Purchase Confidence of young women while buying technological products

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Abstract

Purpose - The purpose of this paper is to test the mediation effect of perceived risk on the relationship between technological orientation and purchase confidence of women when the moderating variables are mobile phones and laptops. The study presented here used perceived risk in terms of social, financial, performance and disposal risk to investigate its mediation effect on the relationship between technological orientation and purchase confidence of women.
Design/methodology/approach – A questionnaire was given to women in the age group of 16-25 asking questions to ascertain their technological orientation, perceived risk and purchase confidence. The results of these questionnaires were analyzed using mediation and moderation analysis.
Findings – Perceived risk partially mediates technological orientation and purchase confidence for technological products. For mobile phones, full mediation exists between technological orientation and purchase confidence while for laptops; partial mediation exists between technological orientation and purchase confidence.
Research limitations – The study was limited only to two products, mobile phone and laptop. Future research should involve other technological products like home appliances. Also the income/buying capacity of the female has not been considered.
Practical Implication – Marketers should try to form marketing strategies that mitigates the risks perceived by women while shopping for technological products and they should try to orient the consumer towards the technical features of the product to boost consumers' confidence.
Originality/value – This paper provides insights into how the technological orientation of a woman affects the perceived risk and purchase confidence of a woman while buying a technological product.
Keywords – Technological Orientation, Perceived Risk, Purchase Confidence
Paper Type – Research Paper

Introduction

New goods and services are entering the market very fast and a product introduced yesterday becomes obsolete now (Higgins and Shanklin 1992). With an increased emphasis on relationship marketing strategies (Anderson 1996), there is a greater responsibility to serve as a consultant to the customer and to strengthen the buyer–seller relationship by helping to develop the customer's business and achieve customer satisfaction (Liu and Leach 2001).

Gender And Technology Divide

Improving women's access to technology has the potential to spur their economic advancement and stimulate broader economic growth. Regrettably, technology has been underused in unlocking women's economic opportunities. The gender divide is evident in both traditional and modern technologies. In most developing countries, women lag behind men in using the Internet, mobile phones, and radios (Hafkin and Taggart, 2001). For example, women are estimated to be just 25 percent or less of Internet users in Africa, 22 percent in Asia, 38 percent in Latin America, and a mere 6 percent in the Middle East. Even in rapidly developing countries, women still trail men in access to mobile phones, as in the Czech Republic, where only 60 percent of women had access to mobile phones in 2003, compared with 72 percent of men.

So far, there have not been many technical products that cater to the needs of women. According to Venkatesh, Vishwanath and Morris, Michael (2000), women's technology usage decision was strongly influenced by their perceptions of subjective norm and ease of use. However, the effect of subjective norm diminishes over time. Hence we wanted to study the causal variables that helped build purchase confidence among women towards technical products. According to Bauer (1960), women are greatly influenced by technological orientation and perceived risk while making a purchase decision for technical products. Hence we strove to choose two products: one with low involvement – mobile phone, and other with high involvement – laptop. To study the purchase confidence behaviour, we chose to take technological orientation as predictor variable and perceived risk as mediator variable.

Technological Orientation

Technological Orientation refers to the interest level and knowledge of a person towards technological products. With technological orientation we refer to the interest of women in learning about new technologies and using new technical products. In technological orientation we plan to measure the impact of technical features on the purchase confidence and perceived risk of the women consumers.

Perceived Risk

Bauer (1960) defines perceived risk as the consumer's feeling of uncertainty about the consequences of transactions. Researchers have identified six key dimensions of perceived risk – i.e. performance, physical, financial, time, social, and psychological risks (e.g. Cherry and Fraedrich, 2002; Dholakia, 2001) out of which we propose to use 4 of them – social, financial, performance and disposal. Financial risk refers to the financially negative outcomes for consumers after they adopt products. Performance risk is the risk that the product will not perform as expected. Disposal Risk refers to the risk involved in disposing off of the product effectively and in a cost effective manner. Social risk has to do with the negative responses from

consumer's social network. Thus, we plan to use these 4 risk variables to derive the total score of perceived risk which acts as the mediator variable in our analysis.

Purchase Confidence
In this paper, we want to analyze how technological orientation and perceived risk impact the confidence with which the young women purchase products. With purchase confidence, we want to understand how sure are the young women are, of the product's ability to reduce their perceived risk and balance with their technological orientation.

This study plans to help marketers to study what drives the purchase confidence of women with respect to buying technical products and hence adjust their marketing strategy accordingly.

Research background and hypothesis

Technological Orientation and Purchase Confidence
According to Howard (1989); Howard and Sheth (1969), if a consumer isn't confident in their assessment of a brand, they won't buy. Confidence affects consumers' shopping decisions by directly influencing intentions to purchase. Purchase confidence is thought of as an object-based construct, assessed according to an individual's confidence in their evaluative judgment of a brand (Bennett and Harrell 1975; Berger and Mitchell 1989; Krishnan and Smith 1998; Smith and Swinyard 1988), or ability to evaluate a brand considered for purchase (Laroche and Howard 1980; Laroche, Kim and Zhou 1996). Purchase Confidence refers to the degree to which an individual is certain of their ability to overcome and cope with any perceived inhibiters and consequences associated with purchasing a product.

Orientation is defined as an integrated set of attitudes and beliefs. With technological orientation we refer to the interest level and knowledge of women towards technological products. According to Faulkner (2000, p. 93) symbolic association of masculinity and technology operates strongly. Faulkner states that the popular images of science and technology are closely associated with the masculine sides of these polarities, and that a clear hierarchy also operates for each of these. For her, this may help to explain why many girls and women do not even consider a career in engineering. Faulkner argues that gender in-authenticity would account for her observation that some women software engineers show reluctance to admitting enjoying technology too much. Hence, she believed that women have a low technological orientation. However, in the recent years, growth in the education of women and increasing dependence on technology has led to a growth in technological orientation of women. A recent study by US TV network Oxygen ("The New Girls Network") suggests that women are highly oriented towards technology and that three-quarters of American women would prefer a plasma television to a diamond solitaire necklace. Another report in this regard suggests that more and more women are getting comfortable with technology day by day. Some facts worth mentioning are:

- In India, close to 80% of cyber-cafes present in rural India are operated by women.

- In Indonesia and Singapore, maids who can do both – housekeeping and providing IT support – are highly sought after.
- In Korea, 70% women form the gamers, in the U.S. that number is 40%, and in the U.K., it falls to 25%.
- 64% of all Facebook users are female.

How consumers process information has an impact on consumer confidence, such that a greater understanding of product information tends to lead to greater consumer confidence in purchase decisions (Wendler, 1983). Preceding in a similar manner it can be inferred that higher technological orientation of a person would lead to greater purchase confidence. In a research paper by Robertson and Gatignon (1986), they propose that consumers are reluctant to purchase innovative products because of their lack of knowledge about the products and because of high expected costs and risks. Mick and Fournier (1998) find through surveys and in-depth interviews that consumers have mixed reactions to technologies, believing that these technologies offer more control, new benefits, and greater efficiency, but at the same time that they cause chaos and are prone to obsolescence.

Perceived risk as a mediating variable

Technological orientation and Perceived risk in women

Bauer (1960) originally introduced the concept of perceived risk. He defined risk in terms of the consequences and uncertainty associated with a consumer's actions. Several researchers have adopted this definition. For example, consumer researchers define perceived risk as a consumer's perception of the uncertainty and adverse consequences associated with buying a product (or service) (Cunningham, 1967). Since Bauer, perceived risk has been conceptualized in various ways, although the models are generally of two sorts: (a) risk as uncertainty (Bauer 1960; Cox 1967; Taylor 1974) and (b) risk as expected loss. In our project, we have focused on analyzing risk as an uncertainty. A multi-dimensional construct perceived risk indicates an individual's perception of the uncertainty inherent in purchasing of any new product. Researchers have identified six key dimensions of perceived risk – i.e. performance, physical, financial, time, social, and psychological risks (e.g. Cherry and Fraedrich, 2002; Dholakia, 2001). Financial risk refers to the financially negative outcomes for consumers after they adopt products. Performance risk is the risk that the product will not perform as expected. Physical risk is the concern that the product might be to adopters. Time risk relates to the perception that the adoption and the use of the product will take too much time. Social risk has to do with the negative responses from consumer's social network. Dholakia (2001) defines psychological risk as the nervousness arising from the anticipated post-purchase emotions such as frustration, disappointment, worry, and regret. Consumers' evaluation of these risks is based on their knowledge in a certain product domain (Ram and Sheth, 1989). However, these concerns might be alleviated by consumers' expertise and interest in the high tech product domain (Mitchell and Harris, 2005; Mowen and Minor, 2001). Perceived risk increases with uncertainty and/or the magnitude of the associated negative consequence (Lu, Hsu and Hsu, 2005). The customers may possess high levels of knowledge about new products pertaining to their interest categories. This interest was measured by their technological orientation. When a consumer becomes more familiar with the technology, he\she will be less concerned about this risk unless the technology is radically different.

It is a well known stereotype that on an average, women take lesser risks than men. An interesting explanation of this is the importance of individual characteristics and of the decision tasks' framing. The more familiar a women is with a specific type of decision problems and the more experienced she is in the corresponding domain, the more risk loving she will be (Levin et al., 1988; Johnson and Powell, 1994; Schubert et al., 1999). This reasoning may be true of all kind of decisions including the decision to purchase a technical product. The technological orientation of a women consumer will lead her to search for more information regarding the technical features of a product before she makes the purchase decision. And more the information and knowledge that she possesses about the product less will be the various types of risk perceived by her.

According to Stone, Robert and Gronhaug, Kjell (1993), for High Involvement product such as personal computer, financial risk is expected to be having the biggest impact among the overall risk. Similarly it is implied that higher the technological orientation, lesser is the expected financial risk.

According to Hyun Kyung Kim and Moonkyu Lee (N.N), low technology products require low involvement. They have shown it from the point of view of technology orientation and that impact on perceived risk, performance risk bears the biggest impact.

Perceived Risk and Purchase confidence
Risk is a key construct in consumer decision making (Gabbott, 1991; Mitchell, 1998; Oglethorpe and Monroe, 1987). Consumers observe risk individually, handle risk differently, and respond accordingly (Ingene and Hughes, 1985). Much consumer decision making involves risks at different stages, e.g. before, during, or after purchase (Cunningham et al., 2005).

Consumers are often reluctant to use new technologies. Innovative goods and services can jeopardize a comfortable status quo or go against the grain of their belief structures (Lunsford and Burnett 1992; Moore 1991). In other words, consumers perceive high risks in purchasing high-tech products. We extend the same analysis to consumers who are young women. Accordingly, they adopt risk-reduction strategies to diminish the possibility or the consequences of loss through a purchase.

Several other studies have examined resistance to innovation, i.e., consumer unwillingness to purchase products of a newly developed technology. According to Ram and Sheth (1989), barriers to innovation diffusion are of two sorts, functional and psychological. According to a paper on assessment of internet purchase confidence (Brent L S Coker, Nicholas J Ashill), purchase confidence is directly related to intention to purchase and that past purchases will have a positive effect in building purchase confidence and hence intention to purchase. So we can infer that purchase confidence and intent to purchase are positively correlated. It has already been shown that perceived risk is negatively correlated to purchase intent, i.e. higher the perceived risk lesser the intent to purchase the product. The above papers have extensively dealt with high technology products like internet, etc.

In another paper Moisescu, Ovidiu I. (N.N), most of the consumers would prefer buying brands that are familiar to them, brands which they have heard of. Regression analysis was done with the independent variable (predictor) represented by awareness, and the dependent (predicted) variable represented by choice of the brand and it was determined that most of the consumer would prefer buying brands that they are familiar with and hence perceive lesser risk.

In a low involvement service usage such as internet, it has seen to have high purchase confidence and involved performance risk is high. (It is our assumption that performance risk is expected to be high as we did not get any literature survey to support our views)

For low involvement product, we infer that low technology products require low involvement and hence, from a study Hyun Kyung Kim and Moonkyu Lee (N.N), they have shown that from the point of view of performance risk, it impacts the purchase intent and hence the purchase confidence indirectly as specified by a study Brent L S Coker, Nicholas J Ashill (N.N), purchase confidence is directly related to intention to purchase and that past purchases will have a positive effect in building purchase confidence and hence intention to purchase.

For a high involvement product it is hypothesized, that financial risk impacts the purchase confidence the most.

Thus we presume that, higher perceived risk tends to bring down purchase intent and lesser purchase intent decreases purchase confidence.

Mobile phone and laptop as moderating variables
Technological products range from a small chipset to a personal computer, from a pen-drive to electrical gadget. To choose our moderating variable, we conducted a small survey to understand the level of involvement of technological products- laptops and mobile phones. The results are as follows:

Analysis of Kaichkowsky Scale for interpreting high involvement and low involvement product

Content Validity
The Scale has been used in the paper by Kaichkowsky, Judith Lynne (1985) to measure the involvement between laundry detergent and colour television. Hence we have used the same scale and analysis to determine which among the two, between mobile phone and laptop is more involving.

Analysis
We collected data from 12 respondents to rank according to the scale above for the two moderating variables of mobile phone and laptop. We then summed the scores for each respondent (considering reverse score for a few questions) and took the average over all respondents to arrive at the final score as 136 for laptop and 126 for mobile phone. Hence since

the Kaichkowsky score is higher for laptop over mobile, we conclude that mobile phone is a relatively low involvement product while laptop is a relatively high involvement product.

Thus, since we could classify laptops and mobile phones into high and low involvement products, we chose them as moderating variables in order to understand how these factors modulate the technological orientation, perceived risk and purchase confidence of young women.

From the above discussions, the following hypotheses are proposed,

H1. Technological Orientation in women is positively related to their Purchase confidence.

H2. Perceived Risk is negatively related to Technological Orientation in women.

 H2a. For high involvement product, higher the Technology Orientation, the financial risk becomes the least

H2b. For a low involvement product, higher the technology orientation, the performance risk becomes the least

H3. Higher the perceived risk, lesser the purchase confidence

H3a. For a high involvement product, Financial Risk impacts the purchase confidence the most

H3b. For a low involvement product, Performance Risk impacts the purchase confidence the most

Methods

Sample
The young women of age between 16 to 25 years were identified as the target group for the survey. The questionnaire was floated through a website and the respondents were asked to fill the questionnaire online. To encourage participation and increase the number of responses a disclaimer declaring the confidentiality of individual data was assured. A total of 214 respondents filled the questionnaire of which 192 responses were considered for the analysis and hypothesis testing. The reason for not including the rest of the responses was their falling out of our target group.

Measures
Based on the discussion in the above sections a theoretical model was developed and the following constructs were measured using different scales.
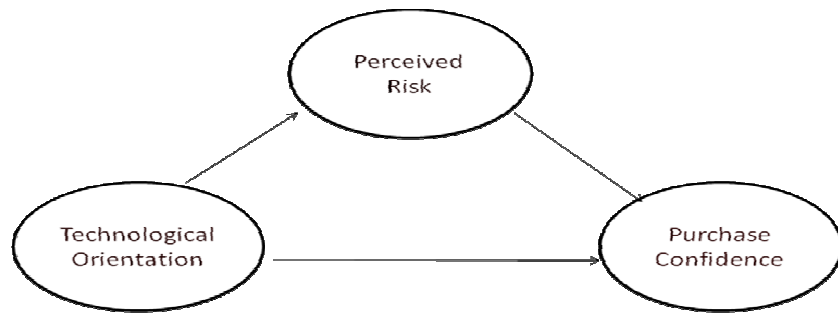
Considering the moderating variable of technological products, the model is as follows.
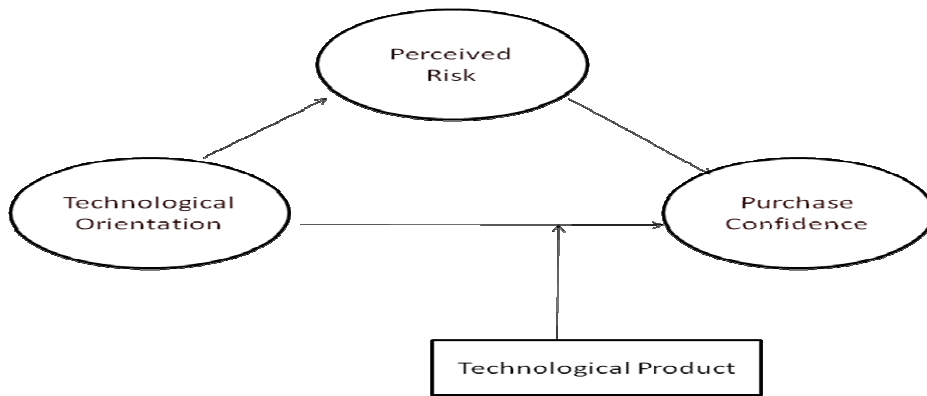
Considering the components of Perceived Risk i.e. Social Risk, Performance risk, Disposal risk and Financial Risk, the model is as follows,
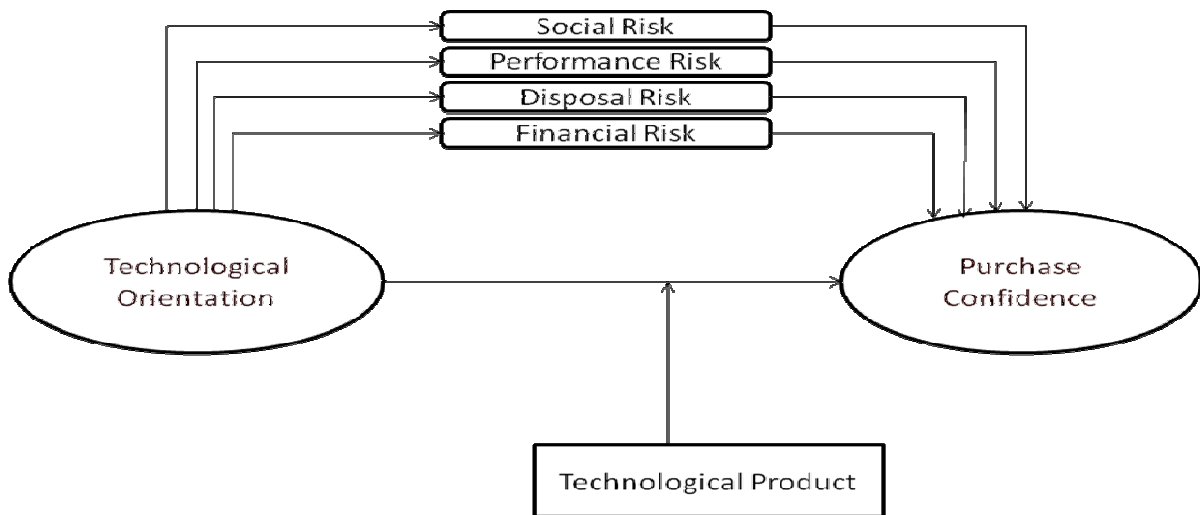
Technological Orientation: Participants were asked to respond to Likert-type scales of four questions with responses ranging from "Very Low" to "Very High". The scale used was adapted from Biswas et al. (2006). Although there have been apprehensions regarding the correspondence between subjective and objective knowledge, the use of such subjective questions to assess consumer knowledge is consistent with prior literature. The scoring rule was to assign a numerical value to each of the response ranging from 1= "Very Low" to 5 = "Very High". The total of the scores obtained for each of the questions were added to obtain a total score measuring technological orientation in an individual. Higher the score, higher was the technological orientation. The appendix reports the questionnaire items used. The content validity for the used scale has been established in the study and since we have used the same questionnaire and the scale we have checked for the content validity in this study.

Perceived Risk: Both the overall risk and the individual dimensions of the risk were measured through 20 questions asked in the questionnaire. The scale used was adapted from Stone et al. (1993). The responses were recorded using 5-point bipolar scales ranging from "Least Important" to "Very Important". Questions asked to ascertain the perceived risk are present in the questionnaire attached in the appendix. The perceived risk variable had 4 variables under it namely, social risk, performance risk, disposal risk and financial risk. We measure the individual scores for each of these risks by averaging the scores from the questions asked for each of the aforementioned risks. The final score for measuring the overall risk was derived by averaging the individual scores of all the answers from each respondent. The scale has been adopted from the aforementioned study and content validity has been established in the previous studies.

Purchase Confidence. Confidence in buying a product was measured on a five-point semantic differential type scale, adapted from Yoh et al (2007). The question asked in the questionnaire referred to the introduction of a technical product by a non-existent business identity to avoid subjective biases of a participant. The attitude was captured using responses like safe/risky, informative/uninformative, certain/uncertain, and responsible/irresponsible and a good deal/a bad deal. The individual responses were summed to get a cumulative score. The higher the score, higher was the confidence of the participant. The scale has been adopted from Brent et al. The study had established a strong content validity for purchase confidence scale.

Analysis
The four-step method developed by Kenny et al. (1998) and Baron and Kenny (1986) for mediation analysis is used in this study. The first step uses purchase confidence as the criterion variable in the regression equation and technological orientation as the predictor. The second step uses perceived risk (social risk, performance risk, disposal risk and financial risk) as criterion variable in the regression equation and technological orientation as the predictor. The third step uses purchase confidence as the criterion variable and technological orientation and perceived risk as the predictors. The fourth step is to compare the first and the third regression models to identify the mediation effect. We also calculated the data with purchase confidence as the criterion variable in the regression equation and perceived risk as the predictor.

Results

The means, standard deviation, correlations and measures of internal consistency (Cronbach's α) among study variables can be found in Table 1. Almost all variables are significantly correlated with one another except social risk and performance risk and social risk and purchase confidence. Technological orientation is significantly related with all other variables. Performance risk, disposal risk and financial risk are significantly and negatively correlated with purchase confidence. The highest negative relationship is that between purchase confidence and financial risk and purchase confidence. The Cronbach's α for each of the variables lies between 0.7 and 1, thus proving the validity of the model.

Table 1 : Means, Standard Deviations and correlations

Variables	Mean	SD	1	2	3	4	5	6
1. Technological Orientation	14.89	3.68	(0.89)					
2. Social Risk	11.46	5.7	-0.19*	(0.87)				
3. Performance risk	19.48	6.91	-0.148**	0.126	(0.9)			
4. Disposal Risk	10.89	4.26	-0.186*	0.304*	0.628*	(0.83)		
5. Financial Risk	12.05	4.3	-0.311*	0.309*	0.738*	0.671*	(0.79)	
6. Purchase Confidence	16.08	3.655	0.318*	-0.101	-0.312*	-0.308*	-0.353*	(0.7)

Notes: **$p < 0.05$; *$p < 0.01$. Diagonal values are measures of scale internal consistency.

Table 2 shows the results of the overall model. Step I in the above table shows the result of the regression analysis between technological orientation as independent variable and purchase confidence as dependent variable. The value of R Squared being .101 and a positive value of β shows a positive correlation between Technological Orientation and Purchase Confidence. Step II shows the regression analysis between perceived risk and technological orientation and a negative β clearly shows a negative relation between perceived risk and orientation to technology. Step III shows that purchase confidence and perceived risk are negatively correlated and since significance level is below 0.05, there exists a mediation effect of perceived risk. Step IV shows the combined effect of Technological Orientation and Perceived Risk regressed upon Purchase Confidence and again, the significance effect is coming to 0; showing that both Perceived Risk and Technological Orientation impacts Purchase Confidence. Thus all our hypotheses have been proved. The Mediation Effect was calculated for the effect of Perceived Risk as a mediator between the predictor, Technological Orientation and Purchase Confidence and was found to be 0.074. The corresponding Sobel's Calculator was used to compute Sobel's statistic and was found to be 2.78 (>1.96) and thus the effect is significant and thus the hypothesis that there is a mediation effect is proved.

Table 2 : Regression results on four steps for overall data

Step	Variable	R^2	USC	β
1	First Regression(Purchase Confidence)			
	Technological Orientation	0.101*	0.313	0.318*
2	Second Regression (Perceived Risk)			
	Technological orientation	0.068*	-1.149	-0.261*
3	Third Regression (Purchase Confidence)			
	Perceived Risk	0.118*	-0.077	-0.344*
4	Fourth Regression (Purchase Confidence)			
	Technological Orientation	0.174*	0.241	0.244*
	Perceived Risk		-0.063	-0.28*

Notes: Dependent variables are in parenthesis. *$p<0.01$

Mediation Effect	**0.074**
Sobel's calculator	**2.78**

We can see that the mediation effect of perceived risk is significant and also that there is a presence of partial mediation.

Analysis of Mobile Phone

Table 3

Step	Variable	R^2	USC	β
1	First Regression(Purchase Confidence)	0.04**		
	Technological Orientation		0.2	0.199**
2	Second Regression (Perceived Risk)	0.089*		
	Technological orientation		-1.391	-0.298*
3	Third Regression (Purchase Confidence)	0.189*		
	Perceived Risk		-0.094	-0.435*
4	Fourth Regression (Purchase Confidence)	0.194*		
	Technological Orientation		0.077	0.077

Perceived Risk		-0.089	-0.412*

The same steps as before were followed and the results were analysed to find that our hypothesis that technological orientation positively impacted the purchase confidence, with the significance level on the borderline of 5%. Technological Orientation had a negative impact on perceived Risk and perceived risk had a negative impact on purchase confidence. In the IV step, the regression between technological orientation and purchase confidence was found to be 0.432 which implies that there is no impact of technological orientation in combination with perceived risk on purchase confidence. This could be because of the presence of full mediation.

Ananlysis of Laptop

Table 4

Step	Variable	R^2	USC	β
1	First Regression(Purchase Confidence)	0.178*		
	Technological Orientation		0.405	0.422*
2	Second Regression (Perceived Risk)	0.05*		
	Technological orientation		-0.929	-0.224*
3	Third Regression (Purchase Confidence)	0.061*		
	Perceived Risk		-0.057	-0.247*
4	Fourth Regression (Purchase Confidence)	0.203*		
	Technological Orientation		0.371	0.386*
	Perceived Risk		-0.037	-0.161

The same steps as before were followed and the results were analysed to find that our hypothesis that technological orientation positively impacted the purchase confidence, with the significance level on the below 5%. Technological Orientation had a negative impact on perceived Risk and perceived risk had a negative impact on purchase confidence. In the IV step, the regression between perceived risk and purchase confidence was found to be 0.095 which implies that there is no impact of technological orientation in combination with perceived risk on purchase confidence. This could be because of the presence of full mediation.

Laptop: Mediation analysis of Perceived Risk Components

    i.   Social Risk

Analysis of Social Risk on Purchase Confidence (Table 3) yielded $p > 0.05$, which implies the result is insignificant. This thus leads us to accept H_0, which implies Social Risk has no impact on Purchase confidence. We can speculate this to be so, since laptop is a high involvement product and hence impact of social circles will be minimum and other risks like performance and disposal carries more importance.

Table 5

Step	Variable	R^2	USC	β
1	First Regression(Purchase Confidence)	0.178*		
	Technological Orientation		0.405	0.422*
2	Second Regression (Social Risk)	0.068*		
	Technological orientation		-0.4	-0.262*
3	Third Regression (Purchase Confidence)	0.003		
	Social Risk		-0.033	-0.052
4	Fourth Regression (Purchase Confidence)	0.182*		
	Technological Orientation		0.421	0.439*
	Social Risk		0.039	0.062

Notes: Dependent variables are in parenthesis. *$p<0.01$; ** $p<0.05$

Mediation Effect	-0.017
Sobel's Calculator	-0.62104

However since Sobel's d factor is coming lesser than 1.96, the value of the statistic is not significant and hence though mediation effect exists, it is not significant enough to be considered.

ii. Performance Risk

Table 6

Step	Variable	R^2	USC	β
1	First Regression(Purchase Confidence)	0.178*		
	Technological Orientation		0.405	0.422*
2	Second Regression (Performance Risk)	0.005		
	Technological orientation		-0.13	-0.072
3	Third Regression (Purchase Confidence)	0.039		
	Performance Risk		-0.106	-0.198
4	Fourth Regression (Purchase Confidence)	0.206*		
	Technological Orientation		0.393	0.41*
	Performance Risk		-0.09	-0.168

Notes: Dependent variables are in parenthesis. *p<0.01; ** p<0.05

There is no mediation effect.

On analysing the regression of performance risk on purchase confidence, the significance level is coming above 0.05 for technological orientation, which implies that technological orientation has no impact on performance risk. Also performance risk has an impact on purchase confidence, where the significance level is on the borderline of 0.05. Thus while there exists an impact of performance risk on purchase confidence, there is no impact of technological orientation on performance risk.

iii. Disposal Risk

Table 7

Step	Variable	R^2	USC	β
1	First Regression(Purchase Confidence)	0.178*		
	Technological Orientation		0.405	0.422*
2	Second Regression (Disposal Risk)	0.006		
	Technological orientation		-0.09	-0.08
3	Third Regression (Purchase Confidence)	0.057**		
	Disposal Risk		-0.205	-0.24**

4	Fourth Regression (Purchase Confidence)	0.221*		
	Technological Orientation		0.389	0.406*
	Disposal Risk		-0.177	-0.207**

Notes: Dependent variables are in parenthesis. *$p<0.01$; ** $p<0.05$

There is no mediation effect.

Technological orientation has no impact on disposal risk while disposal risk has a negative impact on purchase confidence. This means, a woman who is very oriented and knowledgeable towards technology related aspects in products would have no perception regarding disposal risk but will have a direct impact towards her purchase confidence.

    iv. Financial Risk

Table 8

Step	Variable	R^2	USC	Beta
1	First Regression(Purchase Confidence)	0.178*		
	Technological Orientation		0.405	0.422*
2	Second Regression (Financial Risk)	0.081*		
	Technological orientation		-0.309	-0.284*
3	Third Regression (Purchase Confidence)	0.088*		
	Financial Risk		-0.262	0.297*
4	Fourth Regression (Purchase Confidence)	0.212*		
	Technological Orientation		0.353	0.368*
	Financial Risk		-0.17	-0.193**

Notes: Dependent variables are in parenthesis. *$p<0.01$; ** $p<0.05$

Mediation Effect	**0.054**
Sobel's Calculator	**1.6392**

However since Sobel's d factor is coming lesser than 1.96, the value of the statistic is not significant and hence though mediation effect exists, it is not significant enough to be considered.

There is a negative impact of technological orientation towards financial risk and a negative impact of financial risk on purchase confidence. Hence there is a mediation effect – partial mediation effect present as the unstandardized coefficient has a greater value for technological orientation in step 1 than 4.

Mobile Phone: Mediation analysis of Perceived Risk Components

    i. Social Risk

Table 9

Step	Variable	R^2	USC	β
1	First Regression(Purchase Confidence)	0.04**		
	Technological Orientation		0.2	0.199**
2	Second Regression (Social Risk)	0.011		
	Technological orientation		-0.165	-0.105
3	Third Regression (Purchase Confidence)	0.017		
	Social Risk		-0.085	-0.132
4	Fourth Regression (Purchase Confidence)	0.052		
	Technological Orientation		0.188	0.188
	Social Risk		-0.072	-0.113

Notes: Dependent variables are in parenthesis. *$p<0.01$; ** $p<0.05$

No mediation exists.

    ii. Performance Risk

Table 10

Step	Variable	R^2	USC	β
1	First Regression(Purchase Confidence)	0.04**		
	Technological Orientation		0.2	0.199**
2	Second Regression (Performance Risk)	0.052**		
	Technological orientation		-0.447	-0.227**

Step	Variable	R^2	USC	β
3	Third Regression (Purchase Confidence)	0.186**		
	Performance Risk		-0.22	-0.432**
4	Fourth Regression (Purchase Confidence)	0.197*		
	Technological Orientation		0.107	0.107
	Performance Risk		-0.208	-0.408*

Notes: Dependent variables are in parenthesis. *$p<0.01$; ** $p<0.05$

Mediation Effect	**0.092**
Sobel's Calculator	**2.010137**

Hence mediation is significant

iii. Disposal Risk

Table 11

Step	Variable	R^2	USC	β
1	First Regression(Purchase Confidence)	0.04**		
	Technological Orientation		0.2	0.199**
2	Second Regression (Disposal Risk)	0.085*		
	Technological orientation		-0.35	-0.291*
3	Third Regression (Purchase Confidence)	0.142*		
	Disposal Risk		-0.315	-0.376*
4	Fourth Regression (Purchase Confidence)	0.15*		
	Technological Orientation		0.098	0.098
	Disposal Risk		-0.291	-0.348*

Notes: Dependent variables are in parenthesis. *$p<0.01$; ** $p<0.05$

Mediation Effect	**0.101**
Sobel's Calculator	**2.2645**

Hence mediation effect is significant.

iv. Financial Risk

Step	Variable	R^2	USC	β
1	First Regression(Purchase Confidence)	0.04*		
	Technological Orientation		0.2	0.199*
2	Second Regression (Financial Risk)	0.118*		
	Technological orientation		-0.429	-0.343*
3	Third Regression (Purchase Confidence)	0.172*		
	Financial Risk		-0.333	-0.415*
4	Fourth Regression (Purchase Confidence)	0.176*		
	Technological Orientation		0.065	0.065
	Financial Risk		-0.315	-0.393*

Notes: Dependent variables are in parenthesis. *$p<0.01$; ** $p<0.05$

Mediation Effect	**0.134**
Sobel's Calculator	**2.6347**

Hence mediation effect is significant.

From the above tables for mobile phone, it is clear that social risk has no impact on purchase confidence due to its p value > 0.05. However it is very evident that performance risk has the biggest R squared value and hence has the biggest impact on purchase confidence. This is very evident because laptop is a high involvement product and women consumers, being very conservative in their purchase of high technology products will be very wary and ensure value for money.

Technological Orientation has no impact on social risk, but they have the biggest impact on financial risk.

Inference from Analysis

Mobile Phone – Low Involvement Product

Full Mediation effect is present.

Performance Risk has the biggest impact in this category on purchase confidence whereas social risk has no impact on purchase confidence. Since it is low involvement, hence emphasis is more on the performance rather than social or disposal risks to increase the confidence of young

women consumers. Technological Orientation has no impact on social risk and the biggest impact on financial risk. This could easily be explained because a low involvement product would deal more with top of mind purchase and hence women would like to make sure that the money they pay is value for money. It is assumed that there would not be a very high social value for a low involvement product and hence the impact on social risk is low. Thus women who are having high technological orientation would not bother much about social circles as they would bother about the return for money and value.

Laptop – High Involvement Product

Full Mediation Effect is present.

Though the individual factors of perceived risk have no significant mediation effect, among them financial Risk has the bigger impact on purchase confidence in this category which is evident as this is a high involvement category and hence costs involved also are high and thus expecting maximum return for money is expected. Also Technological Orientation has the biggest impact on financial risk, which is very much expected as people with high technical knowledge of the product would look at one which delivers maximum value for money as they know the worth of the technical products.

Moderating Effect

Laptop/Mobile Phone
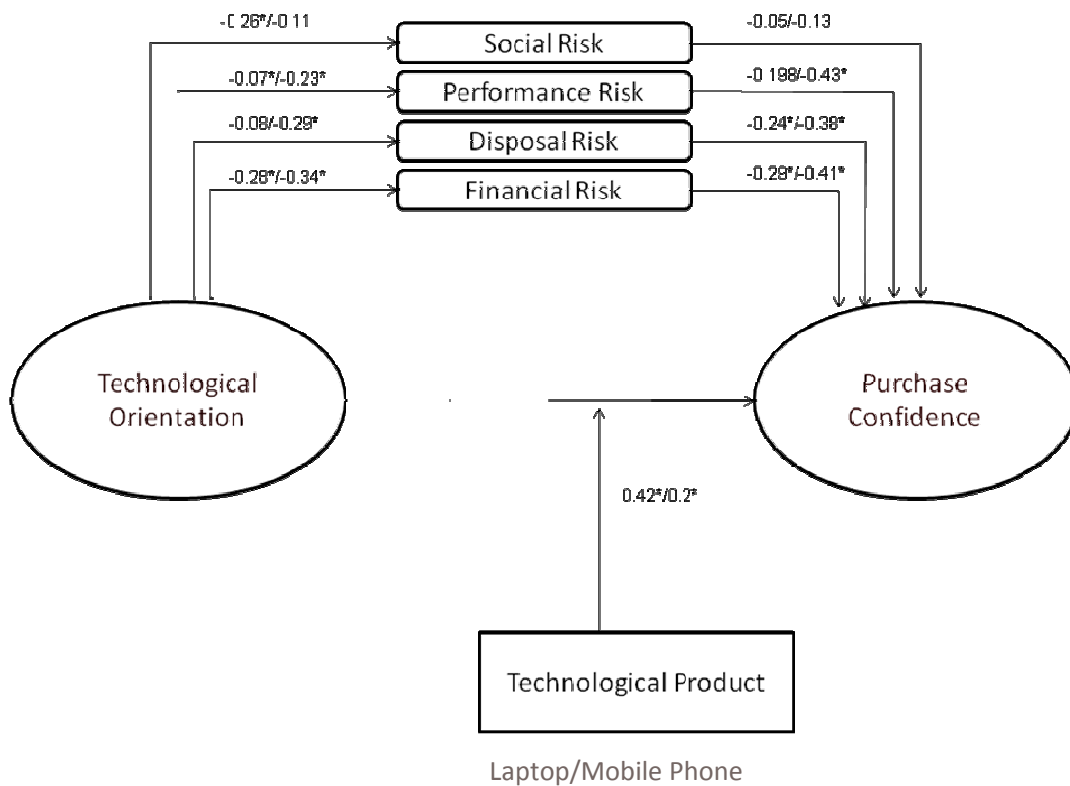
Discussions and implications

This study was undertaken to understand the consumer behavior during purchase of technological product with a view to aid the marketers. As huge investments go in innovating these products and as with the growing technology, the competition is increasing, marketers would be benefitted with a study analyzing the factors which affect the purchase.

The three factors "technological orientation", "perceived risk", "purchase confidence" encompass the information requirement component, risk taking/averse attitude component and decision-making component of the target group's behavior, which here is women, 16-25 yrs of age.

In case technological orientation had been unrelated to perceived risk or purchase confidence the marketers would know they would have to work on the three factors individually. But as the hypothesis gets proved, all three factors are found to be affecting each other.

Technological orientation is inversely related to perceived risk. More the consumer is technically oriented; less will be the perceived risk. Pitching the product on the new innovative technological features and making it prominent through advertisements would appeal to the risk averse female consumers. Out of the social, financial, performance and disposable risks, the consumer is most concerned about the performance risk, so the marketers should try to highlight about performance differential in comparative advertising. Also word of mouth spread stressing the same would be beneficial.

Perceived risk is inversely related to purchase confidence. Less is the risk perceived by the consumer more is the confidence in purchase. In case the product can have potential social risk, e.g. If the product can be considered to be showy, it can be targeted to that segment of consumers who have less social risk to negate the effect. Similarly to increase the consumer confidence while purchasing the risk comparision can be used by the marketer during publicity.

Technological orientation is directly related to purchase confidence. Greater the technological orientation, more is the purchase confidence. So the key lies in orienting the consumer regarding the technological features which would increase the confidence in the product while purchase.

Also as mediation effect of perceived risk gets proved, the marketers can take that more the technological orientation, less is the perceived risk and less is the perceived risk, more is the purchase confidence.

Limitations and conclusion

The study is limited to two products namely mobile phone and laptop. Other technological products like home appliances (television, music system, camera, washing machine, microwave oven) as also vehicles like mopeds, scooties, cars have not been considered in the study.

Also the income/buying capacity of the female has not been considered. So here only the technological orientation has been taken into account and not affordability. This limitation could

affect the purchase of high priced products such as laptops. This might have also affected our results for perceived risk in the case of both mobile phone and laptops.

Scope for future research

Females account for a sizeable segment of population. Moreover with time, they are getting more technologically oriented. But women are home-makers too. Hence they would prefer to go for technology which is less time-consuming or less unintuitive. So the research can be directed in developing technological products by keeping female lifestyle in mind. Technology can be designed for women's needs and considering their preferences and interests.
Also the study can be applied to other technological products.

A comparative study between the importance associated with technological features by female consumers versus aesthetic features during purchase can be carried out.

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