



Factors Causing Consumer Resistance to Innovation by Applying Resistance to Innovation Theory

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Abstract

Innovation resistance is the most vibrant field of study for the economic growth and success of organizations. Notwithstanding, innovation has been a significant focus of attention for scholars and organizations due to its positive and negative consequences. For instance, the success consequences of innovation, consumer delay, or postponement in the adoption of innovation might change this success into failure. Nowadays, many researchers try to determine the different factors that identify consumer behavior towards innovation resistance, which brought up consumer understanding and their good approach towards innovation. This paper, therefore, addressed various factors that affect consumer behavior in terms of resistance to innovation. However, the relationship between innovation features, user features, and consumer aversion to innovation encourages research to explore the phenomenon further. The study will look at the connection between innovation and consumer features and at the reticence of customers to innovation from Pakistan's perspective.

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1. Introduction

Companies dealing in the area of smart devices in Pakistan are Samsung, Nokia, Blackberry, Apple iPhone, and LG and the telecommunication services are being provided by Ufone, Mobilink, Warid, Telenor, and Zong (PTA). Importantly, among the aforementioned companies working in Pakistan, Samsung is seen far ahead in popularity among the users; whereas all other companies like Nokia, Blackberry, Apple iPhone and LG, etc. have remained unable to maintain their popularity in the market. Pakistan is a price-conscious market while more than 65 percent of the total users in Pakistan carry low-cost Chinese smartphones resulting in an unattractive market for all other brands like; Nokia, LG, Sony, and Huawei. Hence, the expensive value of Smartphones is one of the main reasons behind smartphones' low market share i.e. one percent market share in the market from 2007 to 2008 (Martin, 2007). Consequently, cell phone customers are unwilling to purchase smartphones i.e. Apple, Nokia, and Blackberry excluding Samsung. Similarly, all the Smartphone companies, except Samsung, have been facing huge challenges in selling their products in the market. According to "Nokia Corporation Interim" Nokia group net sales have been decreased by 22 percent per year in Pakistan. For instance, total sales of Smartphones are calculated at 244 million throughout the third quarter, with a rising share of Samsung shipments approximately 35 Pakistan. Comparing to Samsung sales with all other brands currently available in Pakistan, the collective shipments of Samsung alone is calculated larger than the total sale of all other brands like; Nokia, Apple, and Blackberry in Pakistan. Furthermore, Technological innovation implementation has been playing a significant role for the firms in long-run growth and survival (Tidd, 2010) mainly in a complex and dynamic market as well as an unstable economic situation. Consumers' behavior towards the latest ideas, technologies, or innovations, is one of the main triggers with respect to the emergence of innovation in the market. For instance, postponement in the adoption of innovation from the consumers' behavior towards the latest ideas, technologies or innovations, behind the failure of innovation consumer play a significant role and consumer could be considered one of the potential factor. Similarly, resistant behavior from consumers is one of the main factors that cause delay or resistance in the diffusion of innovations. Moreover, innovation characteristics and consumer characteristics are a few of the main elements in the perspective of adoption of an innovation. Erstwhile researches in the area of innovation and consumer characteristics explore a good correlation among the factors and adoption or implementation of innovations. The association among consumer and innovation characteristics and consumers' resistance towards innovation have been a source of inspiration among research to explore the phenomenon further. The study intends to explore the factors affecting "consumer resistance" to innovation by the relationship between innovation, consumer characteristics, and resistance to innovation by the consumer in the perspective of Pakistan.

1.1 Resistance to Innovation by Consumer

To understand the concept of resistance to innovation. However, innovation resistance is the most vibrant field of study for the economic development of the country. Nowadays, many researchers try to analyze the variables which identify the consumer behavior towards innovation resistance, which brought up consumer understanding and their good approach towards innovation (Cornescu & Adam, 2013). In addition, Mohtar and Abbas (2015), argued that the consumer response towards innovation always creates resistance to innovation because of their personal beliefs and norms structure. On the other hand, Cornescu & Adam, (2013) suggested that innovation acceptance is the consequence of increasing the resistance attitude towards innovation (Cornescu & Adam, 2013).

On the other hand, one aspect of resistance to innovation was that it occurs due to change executed by innovation like changes in consumption patterns or a product called changes due to the resistance of innovation (Mohtar & Abbas2015; Gatignon & Robertson, 1991). In addition, Zaltman and Duncan (1977), define it as "any behavior that maintains the status quo is facing pressure to change the status quo." The main reason behind this change which occurs due to innovation is basically a common reaction by human beings that change their lifestyle as well as change their living standard (Watson, 1971; Zaltman & Duncan, 1977). Another definition is given by Ellen et al. (1991) and Schein (2010), which stated that "it is not an innovation per se that people resist, but the changes associated with it". Thus, resistance to innovation is one of the vital and important variables for the adoption of technological innovation (Szmigin & Foxall, 1998). In previous studies, the resistance and adoption were two different consumer responses towards change that mainly happened due to innovation (Mohtar & Abbas, 2015; Lapointe et al., 2002).

A large number of researchers analyzed that sometimes consumer's reaction towards innovative products was less excited even though the product is new and successful, this minimum excitement of consumer response towards innovation is called resistance to innovation (Ellen & Bearden, 1991).

There is less number of studies that have been focused on resistance to innovation by consumers in the context of product and service adoption (Mohtar & Abbas 2015; Brehm 1966; Brehm & Brehm 1981, 2013). Research on consumer behavior by emphasizing consumers or individual resistance is important because their perception about products plays a significant role in resistance to innovation by the consumer. Resistance to innovation by the consumer is very important due to its positive and negative consequences like success or failure of the innovations (Yu et al., 2015; Mohtar & Abbas, 2015; Leonard, 2004). Moreover, some of the studies that have done on resistance to innovation (e.g. Yu et al., 2015; Mohtar & Abbas, 2015; Leonard, 2004) to identify the factors which determined the resistance to innovation but still some lacking remained, unexplored and neglected in determining the factors influencing the consumer resistance to innovation. Hence, to fill the gap in the discussed literature, this study identified the most imperative predictors which determined consumer resistance to innovation.

Despite all the argument which emphasize the importance of consumer resistance to innovation, there is still a limited number of studies which demonstrate the link with the customer, innovation characteristics and resistance to innovation by the consumer.

1.2 Underlying Theories of Innovation Resistance

Reviewing the previous literature reveals some challenging models which have been mostly used by different researcher to predict consumer resistance to innovation. These models include innovation resistance theory (Ram, 1987) and appraisal theory (Arnold, 1960).

2. Innovation Resistance Theory

In 1987, Ram and Sheth initially developed innovation resistance theory which is based on two dimensions like consumer characteristics, innovation characteristics, and also discuss the reasons of consumers who cannot accept innovation. Besides, Ram and Sheth specified the reasons that consumers resist innovation is just because of the difficulties produces the change and conflicts through innovation. These conflicts can be a consumer's barriers and these are divided into psychological and functional barriers.

The barriers that stop the adoption of an innovation comprise image and tradition barriers known as psychological barriers. Similarly, Psychological barriers are usually caused by a consumer's previous belief (Ram & Seth, 1989). Other than that, according to this theory consumer personal beliefs are also influenced by some factors for example (motivation, perceived as personality value positioning, perception, behavior, attitude, previous experiences about innovative products, norms and their belief structure, age, education, and income) which lead consumer resistance to innovation.

Furthermore, consumer characteristics perceived by consumers determine the extent of consumer resistance. The key factor in innovation resistance is customer personality. For the purposes of new knowledge, diversity seekers or innovators enjoy creativity and are therefore less resistant to creative goods. For example, personality traits play an important role in the response of consumers to innovation. In the case of inventions which can't be tested before buying, for example. A less efficient customer would have been reasonably seen to wait until product performance. The relationship between self-efficacy and customer resistance to innovation is therefore negative (Rokeach, 1973).

Motivation is one of the consumer's predictors or causes of innovation resistance. Consumer habits focused on "consumer clothes" are immune to change (Sheth 1981). To satisfy consumers rather than with the current routine and to prevent innovation from disrupting existing patterns of use, consumers should stand up to innovation. Motivation thus has a negative relation to market innovation resistance.

On the other hand, the barriers that stop the adoption of an innovation comprises risk, usage, and value barriers known as functional barriers. For instance, these functional barriers arise if a consumer sees some significant changes from adopting an innovative product (Ram & Seth,

1989). Furthermore, Ram's resistance to innovation theory also includes innovation characteristics such as Perceived Risk, Relative Advantage, Complexity, and Better Product Adoption as factors that influence the adoption of innovation or the main reasons for rejection of an innovation.

Other than that, a price is another innovation characteristic which is the economic reason for the delay of the consumer clash with the current approach of use of the product. Furthermore, economic factors like price are the sole predictor of the rate of adoption because the term rate of adoption means it can be adopted or rejected (Rogers and Shoemaker (1971) Which implies that when the price of new products is high, the rate of adoption is decreased which ultimately increase the consumer resistance to innovation.

With respect to the innovativeness of consumers has also been based on innovation theory. Rogers and Shoemaker (1971), defines consumer innovativeness as "the degree to which an individual is earlier in adopting new ideas than the average member of his or her social system". Fundamentally, that consumer who has a great degree of innovativeness are categorized via (Blackwell, 2006) a readiness to create changes in the things and ideas; (Boone, 1970) characteristics of the consumer to impact on others to select the innovative products and ideas; (Greenleaf, and Lehmann, 1995) is very useful for the consumer for a good decision as well as for the problem solution in a social system or organization and (Guiltinan, 1999) the suitable time and degree of selection of the said modification in a practical correlation.

Hence, in 1989, Ram and Seth argue that rejection is the strongest form of consumer resistance to innovation as compared to other outcomes such as postponement, and delay which are mainly affected by situational factors or innovation factors. For example, product perceived complexity leads to the adoption or rejection of the innovation.

2.1 Determinants Influencing Consumer Resistance to Innovation

2.1.1 Innovation Characteristics

As per Ram (1987) "Characteristics of innovations" are categorized into two perspectives, the first perspective is related to consumer independence and the second perspective is consumer dependent. With respect to the view of Ram (1987), aspects of consumer independents perspectives may be anticipated to build a similar type of resistance through all the consumers and although it is out of the scope of that study. Furthermore, the impacts of Consumer-dependent components differ from consumer to consumer. "Innovation characteristics" (customer dependent) elements impact on decision-making ability of the consumer to accept a different product that components are; complexity, perceived risk, price, relative advantage, and social influence. Ram, (1987) stated that gaining knowledge from these factors and their influence on "resistance to innovation" is important for innovation success.

2.2 Consumer Characteristics Factors

For this research, we have selected "motivation" feelings like negative emotions is ignored the point of view in consumer resistance to innovation, as motivation and negative emotion are considered as the main key aspect predicting customer behavior. Also, Barczak *et al.*, (1997),

conducted a study to analyze the part of current products in generating consumer's level of resistance. Moreover, self-efficacy has been included, as it is considered contributing a big part in technical innovative products (Ellen *et al.* 1991, Compeau & Higgins 1995). One of the reasons behind selecting these aspects is because of their simple statistical procedure and intense use by different researchers (Barczak *et al.*, 1997, Wang *et al.*, 2008, Wang *et al.*, 2003).

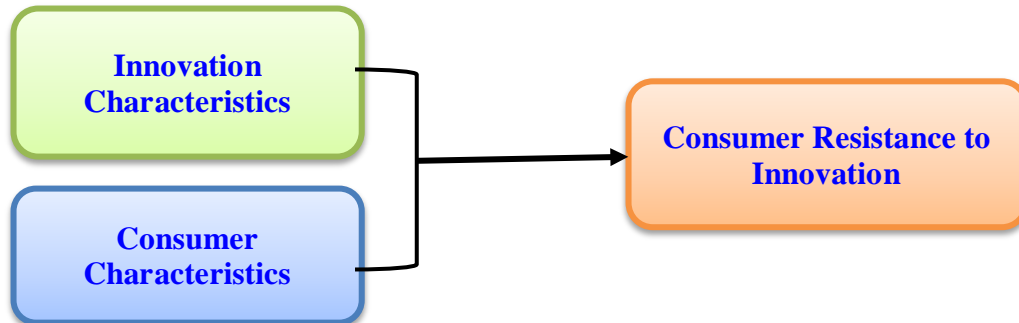


Figure 1: Propose Framework.

3. Material and Methods

Students from public universities in Pakistan are among the respondents to this survey. In these seven public universities, there are approximately 72 000 students full-time, representing the study population. Hair *et al.* (2017) proposed that a good sample size for the statistical analysis should be at least 10-20 times more than variables in evaluating a suitable sample which could yield accurate results for the study. This study's total sample size is 300.

To calculate all the study variables in this study, the questionnaire was adapted from previous researchers and adapted accordingly to the sample. There were two elements of the survey questionnaires. In the first component, many Likert-type scale items were included and in the second component, the faculty members of that study (the respondents) identified the population data. The Likert scale was used to assess how strongly the respondents agree with a specific statement or disagree with it (Sekaran & Bougie, 2010 2003). The 6-point Likert scale is to give respondents more choices and to better capture heterogeneity in terms of adoption and refusal.

4. Data Analysis

4.1 Measurement Model

The measuring model was tested to ensure the validity and reliability of the model. The load should be 0.5 and higher as per the rule of thumb, as for the average variance extracted, it should be above 0.5. This strategy, based on the following argument, should also be deleted from all external charging objects below 0.5, each with the lowest value, as it increases the consistency of the data (Hair *et al.*, 2017). In line with the suggestion of Anderson and Gerbing (1998), this section provides a brief explanation of the modeling procedures. Table 1, the high values of Composite Reliability and Cronbach's Alpha confirm the validity of the data.

Table 1: Convergent Validity

	AVE	Composite Reliability	Cronbach's Alpha	Communality
COM	0.616	0.865	0.794	0.616
CR	0.679	0.925	0.895	0.679
EMO	0.632	0.835	0.719	0.632
MOT	0.613	0.863	0.791	0.613
P	0.554	0.831	0.737	0.554

Table 2: Discriminant Validity

	COMP	CR	EMO	MOT	P
COMP	0.785				
CR	0.414	0.744			
EMO	0.321	0.451	0.810		
MOT	0.065	0.136	0.266	0.790	
P	0.087	0.271	0.340	0.363	0.784

As Table 2 shows, this study shows discrimination, based on contrast between latent parameters, discriminatory validation to ensure the external consistency of the model as shown in Table 2 which summarily, the AVE of the variables are: complexity (COMP) = 0.785; consumer resistance (CR) = 0.744; consumers' emotions (EMO)= 0.809; consumers' motivation (MOT) = 0.789; and product price (P) = 0.784.

4.2 Hypothesis Testing

Table 3 reveals that all the endorsed and approved research hypotheses have t-values greater than 1.64 and the rejected hypotheses have no more than 1.64. In this analysis, four (4) directly related hypotheses were proved to be supported.

Table 3: Direct Hypothesis.

Hypothesized Path	Path coefficient	Standard Error (STERR)	T Value	P-Value	Decision
COMP -> CR	0.343	0.111	1.802	0.036	Supported
EMO -> CR	0.312	0.105	2.970	0.002	Supported
MOT -> CR	0.194	0.102	1.804	0.036	Supported
P -> CR	0.189	0.198	1.927	0.027	Supported

5. RESULTS DISCUSSION

5.1 Direct Relationship Between Price and Consumer Resistance to Innovation

This hypothesized connection between price and consumer innovation resistance shows that price has an important impact on consumer innovation resistance. The research findings also support this hypothesis with beta values ($\beta = 0.188$, $t = 1.927$ $p < 0.05$) which indicates that price has a positive significant influence on consumer resistance to innovation. The findings of this study verify the results of earlier studies (Kotler and Keller, 2012, Ram, 1987).

Consistent with the underline assumption of Rogers (1971) diffusion of innovation theory the research findings of this study validated by the model of Rogers (1971) which postulates that innovation price is the major economic reason such as (price), which is the major factor of delay of the consumer conflict with the current approach of use of the products. On the other hand refusal

of innovation by consumers indicated significant unwillingness to select or adopt the innovation. Besides, the theory of materialism explains the customer's higher perceived value of all luxury products, which including high innovative products or new technology, because these types of products are usually paid at a reasonable high price (Vitzthum, 1995). Furthermore, the Smartphone can affect consumers' purchase intentions, but it must impose an abnormally high price. For example, a luxury product such as smartphones becomes a normal good or even an inferior good, if the purchasing power of global consumers has risen which means that everyone can own a Smartphone, therefore it is no longer the badge of social status (Abbas et al., 2017).

5.2 Direct Relationship Between Complexity and Consumer Resistance to innovation

This study hypothesized complexity has a significant positive influence on consumer resistance to innovation with beta value ($\beta = 0.342$, t-value $T = 1.801$, $p < 0.05$), so the empirical results of this hypothesis could confirm that the higher the complexity, the higher the consumer resistance to innovation. The significant result of this study consistent with the results from past studies such as (Dunphy & Herbig, 1995, Tan & Teo, 2000; Holak & Lehmann, 1990, Gu et al. 2009; Luarn & Lin 2005). The results of this study verify the findings researchers have been looking complexity has a positive influence on consumer resistance and negative influence on consumer adoption (Tan and Teo 2000).

For the validation of results of this study, a vast body of research suggests that there is a strong and significant impact of the complexity of new technology on its adoption and its rejection (Gu et al., 2009; Luarn & Lin, 2005; Venkatesh & Devis, 2000).

Most of the past kinds of literature have been done on the western context that is not applicable in the Asian context. Because according to Abbas et al., (2017) every country has different preferences and characteristics which vary from culture to culture, so Pakistan is a collectivist and power distance country in which people have different preferences related to adoption and rejection of new technology. On the other hand, most of the past pieces of literature have been done on Internet banking, mobile banking, self-service technology, online e-banking but limited literature have been done on the resistance to innovation especially in Smart Phones (Dunphy and Herbig, 1995, Tan and Teo, 2000, Holak and Lehmann, 1990).

5.3 Direct Relationship Between Motivation and Consumer Resistance to Innovation

This study hypothesized motivation has a significant positive influence on consumer resistance to innovation with beta value ($\beta = 0.193$, t-value $T = 1.804$, $p < 0.05$), so the empirical results of this hypothesis could confirm that the higher the consumer motivation, the higher the consumer resistance to innovation. The significant result of this study consistent with the results from past studies such as (Lee et al., 2007, Davis et al., 1992).

Previous research also validates important results of motivation with consumer resistance to innovation, motivation is described as having direction, power, and determination (Abbas et al., 2017). Although Pinder (2008) brought up that capability and circumstances can't be viewed as factors of motivation. Parker and Ohly, (2008) cleared up that motivations are affected by external powers at both macro and micro levels. Motivation is a significant factor that creates resistance to innovation by consumers. Significant findings of this study also validated by Diefendorff and Chandler (2010) define motivation as "an unobservable force that directs, energizes, and sustains behavior over time and across changing circumstances". Moreover, motivation is defined as "goal-directed excitement" which pushes buyer needs It involves inside procedures that offer conduct or behaviors through the direction and control. Control in terms of power described a strength, determination, and focus behavior concerned, and the direction gives a particular objective to the behavior (Abbas et al., 2017).

5.4 Direct Relationship Between Emotions (negative) and Consumer Resistance to Innovation

This study hypothesized emotion (negative) has a significant positive influence on consumer resistance to innovation with beta value ($\beta = 0.311$, t-value, $T = 2.969$, $p < 0.05$), so the empirical results of this hypothesis could confirm that the higher the consumer emotion (negative), the higher the consumer resistance to innovation. The significant result of this study consistent with the results from past studies such as (Abbas, Nawaz, Ahmad, & Ashraf, (2017) The results of the findings verify that Emotions are an essential element of customer response, and the significance of emotions in the field of buyer behavior was founded (Abbas et al., 2017). According to Phillips and Baumgartner, (2002) emotions related to consumption are influenced by each actual product functionality and performance of disconfirmation of anticipation (Chitturi, Raghunathan, and Mahajan 2008).

Consistent with the previous findings which validate the significant and positive relationship with resistance to innovation revealed by Bagozzi and Lee (1999) noted that emotional resistance to innovation comes from negative emotions such as anger, fear, sadness, and disgusted guilt, shame, humiliation, and the envy. Anger happens when another consumer makes one be unsuccessful to achieve a normal reward and creates resistance to innovation. Fear happens when either a threat is anticipated or conceivable disappointment to get a prize is anticipated which influences consumer behavior caused consumer resistance to innovation. Disappointment comes about external occasions to stop the occurrence of a wanted reward which impacts individual consumer willingness to buy or reject or resist the innovation. Disgust results when outside circumstances upset one's gustatory objectives caused negative emotion and create consumer resistance to innovation. These are emotional states and create negative related to innovation which creates consumer resistance to innovation. Rejection of an innovation results, to some degree, from the assessment of a product's new promotions and the expected outcomes of its adoption, additionally the negative emotions included. The previous studies discovered that

emotions have a positive association with resistance to innovation by consumers and verified the results of this study.

6. Conclusion

The fundamental objective of this research is to study consumer resistance determinants in Pakistan. The result is not unexpected in Pakistan, which has diverse cultures, languages, and social values. Higher prices thus indicate greater resistance to market innovation. Furthermore, Social standard implicitly affects the decision to use a smartphone by affecting perceived pleasure and typically resists using a smartphone. The majority of the literature discussions deal with works in the western context that are not relevant in the Asian setting since each country has various preferences and qualities that vary from culture to culture. That includes Pakistan, collectivism, and the country away from influence, where people differ from country to country in relation to new technologies adopted and rejected. Also, encouragement has guidance, strength, and commitment to pick the creative product or to reject it. This study, therefore, shows that motivation is critical and, because of their way of life in Pakistani society, has created a consumer resistance to innovation in Pakistan. It is also confirming that emotion is a fundamental component of client reaction and that the sense of emotion is built in the area of customer behavior.

7. Availability of Data, and Material

Data can be made available by contacting the corresponding author.

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