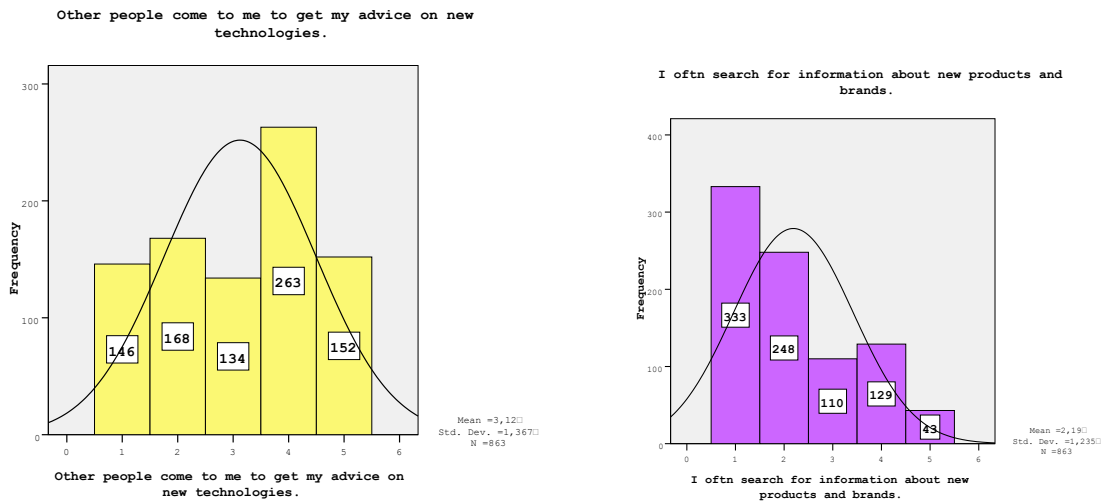
**Table 3. Relationship Between Consumer Innovativeness and Information Seeking Behavior.**

	Consumer Innovativeness					
	Other people come to me to get my advice on new hi-tech products		It is evident that I am more adapted to newer technologies than my friends.		In general, I am amongst the first in the cycle of my friends to acquire new technologies when they appear.	
	Agree %	Disagree %	Agree %	Disagree %	Agree %	Disagree %
<b>Information Seeking Behavior</b>						
I often search for information about new products and brands.	53.5 13.7	40.5 71.2 (X)	48.8 24.2	31.5 71.1 (X)	60.5 16.3	35.1 69.0 (X)
I frequently learn about new products and new brands.	44.3 49.1	39.0 43.9	62.0 36.7	42.7 52.4 (X)	64.5 34.7	43.4 52.1 (X)
I like to read magazines which give place to new products.	40.0 29.4	33.5 56.2 (X)	41.7 25.8	35.2 64.8 (X)	53.4 29.5	34.8 63.5 (X)

Accepted at  $\rho < 0.01$

(X) Inversely correlated

H2 is rejected almost at all levels (eight out of nine) of the cases prove a negative relationships between these two groups of variables. The following histograms prove this negative relationship:



### 4.3 The Relationship Between Information Seeking Behavior and Risk Avoidance.

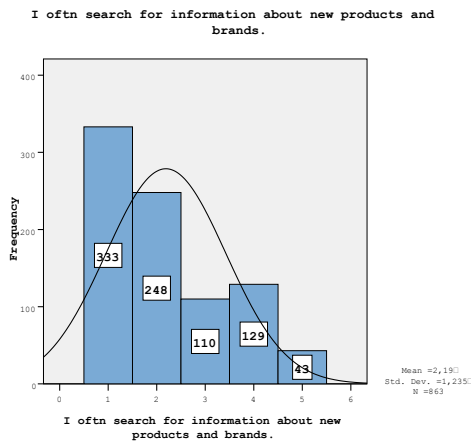
**Table 4. Relationship Between Information Seeking Behavior and Risk Perception and Avoidance**

	Risk Perception and Avoidance					
	When I start a project of my own, I sometimes think that it is better to leave them alone rather to make a mess of them.		I always follow manufacturers warnings before moving the back plates of electronic products		By using exact directions in the manuals about usage of a sophisticated product I seldom succumb into trouble..	
	Agree %	Disagree %	Agree %	Disagree %	Agree %	Disagree %
<b>Information Seeking Behavior</b>						
<b>I often search for information about new products</b>	<b>76.7</b> <b>18.2</b>	<b>9.0</b> <b>54.6</b>	<b>79.1</b> <b>19.5</b>	<b>14.4</b> <b>71.7</b>	<b>Not Sustained</b>	<b>Not Sustained</b>

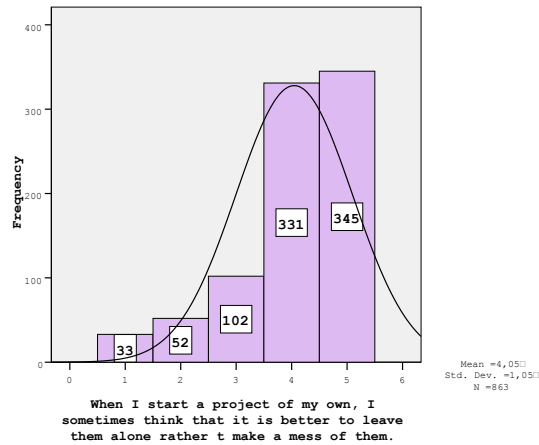
<b>and brands.</b>						
<b>I frequently learn about new products and new brands.</b>	<b>77.1</b> 54.6	<b>8.8</b> 36.3	<b>30.0</b> 43.5	<b>12.5</b> 41.3	<b>81.0</b> 50.0	<b>5.6</b> 40.01 <b>(XX)</b>
<b>I like to read magazines which give place to new products.</b>	<b>61.7</b> 57.6	<b>3.7</b> 27.3	<b>83.3</b> 21.8	<b>11.7</b> 60.9	<b>Not Sustained</b>	<b>Not Sustained</b>

**(XX) Accepted at  $\rho < 0.05$**

As could be seen above H3 is accepted at all levels of the two variables. The distributions of the variables are given below:



When I start a project of my own, I sometimes think that it is better to leave them alone rather t make a mess of them.



## 4.4 The Relationship Between Technology Proneness and Functional Risk Perception.

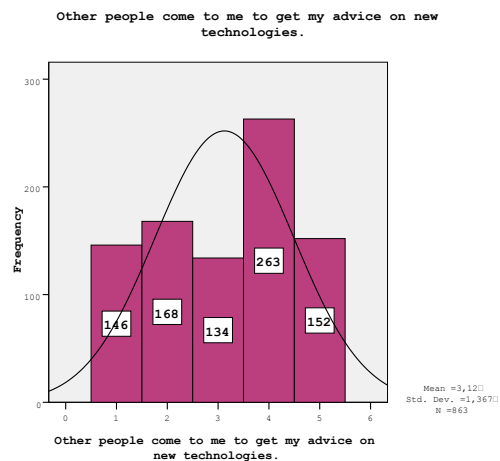
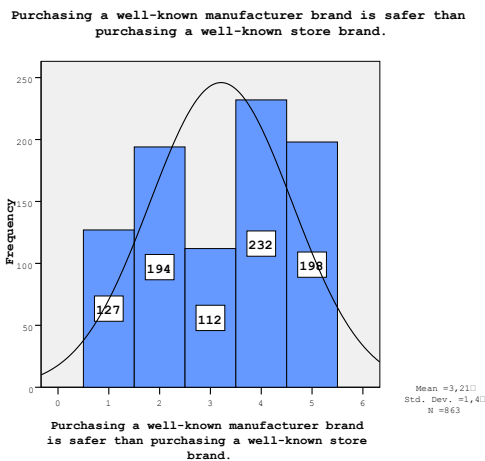
**Table 5. Relationship Between Technology Proneness and Functional Risk Perception**

	Technology Proneness					
	Other people come to me to get my advice on new technologies		Technology gives people more control over their daily lives		Products and services that use new technologies are more convenient to use.	
	Agree %	Disagree %	Agree %	Disagree %	Agree %	Disagree %
<b>Functional Risk Perception</b>						
<b>Purchasing a well-known manufacturer brand is safer than purchasing a well-known store brand.</b>	43.0 66.4	26.0 23.2	35.8 57.9	46.4 29.8	45.9 63.0	35.4 32.6
<b>A product with a “famous” manufacturer brand will perform better than an store brand, even if the store brand is from a reorganized establishment</b>	39.8 61.0	22.9 30.2	33.3 46.6	45.2 39.9	49.7 50.0	30.3 39.8 (X)
<b>Store brands have worse performance</b>	48.0 53.5	39.2 46.3	38.8 45.7	51.9 38.5	56.9 50.7	39.3 47.8

than manufacturer brands		(X)				
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**(X) Positively correlated**

H4 is accepted at seven levels out of nine relationship between the variables of 'functional risk perception' and 'technology proneness'. However the discrepancy between these two variables is not very much stressed as in the preceding hypotheses. Following distributions prove this situation:



*4.5 The Demographic Characteristics of the Consumers in Conformity With Their Innovativeness, Information Seeking Behavior and Risk Perception.*

**Table 6. Demographic Characteristics of the Consumers in Conformity With Their Innovativeness, Information Seeking Behavior and Risk Perception.**

	Consumer Demographics				
Risk Perceptions, Innovativeness and Information Seeking Behavior	Age	Gender	Occupation	Education Level	Income Level
<b>A - PERCEIVED RISKS IN ONLINE SHOPPING</b>					
In online shopping of the above mentioned products, it is difficult for me to judge product quality adequately.	<b>Not Sustained</b>	<b>Not Sustained</b>	<b>Not Sustained</b>	<b>Not Sustained</b>	<b>Not Sustained</b>
It is difficult for me to compare the	<b>Not</b>	<b>Fema</b>	<b>Not</b>	<b>Not</b>	<b>Not</b>

quality of the above-mentioned products in online shopping.	<b>Sustained</b>	<b>le 85.5% (XX)</b>	<b>Sustained</b>	<b>Sustained</b>	<b>Sustained</b>
The above mentioned products if purchased online may not perform as expected.	<b>Not Sustained</b>	<b>Not Sustained</b>	<b>Not Sustained</b>	<b>Not Sustained</b>	<b>\$1601-300 72.6%</b>
<b>B - TECHNOLOGY PRONENESS</b>					
The people come to me to get my advice on new technologies	<b>Not Sustained</b>	<b>Not Sustained</b>	<b>Housewives 76.3%</b>	<b>Elementary 78.6%</b>	<b>\$3200 75.0%</b>
Technology gives people more control over their daily lives.	<b>41-62 48.9%</b>	<b>Not Sustained</b>	<b>Not Sustained</b>	<b>Middle School 43.7%</b>	<b>\$0-400 43.2%</b>
Products and services that use new technologies are more convenient to use.	<b>18-25 49.5%</b>	<b>Not Sustained</b>	<b>Wage and Salary Earners 52.1% (XX)</b>	<b>Middle School 50.5% (XX)</b>	<b>\$0-400 58.9%</b>
<b>C- RISK PERCEPTION AND RISK AVOIDANCE</b>					
When I start a project of my own, I sometimes think that it is better to leave them alone rather t make a mess of them.	<b>Not Sustained</b>	<b>Females 85.5%</b>	<b>Housewives 85.0%</b>	<b>Not Sustained</b>	<b>Not Sustained</b>
I always follow manufacturers warnings before moving the back plates of electronic products.	<b>Not Sustained</b>	<b>Not Sustained</b>	<b>Not Sustained</b>	<b>College-University 77.1%</b>	<b>%1601-3200 86.7%</b>
By using exact directions in the manuals about usage of a sophisticated product I seldom succumb into trouble.	<b>Not Sustained</b>	<b>Not Sustained</b>	<b>Not Sustained</b>	<b>Elementary 7.8%</b>	<b>Not Sustained</b>

<b>D - PHYSICAL RISK PERCEPTION</b>					
May be dangerous for me or some of my family members.	<b>26-40 51.3%</b>	<b>Not Sustained</b>	<b>Self-employed 54.3%</b>	<b>College-University 50.0%</b>	<b>\$1601-3200 61.3%</b>
Cheap hi-tech products could damage my health.	<b>Not Sustained</b>	<b>Females 41.6% (XX)</b>	<b>Wage and Salary Earners 72.1%</b>	<b>Not Sustained</b>	<b>Not Sustained</b>
Such products would not be safe for me or my family.	<b>26-40 32.5%</b>	<b>Not Sustained</b>	<b>Not Sustained</b>	<b>Not Sustained</b>	<b>\$801-1600 30.5%</b>
<b>E - CONSUMER INNOVATIVENESS</b>					
Other people come to me to get my advice on new hi-tech products..	<b>41-62 57.8% (xx)</b>	<b>Females 54.1%</b>	<b>Retired 61.9%</b>	<b>Elementary 60.1%</b>	<b>\$0-400 52.8%</b>
It is evident that I am more adapted to newer technologies than my friends.	<b>Not Sustained</b>	<b>Not Sustained</b>	<b>Retired 64.0%</b>	<b>Elementary 61.2%</b>	<b>\$0-400 65.1%</b>
In general, I am amongst the first in the cycle of my friends to acquire new technologies when they appear.	<b>62- 70.0%</b>	<b>Not Sustained</b>	<b>Wage and Salary Earners 58.1%</b>	<b>Elementary 62.3%</b>	<b>Not Sustained</b>
<b>F- FUNCTIONAL RISK PERCEPTION</b>					
Purchasing a well-known manufacturer brand is safer than purchasing a well-known store brand.	<b>62- 55.0%</b>	<b>Not Sustained</b>	<b>Not Sustained</b>	<b>Not Sustained</b>	<b>Not Sustained</b>

A product with a “famous” manufacturer brand will perform better than an store brand, even if the store brand is from a reorganized establishment	<b>Not Sustained</b>	<b>Not Sustained</b>	<b>Not Sustained</b>	<b>Elementary 50.0%</b>	<b>Not Sustained</b>
Store brands have worse performance than manufacturer brands	<b>Not Sustained</b>	<b>Not Sustained</b>	<b>Not Sustained</b>	<b>College-University 49.5%</b>	<b>Not Sustained</b>
<b>G – INFORMATION SEEKING BEHAVIOR</b>					
I often search for information about new products and brands.	<b>Not Sustained</b>	<b>Males 21.0%</b>	<b>Wage and Salary Earners 23.3%</b>	<b>Middle School 23.7%</b>	<b>\$3200 - 26.4%</b>
I frequently learn about new products and new brands.	<b>Not Sustained</b>	<b>Not Sustained</b>	<b>Not Sustained</b>	<b>Elementary 42.8% (XX)</b>	<b>Not Sustained</b>
I like to read magazines which give place to new products.	<b>Not Sustained</b>	<b>Females 21.9%</b>	<b>Not Sustained</b>	<b>Elementary 29.6%</b>	<b>Not Sustained</b>
<b>H – SOCIAL RISK PERCEPTION</b>					
Continuous using of new technologies and sophisticated products may make others look down upon me.	<b>Not Sustained</b>	<b>Females 33.3%</b>	<b>Not Sustained</b>	<b>Not Sustained</b>	<b>Not Sustained</b>
Using too much sophisticated and expensive products may negatively affect what the people think of me.	<b>Not Sustained</b>	<b>Females 69.1%</b>	<b>Housewives 67.5%</b>		<b>\$1601 -3200 59.0%</b>

**(XX) Accepted at  $p < 0.05$**



#### 4.6 Factor Analysis

An exploratory factor analysis reduces 45 variables to eight basic components as shown in Table 1. KMO test of sampling adequacy and scale reliability test proved high scores as 0.835 and 0.7311 respectively:

#### 5. Conclusion

The pragmatic approach of this paper first of all proved the inverse relationship between perceived risks and technology proneness of the consumers who purchase and use high-tech products. The proposition “technology gives people more control over their daily lives” proved that people may succumb less to ‘risk-anxiety’ if they properly cope with new technologies.

It is perplexing that the findings proved the contrary of what was anticipated as far as the relationship between consumer innovativeness and consumer information seeking behavior is concerned. The pre-though positive relationship turned out to be negative for most of the cases and the writers of this paper could not find a plausible reason for it except the divergent assumption that ‘innovators do not need too much information to be triggered by the attraction of new and sophisticated products’.

However, information seeking behavior pulled up caught its conventional function, when related to risk perception and risk avoidance. Here this relationship proved to be solid and the inverse relationship is evident at almost all levels of the analyses. “More information yields less perception of risks” is the motto of this comparison.

One of the important findings of this study is that technology-prone people do not care much about perceiving functional risks. They believe that they can command technologies rather than be embarrassed...

Finally from ‘consumer demographics’ point of view some outstanding conclusions are found as follows:

- a. Females and upper-middle income class perceive risks in online shopping.
- b. Youngsters, white and blue collar workers, middle school graduates and lowest income group are technologically prone.
- c. Risk perception and risk avoidance is more common among females, housewives, college and university graduates and upper-middle income group.
- d. Young adults, females, self-employed and white and blue collar workers, university graduates and middle income people care about physical risks more than other people.
- e. Mature and elderly people, females, retirees, wage and salary earners elementary school graduates and lowest income people see themselves as innovative consumers.
- f. Functional risk is perceived mainly by elderly people and university graduates.

- g. Information-seeking behavior is common amongst wage and salary earners and highest income group.
- h. Social risk is perceived by females, housewives and higher income group.

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