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Factors Influencing Consumer Resistance to Innovation (Smartphone)

Shahimi Bin Mohtar and Mazhar Abbas

University Utara Malaysia

Abstract: Themotive behind this study is to explain the consumer resistance to innovation. In this study smartphone is considered as an innovation. In mobile phone technology smartphone are very famous and very good communication tool. Smartphone are providing different and multiple functionalities and usage to the consumer. In the dynamic market different expert in this industry facing problems like low market share and decreasing sales. Researcher identified two factors which influence consumer behavioral intention to resist the innovation like smartphone: perceived risk and perceived complexity. Data were collected from 200 respondents through a self-administered questionnaire and correlation was used to analyze the relationship. Our result indicates that both factors have significant influence on consumer i.e resistance to innovation. This is ignored perspective in the research. Consumer resistance as consumer intention to adopt or reject the product makes very important difference in success of innovative products.

Key words: Consumer Resistance • Smartphone • Perceived Risk • Perceived Complexity

INTRODUCTION

There was a lot of research on Smartphone in respect of the behavior of consumers. As consumption of smartphones has increased in recent years, the majority of mobile phone manufacturers began spending billions to develop more user friendly, interactive smartphone for consumers. Similarly Sheth [1] studied attitude of the consumer regarding consumer resistance to innovation and anticipated two constructs which depicts the consumer psychology, that were defined important for accepting the thinking consumer about resistance to innovation. All are called consumer psychological theories or concepts behavior or habits of consumer about current products and the risk perception related with the adoption of innovation or rejection. In addition, several researchers identified that complexity negatively associated with the innovation diffusion and as well as positively correlated to innovation resistance [2, 3]. Overall perceived risk and complexity is the reason for the purchase and consumption of a product to maximize a resistance innovation consumer. However, this research will focus primarily on customer perceived risk as well as the perceived complexity and its impact on the deviant behavior of consumers and performance.

The technology is considered one the best instruments that improve the performance of the consumer. Much research has been conducted on technology adoption and its impact on consumer behavior 'and how they use it, its impact on performance and satisfaction. However, it seems that no attempt to study to examine the impact of perceived risk and perceived complexity of smartphones and its impact on the deviant behavior of consumers in the market.

Literature Review: While a number of publishers argued the concept of consumer resistance [4,5] and, implicitly or explicitly recognized the importance of consumption or 'against' 'negative' [6-10], there were few attention paid to the conceptualization the notion of in-depth individual consumer resistance [11,12]. Furthermore, the research that does exist is largely theoretical with little effort devoted to the explanation and empirical validation of consumer resistance. Therefore, we need a more detailed discussion of the concept of consumer resistance.

[13] Explicitly require research that explores consumer resistance to innovation as a specific form of behavior, conceptually separated from the adoption of innovation. Many researchers argue that the characteristics defined in the search for adoption are not

typically the factors that lead to innovation active resistance and that resistance could prevail despite the presence of many 'adoption-related "characteristics [14,15]. However, other researchers point out that the studies on the characteristics of innovation, such as diffusion theory Rogers' can offer useful information and therefore should not be completely ignored [16-18]. The current discussion integrates these theoretical reflections on the theory of consumer resistance characteristics of innovation perceived Rogers', in order to create a broader perspective on this important issue.

Characteristics of Innovation That Create Resistance:

[19] Concise the hurdlesparalyzing the willingness to take an innovation in two classes: psychological barriers as well as functional barriers. The barriers like functional happen when the variations perceived through consumers or adopt or innovation is not important. In this group included the usage barriers, value barriers and risk barriers. When innovation are not according to the consumers current habits or demands then usage barriers occurs for novel products; because new things or products need variations in the daily life of the consumers. Hurdles in value represent the shortage of innovation gains over alternatives. Finally the risk barriers representing the vagueness of buyers, in the presence of each type of innovation, probable barriers and its disadvantages. Thus four major kinds of risk embedded in a novelty. Physical risk: risky innovation may harm to the consumer physically for example adopting insecticides or new drugs which can harm the cultivation; Economic risk: the greater the price of a major innovation is the financial risk that cannot value and after it can be best innovation and having best performance and quality for the consumers like in the computer market functional risk also exist named perceived risk as different risk uncertainties of consumers with product performance that denotes to the probability that innovation cannot completely verified and consequently cannot function properly; Social risk: the consumer cannot adopt an innovation because they are afraid of reducing their acceptance in their peer group or being ridiculed.

Another two psychological factors traditions and norms Suggest that culture and society create socalled diffusion thresholds, when innovations go beyond this threshold they will be resisted [20]. Furthermore [21] Suggests that innovations that are closer to traditional norms are more acceptable, whereas innovations that deviate from these ideas (i.e., innovative day care centres) are resisted at first.

Perceived Risk Associated with Innovation (Smartphone): Risk concept is fundamental to many problems and issues, including the economy, management and public services fields [22]. Especially in the context of mobile services, the risk plays an important role in influencing consumers' behavior since the technologies of mobile marketing services involved, online transactions, Internet, download tasks and many others that may include some important potential risks. Risk perceived was claimed as a key element of relations Buyer Seller [23,24].

[25-27] brought the perceived risk concept which is another different concept in the innovation adoption and diffusion of innovation, that is then added through [28,29] perceived risk is another determinant influencing consumer resistance to innovation. Here researcher introducing the extent of perceived risk related to the new product adoption which is very innovative and novel. It is considered negatively associated with adoption and positively associated with consumer resistance to innovation [30,31]. Latest product or advanced technologies can be perceived through consumer are very risky. So the different scholars revealed that perceived risk is primary factor of adoption like consumer eagerness about novel or innovative products [32]. It is very tough to interpret the truth about perceived risk regarding consumer resistance to innovation [33,34]. With respect to the impact of an action including the risk perceptions, is the critical aspects which formulate the attitude into action, therefore perception of risk about new product might increase the resistance by consumer risingafter the adoption of novel products. Consequently, perception of risk is supposed to have positive correlation with resistance to innovation by consumer. Although in situations when a consumer evaluated and regarded to take a novelty, risk and uncertainties sensed create barriers substantial adoption. The innovation continuouslycontains a certain levelof perceived risk due to consumer uncertainties, so that the innovation connectedby significant perceived risk, have the slowest degree of innovation diffusion and for consumers higher "resistance.

Furthermore in conclusion three types of risk (financial, performance and security risks) were found important in the case of smartphones. After the past research on risk perception and risk behavior of consumers towards innovation, we assume perceived risk generates positive effects on to consumers' resistance to smartphones.

Preposition: The higher the perceived risk, the higher the consumer resistance to smartphone

Perceived Complexity Associated with Innovation (Smartphone): Complexity, recognized by Rogers as "the degree to which the innovation is perceived as relatively difficult to understand and use", is one of the six risk of adoption responsible for the slow diffusion of a product. More recently, the found that perceived complexity lower the likelihood of a rapid adoption. Complexity risk was generally identified to be relatively less important than the others, to influence the spread, however, this is definitely not the case of high-tech products, analyzing the acceptance of information technology, verified that the ease of use and usefulness not only theorized to be fundamental determinant of use, but also highly correlated foundperceived by consumers the costs of higher learning when components are added to the product, each additional feature is a thing that can be misunderstood and another thing to search for when looking for what you want. In this direction, successfully hypnotized a relationship between the increase in the number of features and the decrease of the usability of the product.

Preposition: The higher the complexity, the higher the consumer resistance to innovation

MATERIALS AND METHODS

Population of the Study: The sample is selected from the huge population comprises of university graduates who use the mobile technology like smartphone. Among these students author selected students as a unit of analysis. The overall population of public universities in Pakistan is 70,000.

Sample Size: According to the proposed that the sample size of the study no less than 200. Furthermore as per numerous studies used 100-150 appropriate sample size by using the structural mathematical display. According to the previous studies point of view the current study sample size is 200. Thus the current study fulfilling the minimum criteria recommended by various studies.

Data Collection Procedure: For the validation of proposed model researcher used survey method to check the consumer intention to resist the innovation like smartphone. The questionnaire was developed based on previous literature review to make sure content validity. The instruments wording adapted according to our

Table 1: Demographic Factors

		Frequency	Percentage
Age	20-30	49	24.5
	30-40	105	52.50%
	40-50	35	17.60%
	50 Above	11	5.4
Gender	Male	78	38.75%
	Female	136	68.25%
Brand of Smartphone	Nokia	48	23.70%
	Samsung	102	51.30%
	LG	20	9.60%
	Apple	30	15.40%
Service Provider	Ufone	47	23.80%
	Mobilink	70	35.20%
	Telenor	52	25.70%
	Warid	13	6.30%
	Zong	18	9%
Personal monthly spending	10000	55	27.3
	10001-15000	57	28.7
	15001-20000	65	32.6
	20001-25000	19	9.4
	N.A	4	2

Table 2: Descriptive Analysis

Descriptive Statistics						
	N	Minimum	Maximum	Mean	Std. Deviation	
PRISK	200	1.17	6.00	4.0483	.89052	
COMP	200	1.20	6.00	4.0230	1.02220	
CR	200	1.55	5.82	3.9882	.77773	
Valid N						
(listwise)	200					

context. The participants have been asked to check the best option which describes their best level of agreement with the given statement. Every question were measured on six point likert scale, ranging from (1) disagree very much to (6) Agree very much. The full survey has been distributed among the participant for the data collection. It was totally self-administered survey. 400 questionnaire distributed among the respondents to reduce the biasness of the research.

Data Analysis: Here researcher followed SPSS version 16.0 correlation analyses was used to identify the relationship between two independent and consumer resistance to innovation.

Descriptive Analysis: The table below summarizes the results of by describing collected data based on 200 observations. The statistical findings the data which is empirical in the table represents that consumer expects good and better smartphone because of the risk and complexity which also a high value 4.04 and 4.02. Little resistance with the less standard deviation value was

identified that can be named as buyersunbiasedreaction regarding resistance. As the stated that fewer excitedreaction of consumer for innovation are called consumer resistance to innovation.

RESULTS AND DISCUSSIONS

The following table showing the correlation analysis.

Correlations							
		PRISK	COMP	CR			
PRISK	Pearson Correlation	1	.338**	.363**			
	Sig. (2-tailed)		.000	.000			
	N	200	200	200			
COMP	Pearson Correlation	.338**	1	.373**			
	Sig. (2-tailed)	.000		.000			
	N	200	200	200			
CR	Pearson Correlation	.363**	.373**	1			
	Sig. (2-tailed)	.000	.000				
	N	200	200	200			

^{**.} Correlation is significant at the 0.01 level (2-tailed).

In this analysis relationship between perceived risk and consumer resistance to innovation is positive correlation between these two variables r=0.36, n=200, p<.0005 that shows higher the perceived risk higher the consumer resistance to innovation. According to the previous findings shows that perceived risk having positive relationship higher the perceived risk, the higher the consumer resistance to innovation. Perceived risk and complexity have positive effectsi.e. increase consumer resistance. Same as there was a positive correlation positive correlation between perceived complexity and consumer resistance to innovation where r=0.37, n=200, p<.0005 that shows higher the complexity, the higher the consumer resistance to innovation.

CONCLUSION

In conclusion through previous research different researcher conducted on two psychological constructs to identify the impact of perceived risk and complexity on consumer resistance to innovation. Researcher identified through deep insight of previous literature risk as an additional dimension in the diffusion and adoption of innovation as another factor affecting consumer's resistance to innovation like smartphone. Majority of the authors identified that perceived complexity have positive relationship with consumer resistance to innovation. The higher the complexity, the higher the consumer resistance to innovation. From above results also identified that perceived risk and complexity have positive effect i.e. increase consumer resistance to innovation.

REFERENCES

- 1. Ram, S., 1981. A model of innovation resistance, Advances in Consumer Research, 14(1): 208-212.
- Dunphy, S. and P.A. Herbig, 1995. Acceptance of innovations: the customer is the key! The Journal of High Technology Management Research, 6(2): 193-209.
- Tornatzky, L.G. and K.J. Klein, 1982. Innovation characteristics and innovation adoptionimplementation: A meta-analysis of findings, Engineering Management, IEEE Transactions on, (1): 28-45.
- 4. Gatignon, H. and T.S. Robertson, 1989. Technology diffusion: an empirical test of competitive effects. The Journal of Marketing, pp. 35-49.
- Ram, S. and J.N. Sheth, 1987. Consumer resistance to innovations: the marketing problem and its solutions, Journal of Consumer Marketing, 6(2): 5-14.
- 6. Garrett, D.E., 1987. The effectiveness of marketing policy boycotts: Environmental opposition to marketing, Journal of Marketing, 51: 46-57.
- Kozinets, R.V. and J.M. Handelman, 1998. Ensouling consumption: A netnographic of the meaning of boycotting behavior. Advances in Consumer Research, 25: 475-480.
- 8. Saba, A., S. Rosati and M. Vassallo, 2000. Biotechnology in agriculture: Perceived risk, benefits and attitudes in Italy. British Food Journal, 102(2): 114-122.
- 9. Lapointe, L. and S. Rivard, 2005. A multilevel model of resistance to information technology implementation. MIS Quarterly, 29(3): 461-491.
- Peñaloza, L. and L.L. Price, 1993. Consumer resistance, A conceptual overview. Advances in Consumer Research, 20: 123-128.
- 11. Garcia, R. and T. Atkin, 2002. Coo-petition for the diffusion of resistant innovations: A case study in the global wine industry, Institute for Global Innovation Management Working Paper, 5(2): 1-22.
- 12. Ram, S., 1987. A model of innovation resistance, Advances in Consumer Research, 14(1): 208-212.
- Herbig, P.A. and R.L. Day, 1992. Customer acceptance. The key to successful introductions of innovations. Marketing Intelligence & Planning, 10(1): 4-15.
- Molesworth, M. and J.P. Suortti, 2002. Buying cars online: The adoption of the web for highinvolvement, high cost purchases, Journal of Consumer Behaviour, 2(2): 155-168.

- Hirschman, E.C., 1987. Adoption of an incredibly complex innovation: Propositions from a humanistic viewpoint. Advances in Consumer Research, 14: 376-377.
- 16. Dowling, G.R. and R. Staelin, 1994. A model of perceived risk and intended risk-handling activity, Journal of Consumer Research, pp. 119-134.
- 17. Mitchell, V.W., 1999. Consumer perceived risk: conceptualizations and models. European Journal of Marketing, 33(1/2): 163-195.
- 18. Taylor, J.W., 1974. The role of risk in consumer behavior, The Journal of Marketing, pp. 54-60.
- 19. Bauer, R.A., 1960. Consumer Behavior as Risk Taking, Dynamic Marketing for a Changing World, pp: 398.
- 20. Webster Jr, F.E., 1969. New product adoption in industrial markets: a framework for analysis, The Journal of Marketing, pp. 35-39.
- 21. Ostlund, Lyman E., 1974. Perceived Innovation Attributes as Predictors of Innovativeness, Journal of Consumer Research, 1 (2): 23-29.
- 22. Shimp, T.A. and W.O. Bearden, 1982. Warranty and other extrinsic cue effects on consumers' risk perceptions, Journal of Consumer Research, 9(1): 38-46.
- 23. Yiu, C.S., K. Grant and D. Edgar, 2007. Factors affecting the adoption of Internet Banking in Hong Kong implications for the banking sector, International Journal of Information Management, 27(5): 336-351.
- Crisp, C.B., S.L. Jarvenpaa and P.A. Todd, 1997. Individual differences and internet shopping attitudes and intentions. Graduate School of Business Working Paper, University of Texas.
- 25. Agarwal, R. and J. Prasad, 1998. A conceptual and operational definition of personal innovativeness in the domain of information technology, Information Systems Research, 9(2): 204-215.

- Davis, F.D., 1989. Perceived Usefulness, Perceived Ease of Use and User Acceptance of Information Technology, MISQuarterly/September.
- Schultz, R.L. and D.P Slevin, 1975. Implementation and Organizational Validity: An Empirical Investigation, in Implementing Operations Research / Management Science, R.L. Schultz and D.P. Slevin (eds.), American Elsevier, New York, pp: 153-182.
- 28. Robey, D., 1979. User Attitudes and Management Information System Academy of Management Journal, 22(3): 527-538.
- 29. Nielsen, J., 1993. Usability Engineering, San Diego: Academic Press.
- 30. Yang, Y. and J. Zhang, 2009. Discussion on the dimensions of consumers' perceived risk in mobile service. In Mobile Business, 2009. ICMB 2009. Eighth International Conference on IEEE, pp. 261-266.
- 31. Brown, I., Z. Cajee, D. Davies and S. Stroebel, 2003. Cell phone banking: predictors of adoption in South Africa-an exploratory study, International Journal of Information Management, 23(5): 381-394.
- 32. Holak, S.L. and D.R. Lehmann, 1990. Purchase intentions and the dimensions of innovation: an exploratory model, Journal of Product Innovation Management, 7(1): 59-73.
- Lee, M.K., C.M. Cheung and Z. Chen, 2007. Understanding user acceptance of multimedia messaging services: An empirical study. Journal of the American Society for Information Science and Technology, 58(13): 2066-2077.
- 34. Ellen, P.S., W.O. Bearden and S. Sharma, 1991. Resistance to technological innovations: an examination of the role of self-efficacy and performance satisfaction. Journal of the Academy of Marketing Science, 19(4): 297-307.