

DETERMINING CONSUMER RESISTANCE COMPONENTS TO INNOVATION AND THEIR INFLUENCE ON CONSUMERS' PURCHASE BEHAVIOR OF FOOD PRODUCTS

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ABSTRACT

Nowadays, the production of new goods and their acceptance by customers create value for organizations like a capital. This research aims to suggest attitudes on factors affecting the acceptance behavior of products by influential and potential customers. Five hypotheses were presented to achieve the research objectives in the form of the following variables: human relationships, perceived benefits, an individual's knowledge, and awareness, perceived risk, and individual's feeling. The present study is applied research in terms of purpose and the research method is descriptive survey type in terms of nature and method. The study is conducted in Alborz province, Karaj city and foodstuff consumers and customers are served as the population of the study. 84 questionnaires were distributed among customers and Confirmatory Factor Analysis and Structural Equation Modeling in Smart PLS software were used to analyze the data and hypotheses testing. The findings of the study show that the aspects of human relationships, human risk, and customers' perceived benefits have positive effects on the acceptance of new products.

Keywords: *Individual's Knowledge and Awareness, Human Risk, Individual Feelings, Perceived Benefits, Buyers' Acceptance Behaviors*

INTRODUCTION

Nowadays, product development is considered a growth factor for international companies. Indeed, product development and innovation allow the company to gain a competitive advantage and in turn attract and retain customers (Kotler and Keller, 2006).

For now, the consumers' response to new goods and products can be promising or disapproving for the company. Researchers believe that customer's attitude when accepting or refusing new products is somehow a consequence of resistance to innovation. In fact, the concluding decision of consumers can bring about the approval or rejection of new products. In addition, consumers may choose to adopt or resist to an innovation (Cornescua and Roxana Adamb, 2013).

Review of Literature

In a paper entitled "Exploring consumers' intention to accept smart watch", Shou-ChiChang et al., (2016) studied smart watch acceptance in consumer markets. They found several interesting results greatly different from earlier studies: (1) Attitude, often recognized as a weak mediator, is significant; (2) Ease of use was not significant, which implies that it should be the basic specification of smart watches; (3) Gender has no significant effect on acceptance

of smartwatches; and (4) Individuals 35–54 years old show a significant demand for enjoyment in their use of smartwatch.

In their paper entitled “Identifying design feature factors critical to acceptance and usage behavior of smartphones”, NaLiu and RuifengYu (2016) state that Smartphones are increasingly used all over the world. However, the effects of smartphone design features on smartphone acceptance and usage behavior are not well-known. Results of hierarchical regression analysis indicated that smartphone characteristics, touch feedback, and screen much influenced PEOU. PU was significantly related to Smartphone characteristics, application and PEOU. IU was significantly associated with Smartphone characteristics, PEOU, and PU. The usage behavior of smart phones was significantly related to connectivity, interface element design, PEOU and PU. Acceptance was measured on the basis of perceived ease of use (PEOU), perceived usefulness (PU), and intention to use (IU). The proposed model comprising demographic variables, design features, and acceptance-related variables could explain 76.5% of the variance in the usage behavior of smartphones.

An investigation conducted by Mansouri et al., (2015) titled “Acceptance of novel products: the role of religiosity, ethnicity and values,” the role and the driving force of religiosity and ethnicity and mediating roles of individual basic values and consumer innovativeness in influencing acceptance of novel products have been considered. His model has adopted 34% of variance in accepting the new products. Also, this model which is different from previous research in terms of authenticity/value that often focused on demographic and observable variables (e.g. age, race, religion) has focused on innovation acceptance. This research emphasized the influence of behavioral and psychological characteristics (e.g. religiosity, ethnicity, values, and innovativeness) on the consumer acceptance of novel products.

Fareena Sultan et al., (2010), in their paper entitled “Factors influencing Chinese youth consumers' acceptance of mobile marketing” confirmed the importance of risk acceptance and personal attachment in influencing mobile marketing acceptance, and support the “priming” effect of regular mobile phone usage on orienting consumers toward accepting mobile marketing initiatives.

In his paper entitled “Investigating the Factors Affecting the Adoption of Social Media in Customer Relationship Management”, Hosseinzadeh (2014) based on the findings resulted from the Friedman test, prioritized creation of segregated information according to the needs of customers, while the provision of the same facilities by social media for all users is the least priority among the factors influencing the adoption of social media information. Given the competition in the global market, Iranian companies should try their best to use these technologies to improve their products and services which help them curve a market in the global competitive environment.

In their article “Factors Affecting Internet Shopping Acceptance in the Aircraft Industry”, Bavejdan et al., (2014) stated that research findings show that three factors including, the quality of the website, the usefulness and direct trust and indirect perceived risk impact on the customer’s inclination for online-shopping. In addition, the effect of the ticket price on the tendency of air travelers to buy the online ticket is not approved.

In his research titled “The Effect of Individual Differences on Attitudes and Acceptance of Consumer towards the Product Innovation”, Meshkinfam (2014) showed that the diversity and



consumer knowledge about a product can impact on the attitude of the consumer towards the product innovation. However, the impact of risk aversion on consumer attitudes toward product innovation was rejected; also, the impact of attitude on consumer's acceptance of innovation was confirmed.

In his study entitled "Consumer Clustering on the Base of Their Shopping Styles and Examination of Its Relationship with Innate Innovativeness and NEO Personality Dimensions", Arjmand (2013) showed that cognitive, emotional and social motivation have positive and significant influence on innate innovativeness, while social motivation has a positive and significant influence on innovative-specific domains and functional motivations on alternate innovativeness. Also, there is a positive and significant relationship between alternate innovativeness and the relative acceptance time of the product and between the innovative-specific domains and the number of products ownership.

Rahnema (2013) conducted a research in order to investigate the factors affecting internet Banking acceptance by National Bank Customers in Kerman city using technology acceptance model and theory of planned behavior. Testing all research hypotheses, the results confirmed all the hypotheses so that attitude, perceived usefulness, perceived behavioral control, and mental norm showed a positive and significant relationship with the intention to use on-line banking. Perceived usefulness, ease of use and resistance to change showed a significant relationship with the customer's attitude toward using online banking. Computer-aided self-efficacy and technological support have also a significant relationship with perceived ease of use.

In a paper titled "Investigating Factors Affecting Resistance of Customers to Innovation Acceptance", Ghahremani (2012), presented eight hypotheses and the results approved five out of eight hypotheses. Complexity, perceived risk and positive attitude towards the existing products had a positive relationship, while there was a negative relationship between comparative advantage and the negative relation with customer resistance to smartphone purchases.

METHODOLOGY

This is a descriptive research in terms of nature and it is an applied study in terms of purpose. On the other hand, the research method is descriptive survey in terms of nature and method. This research is non-experimental one since the variables of research are not manipulated. The related literature was reviewed by library studies and in order to collect the required data, a questionnaire was distributed in the executive and operational stage of the investigation. The statistical population consists of customers and consumers of foodstuff in Alborz province, Karaj city. The nonprobability sampling method was used and using the Cochran formula, the sample size, 348 respondents, was determined. The Cronbach's alpha was considered to be a measure of scale reliability. The Cronbach's alpha is a convenient test used to estimate the reliability, or internal consistency of a composite score. It is the most commonly used when you have multiple Likert questions in the questionnaire that form a scale and you wish to determine if the scale is reliable. To calculate the Cronbach's alpha coefficient, first, the variance of the scores of each subset questionnaire items are calculated which is resulted in the total variance calculation. If the Cronbach's alpha for some subsets is above 0.7, the reliability of the instrument is confirmed. Using Cronbach's alpha and SPSS software, the



reliability measurement was performed. Therefore, the coefficient of confidence is calculated based on the Cronbach's alpha using the data obtained from the questionnaire and using the SPSS software. The composite reliability index is also used in addition to the Cronbach's alpha coefficient for reliability testing so that values above 0.7 for each structure indicate its robustness. SPSS and SMARTPLS are also used to analyze the data.

The theoretical framework of the study

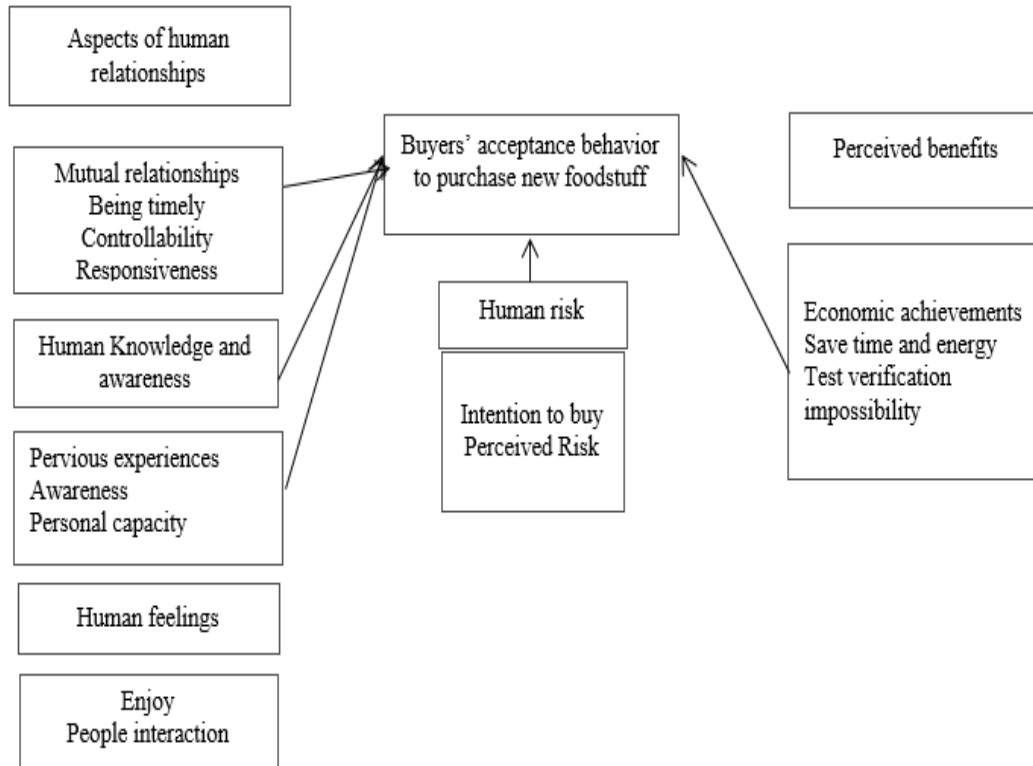


Figure 1: Conceptual model of the study: investigating the resistance components to the acceptance of the novel products and their impact on the consumers' acceptance behavior. (Patsiotis et al, 2013)

Research Hypotheses:

1. Consumers' human relationships in relation to the purchase of new products have a significant effect on buyers' acceptance behavior.
2. Perceived benefits of a new product by consumers have a significant effect on buyers' acceptance behavior.
3. Consumers' knowledge and awareness about new products have a significant effect on buyers' acceptance behavior
4. Consumers' perceived risk in relation to new products has a significant effect on buyers' acceptance behavior
5. Consumers' feelings about new products have a significant effect on buyers' acceptance behavior.

RESULTS

Testing the main hypotheses of the study

The First Main Hypothesis

H0: Consumers' human relationships in relation to the purchase of new products have no significant effect on buyers' acceptance behavior.

The significant coefficient (2.243) between the two variables of human relationships and buyers' acceptance behavior shows that the effect of human relationship on buyers' acceptance behavior is significant. Also, the standardized path coefficient value of human relationships and the acceptance behavior is 0.192 which indicates that the variable of the decision to buy is 19.2% in relation to the changes of buyers' acceptance behavior in reverse direction. Therefore, according to the results shown at the table below and given that the t-value is greater than 1.96 at a 95% confidence level, it can be said that the H0 hypothesis is rejected. So, human relationships have a significant effect on buyers' acceptance behavior.

Table 1: test results for the first main hypothesis

The First Main Hypothesis	Path coefficient	T. Value	Test result
Consumers' human relationships in relation to the purchase of new products have a significant effect on buyers' acceptance behavior.	0.192	2.342	Confirmed

The Second Main Hypothesis

H0: Consumers' perceived knowledge and awareness about new products have no significant effect on buyers' acceptance behavior

The significant coefficient (0.841) between the two variables of knowledge and awareness and buyers' acceptance behavior shows that knowledge and awareness have no significant effect on buyers' acceptance behavior. Since this coefficient is not significant and despite the path coefficient between the two variables is 0.082, it is not possible to decide about the significant extent and the amount of these variables. Therefore, according to the results shown at the table below and given that the t-value is lower than 1.96 at a 95% confidence level, it can be said that the H0 hypothesis is confirmed. So, knowledge and awareness have no significant effect on buyers' acceptance behavior.

Table 2: test results for the second main hypothesis

The First Main Hypothesis	Path coefficient	T. Value	Test result
Consumers' perceived knowledge and awareness about new products have no significant effect on buyers' acceptance behavior	0.082	0.841	Rejected

The third hypothesis

H0: Consumers' perceived risk in relation to new products has no significant effect on buyers' acceptance behavior.

The significant coefficient (2.532) between the two variables of perceived risk and buyers' acceptance behavior shows that human perceived risk has a significant effect on buyers' acceptance behavior. Also, the standardized path coefficient value of human risk and buyers'



acceptance behavior is 0.248 which explains the human risk variable by 24.8% from the changes of buyers' acceptance behavior variable in the direct path. Therefore, according to the results shown at the table below and given that the t-value is greater than 1.96 at a 95% confidence level, it can be said that the H0 hypothesis is rejected. So, human perceived risk has a significant effect on buyers' acceptance behavior.

Table 3: test results for the third main hypothesis

The First Main Hypothesis	Path coefficient	T. Value	Test result
Human risk in relation to new products has significant effect on buyers' acceptance behavior	0.248	2.532	Confirmed

The fourth hypothesis

H0: Consumers' feelings about new products have no significant impact on buyers' acceptance behavior.

The significant coefficient (0.007) between the two variables of consumers' feelings and buyers' acceptance behavior shows that Knowledge and human feelings have no significant effect on buyers' acceptance behavior. Since this coefficient is not significant and despite the path coefficient between the two variables is 0.001, it is not possible to decide about the significant extent and the amount of these variables. Therefore, according to the results shown at the table below and given that the t-value is lower than 1.96 at a 95% confidence level, it can be said that the H0 hypothesis is confirmed. So, human feelings have no significant effect on buyers' acceptance behavior.

Table 4: test results for the fourth main hypothesis

The First Main Hypothesis	Path coefficient	T. Value	Test result
Consumers' feelings about new products have a significant effect on buyers' acceptance behavior	0.001	0.007	Rejected

The fifth hypothesis

H0: Perceived benefits of a new product by consumers have no significant effect on buyers' acceptance behavior.

The significant coefficient (2.761) between the two variables of perceived benefits and buyers' acceptance behavior shows that perceived benefits have a significant effect on buyers' acceptance behavior. Also, the standardized path coefficient value of perceived benefits and buyers' acceptance behavior is 0.257 which explains that perceived benefits variable by 25.7% from the changes of buyers' acceptance behavior variable in the direct path. Therefore, according to the results shown at the table below and given that the t-value is greater than 1.96 at a 95% confidence level, it can be said that the H0 hypothesis is rejected. So, perceived benefits have a significant effect on buyers' acceptance behavior.

Table 5: test results for the fifth main hypothesis

The First Main Hypothesis	Path coefficient	T. Value	Test result
Perceived benefits of a new product by consumers have a significant effect on buyers' acceptance behavior	0.257	2.761	Confirmed

Table 6: Significance test of variables

Independent Variables	Dependent Variables	T. Value	Results
Human Relationships	Buyers' acceptance behavior.	2.360196	Significant
Human Knowledge and awareness	Buyers' acceptance behavior.	0.800364	Not Significant
Human Risk	Buyers' acceptance behavior.	2.271706	Significant
Human Feelings in relation to Products	Buyers' acceptance behavior.	0.00717	Not Significant
Perceived Benefits	Buyers' acceptance behavior.	2.88851	Significant

Table 7: The path coefficients and significant components of the model

Components	Significance coefficient	Dependent variable	Path coefficient	Significance results
Mutuality	1.455	New Products Acceptance	-0.079	Not Significant
Timely	1.254	New Products Acceptance	-0.102	Not Significant
Mutual Controllability	4.536	New Products Acceptance	0.237	Significant
Responsiveness	0.411	New Products Acceptance	0.02	Not Significant
Pervious Experiences	0.749	New Products Acceptance	0.062	Not Significant
Level of Individual Awareness	3.46	New Products Acceptance	0.172	Significant
Personal Capacity	0.907	New Products Acceptance	-0.05	Not Significant
Intention to Buy	4.044	New Products Acceptance	0.203	Significant
Perceived Risk	1.113	New Products Acceptance	-0.061	Not Significant
Enjoy	1.442	New Products Acceptance	-0.067	Not Significant
Interaction with Customer	1.176	New Products Acceptance	-0.073	Not Significant
Economic Achievement	0.939	New Products Acceptance	-0.06	Not Significant
Saving	3.933	New Products Acceptance	0.208	Significant
Test Verification	0.778	New Products Acceptance	-0.055	Not Significant



DISCUSSION AND RESULTS:

The results of the structural equation modeling test showed that the significant coefficient value of human relationships and buyers' acceptance behavior is equal to 2.360 which is more than 1.96. Also, the standard path coefficient between the human relationships and acceptance behavior variables is 0.192 suggesting that the variable of human relationships correlates with the change of acceptance variable by 19.2% and explains the changes of the acceptance variable. Reviewing the results obtained from the earlier research by Ataollah Harandi, it was found out that one of the easiest and cheapest ways to create value and acceptance of the new products of the organization by the customers are to use and show the relationship between the customers and the front line employees of the brand. Understanding customer issues and providing a framework for considering them in human resource management will result in increasing the brand value in the minds of customers, as well as the promotion of acceptance. Measuring the significance of the coefficient between the individuals' knowledge and awareness variable and the acceptance which is equal to 0.841 and the value of the significant coefficient between the variables of knowledge, awareness, and acceptance (0.082), it can be said that there is no significant relationship between these two variables. In their

study, Patsiotis et al., the results indicate that there is no significant relationship between these two variables that are consistent with the results of this study. Mohammadzadeh et al., (2017) states: If the buyer is satisfied or not with the purchased product, the information is returned to provide the customer with insight, trust, and consumer intent to buy. In other words, the level of satisfaction plays a crucial and ultimate role in creating knowledge and perception on the products and the knowledge and awareness has no beforehand effect on the decision to choose the product

The numerical value of 2.532 obtained for the relationship between human risk variables and the buyer acceptance behavior and the standardized path coefficient of these two variables indicates 24.8% of changes in acceptance behavior of buyers by the human risk variable. This also explains that the human risk hypothesis has a significant effect on the acceptance behavior of buyers. The results of the study conducted by Patsiotis et al., confirm a significant relationship between these two variables, and the path coefficient determined between the above variable is obtained as 0.640.

Examining the value obtained in the relationship between the variable of feelings of the people and buyer's acceptance behavior, the obtained number is 0.007 which is less than the criterion value 1.96. The standardized path coefficient is also equal to 0.001 that justifies the reason for rejection of the aforesaid hypothesis. The results obtained by Patsiotis et al., rejects this hypothesis as the standard path coefficient for people's feelings and buyers acceptance behavior is equal to (-0.318). Furthermore, Thaler (1985) believes that the consumers' decision to accept and buy a new product neither follows a rational process nor is on the basis of the feelings and emotions. Buyers' decisions are controlled by the direct impact of environmental and social forces. In fact, buyer shows its consumer behavior by taking into account the acceptance of their desired social group and imitation of the reference groups, as well as the social classes to which they belong.

Discussing the next hypothesis, the perceived benefits have a significant effect on buyers' acceptance behavior. The study of the coefficient of significance between the perceived benefits and the acceptance behavior of buyers, which is equal to 2.761, the value of 0.257 for the coefficient of significance between the two variables shows that the hypothesis is accepted at a confidence level of 95%. The obtained path coefficient in Patsiotis et al., the study is equal to 0.766 which confirms the significance of the relationship between perceived benefits and buyer acceptance behavior.

In their study, Chang and Wildt (1994) confirmed that perceived benefit is the first affecting factor on the intention to buy. Furthermore, the results of a study by Monroe and Krishnan (1985) confirm that perceived benefit of the product is based on this fact that intensity and weakness are determinants of inclination to buy which customers show. For example, the greater is the perceived value, the more inclination is to buy. In general, the results show a positive influence of perceived value and benefits on buyers' acceptance.

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