A Purchasing-Intention Model in B2C E-Commerce of Pakistan: The Role of Perceived Risk, Trust, Perceived Benefit and Their Antecedents

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Abstract
The research report is on "A Purchasing behavior Model in B2C E-Commerce of Pakistan: The Role of Perceived Risk, Trust, Perceived Benefit and Their Antecedents". Although the richness of literature on buying behavior of online consumers, very little of it focuses on developing countries. The purpose of this research is to investigate the factors impacting the online purchasing patterns of consumers in the Pakistani market. The model demonstrated that trust, perceived risk, perceived benefit and their antecedents would have an influence on costumer intention of purchase. The primary data is gather by floating hundred questionnaires to online shoppers using convenience sampling and web-based surveys. The secondary data is collected by consultation of published research papers, consumer reports, libraries and various internet sources.The results of the study show that Internet consumers' trust, perceived benefit and perceived risk have strong impacts on their intention of purchase. Reputation of sellers, website security, familiarity with websites and group purchase have strong effects on consumers' trust. However, only seller accessibility has a significant impact on perceived risk. Moreover, group purchase has a strong impact on perceived benefit. The results and implications of this research are discussed.
Keyword: *Customers intention of purchase, Customer Trust, Perceived Risk, Antecedent of Trust, Group Purchase*

I. Introduction

In recent years, with the fast popularity of Internet in Pakistan, more and more people are familiar with broadband Internet access and even wireless Internet. The quantity of Internet users is increasing. The development of e-commerce in Pakistan increases a lot of appreciating performance. Electronic commerce promotes the sale and purchase of products and services on the Internet. However, the quantity of shopping on the Internet has not been improved much. At present, the factors impacting consumer purchasing behaviors mostly include three aspects as follows: the lack of the trust that customers show to the sellers, the low anticipation to the expectation of benefits, as well as the higher perceived risk. In prior researches, trust in online transactions has been viewed through diverse disciplinary lenses and filters. Liu, C. et al. proposed and tested a theoretical model that considers an individual's trust and perceptions of privacy and how they relate to his or her behavioral intention to make an online transaction. Zou, P., Yu, B. and An, H. built a new future use intention model of the colleges student credit card customers combining the Repurchase Intention Model with Technology Acceptance Model, and found trust would influence the future use intention. Chiu, CM, Chang, C. C., Cheng, H. L. and Fang, Y. H. showed that trust, perceived ease of use, perceived usefulness and enjoyment were significant positive predictors of customers' repurchase intentions. Chen, M. F., Tang, Y. E. and Kau, A. K. studied the effect of trust as a moderating variable to Internet shopper's Web purchase decisions in terms of extrinsic motivation, information search and online purchase intention. Most studies found that trust plays an important role in online transactions as a key element. In e-commerce market, especially in B2C e-commerce, customers will face the risk buying fake and poor quality commodity. Through browsing the websites, customers make use of information to eliminate the perceived risk. Based on TAM, Hu, Y., et al. shows that perceived usefulness, perceived ease of use, perceived entertainment and perceived risk have different influence on the attitude towards using online shopping.

Park, J., Lennon, S. J.and Stoel, L. found a negative relationship between mood and perceived risk. Stefani, G., et al.[9] investigate how purchasing intentions among a sample of Italian consumers are On the basis

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of Basic theoretical framework, we could see that perceived risk, trust and perceived benefit have an influence on purchasing intention. To a large extent, they determine the customers' purchasing intention. Website influenced by different levels of risk perception. Wu, W.Y. and M.L. Chang show that risk attitude is positively associated with online shopping experience, consumer satisfaction, and repurchase intention for online shopping. Compared with traditional shopping, customers purchase products online because they can predict the benefit or avail in the process of shopping, for example, more convenience, less money, less time, more various products. Therefore, different from perceived risk which is obstacle in the shopping, perceived benefit which customers feel is a promoting factor for online shopping.

This paper is organized as follows. The second section presents the theoretical framework for the study along with background theories that provide the foundation for the framework. The section also proposes the research model, referred to as a Security Relevance of Information Seller Accessibility Reputation of sellers Familiarity with websites Group purchase purchasing-intention model in e-commerce, with research hypotheses. The third section describes the research methodology and data collection. An analysis of results follows in the fourth section. The final section provides a discussion of the findings, and concludes with limitations and implications of this study.

CONCEPTUAL DEVELOPMENT: THE RESEARCH MODEL AND HYPOTHESES
Basic Theoretical Framework

Consumer behavior in e-business is concerned in psychology, organizational behavior, marketing, and information technology and so on. And many theories and models are able to be used in the researches on consumer purchasing intention model, such as TAM, TRA, social network theory and so on. According to the literature overview, this study found that most literature only considered perceived risk, trust as a sole factor to influence the consumers' decisions, and don't link them up as two variables in a model. In daily life, there are a good many factors not only influence perceived risk, but also influence trust. Therefore, this research takes perceived risk and trust as two factors which influence purchasing intention, taking their antecedents into account. Basic theoretical framework is showed in Figure 1.

Purchasing Intention（PI）

Purchasing Intention is the customers' intention to continue the online transactions, and not to stop it. Previous researches have demonstrated the relationships among intention and other
variables. In TAM, attitude is positively related to the intention. And previous research has demonstrated their relationships in different environments. Intention in TAM represents the impact of social norms and attitudes that can be mediated by other variables. Integrating innovation diffusion theory, Wu, J. H. and Wang, S. C. found that all variables except perceived ease of use in their model significantly affected users' behavioral intent to
study the mobile commerce (MC) acceptance. On the basis of Basic theoretical framework, we could see that perceived risk, trust and perceived benefit have an influence on purchasing intention. To a large extent, they determine the customers' purchasing intention.
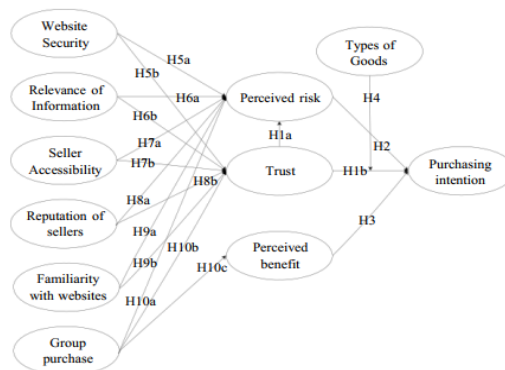

Figure 1. Basic Theoretical Framework

Trust (TRUST)

Due to the inherent nature of Internet shopping, consumers will always experience some level of risk, for instance, potentially trustworthy web vendors, hackers, and unknown new technologies. In these uncertain situations, trust comes into play as a solution for the specific problems of risk. In the model provided by this paper, trust is defined as customers' reliance on the B2C websites and the information provided by the sellers, as

well as belief in sellers. It is a bit different from trust in C2C e-commerce. In B2C ecommerce, trust can be described as customers' reliance on the websites, not referred to the belief in the vendors, for all the vendors are qualified for their goods in the platform of B2C websites. In conclusion, trust can increase consumers' purchasing intention, as well as reduce consumers' perceived risk. Scholars have provided different views regarding the relationship between trust and risk. Stated that consumers' trust would influence their willingness to transaction online. When consumers believe in websites, then they will be more willing to transaction online. In addition, also believed that trust of the supplier firm and trust of the salesperson influenced a buyer's anticipated future interaction with the supplier. So we propose:

Hypothesis1a. A consumer's trust negatively affects his or her perceived risk in B2C e-commerce.
Hypothesis1b. A consumer's trust positively affects his or her intention to purchase in B2C e-commerce.

Perceived Risk (PR)
A consumers' perceived risk is an important barrier for online consumers who are considering whether to make an online purchase. In this study we define perceived risk as a consumer's belief about the potential uncertain negative outcomes from the online transaction. This belief may influence the consumers' purchasing intention. If a consumer believes that the potential risk on online purchase is larger than traditional purchase, he will make a purchasing decision difficultly. So we propose that：

Hypothesis2. A consumer's perceived risk negatively affects a consumer's intention to purchase in B2C e-commerce.

Perceived Benefit (PB)
We define perceived benefit as a consumer's belief about the extent to which he or she will become better off from the online transaction with a certain website For instance, compared with traditional mode of shopping, online purchase can save more time and cost, have more kinds of products. And compared with perceived risk, perceived benefit provides a major incentive for making a purchase online.

Hypothesis3. A consumer's perceived benefit positively affects a consumer's intention to purchase on the Internet.

Types of Goods (TOG)
Divided goods into search goods and experience goods according to the characteristics of goods. Search goods refers that consumers have known complete information about the characteristics of the goods before shopping; experience goods refers that consumers have known complete information about the characteristics of the goods only after using it.

Hypothesis4. Types of goods would have effect on the correlation between trust and purchasing intention in B2C e-commerce.

Antecedents of Perceived Risk, Perceived Benefit and Trust
Website Security (WS)
Consumers are always worrying about divulging their personal information and security of online transactions when they make online shopping. Therefore, the consumers primary concern whether online transactions are safe when deciding to purchase in B2C e-commerce websites. They hope that the B2C e-commerce websites could provide effective measures to protect privacy and security.

Hypothesis5a: Website Security negatively affects a consumer's perceived risk.
Hypothesis5b: Website Security positively affects a consumer's trust.

Relevance of Information (INF)
Proposed the concept of "information relevance". Information relevance refers to whether is the information provided by the seller is differential. That is, whether the buyer can effectively use the information to make purchasing decisions more appropriately.

Hypothesis6a: A consumer's relevance of information negatively affects his or her perceived risk.
Hypothesis6b: A consumer's relevance of information positively affects his or her trust.

Seller Accessibility (SA)
In B2C e-commerce, seller accessibility is an important part. Doing so, the customers can get the information they are interested in, perceive whether the seller is trustable, and facilitate the successful transactions. Therefore, seller accessibility can increase the customers' trust and reduce the perceived risk.

Hypothesis7a: Seller accessibility negatively affects a consumer's perceived risk.
Hypothesis7b: Seller accessibility positively affects a consumer's trust.

Reputation of Sellers (ROS)
Reputation of sellers has been considered a key factor for reducing risk and creating trust, because it provides information that the sellers have honored or met their obligations toward other consumers in the past. Consumers are likely to conclude that it is inherently risky to transact with a seller who has a history of failing

to honor his or her obligations, whereas it is relatively less risky to transact with a seller who has a history of honoring his or her obligations.

Hypothesis8a: The reputation of sellers negatively affects a consumer's perceived risk.
Hypothesis8b: The reputation of sellers positively affects a consumer's trust.

Familiarity with Websites (FAM)
A consumer's familiarity with websites refers to the consumer's degree of acquaintance with the B2C e-commerce websites, which includes knowledge of the sellers and understanding their relevant procedures such as searching for products and information and ordering through the Website's purchasing interface.

Hypothesis9a: Familiarity with websites negatively affects a consumer's perceived risk.
Hypothesis9b: Familiarity with websites positively affects a consumer's trust.

Group Purchase (GP)
Group purchase specializes in group shopping, where a group of people come together online to purchase a wholesale lot of the same item. In B2C e-commerce, "Group Purchase" is an emerging concept which can influence consumers' perceived benefit due to saving cost. And in this study, group purchase means that the consumers get together to buy something who live in the same city, or who are friends.

Hypothesis10a: Group purchase negatively affects a consumer's perceived risk.
Hypothesis10b: Group purchase positively affects a consumer's trust.
Hypothesis10c: Group purchase positively affects a consumer's perceived benefit.

II. Research Methodology And Data Collection

For this study adopt survey as the data sources for statistical analysis. The scope for research aims at B2C e-commerce websites at present. The target people are the users who browse domestic B2C e-commerce website (who have the transaction experience at least once).

The instrument development for this study is carried out following the two stages, including a pilot test conducted prior to collection of the main study data and the main study data collection via web-based surveys. During the pilot study, all the questions relating to antecedents of trust, perceived risk, perceived benefit, and purchase intention were tested. After rejecting the non-significant items and inappropriate items, we designed the final questionnaire. The research participants were students who participated in the web-based surveys. Via web-based surveys, we were convenient, cheap, fast, more accurate, and can survey hard to-reach respondents.

To achieve the purpose of research, we choose some students randomly as a sample for the survey. During this period, a total of 336 questionnaires were recovered. After eliminating incomplete and inappropriate responses, a total of 298 usable responses were included in the sample for construct validation and hypothesis testing, with effective response rates to 88.7%.

Table 1 shows the descriptive information of the dataset. In the survey, 56.9% of the respondents are male, and 43.1% are female. A majority (86%) of the respondents were students aged between 18 and 25 and 82% had education of undergraduate or above.

Even though we mainly surveyed well-educated young adults, they without a doubt are the main shoppers on B2C websites. According to iResearch, more than 60% of B2C shoppers in Pakistan are between 18 and 30 years old, and more than 60% of Daraz.pk shoppers have undergraduate education or above. Hence, we believe that our sample represents the major segment of B2C shoppers in Pakistan. In the use of the B2C e-commerce websites, the majority of users choose Daraz.pk, which shows it is in an absolute monopoly position in Pakistan. While compared with the previous survey results, other users are obvious declining.

Table 1 Sample Demographics （N=298）

Measure	Item	Count %
Gender	Male	56.9
	Female	43.1
Age	>18 and ≤ 25	86.2
	>26 and ≤ 35	12.9
	>35 and ≤ 45	0.9
Education Background	High school or below	0.9
	Two-year college	17.1
	Four-year college	43.6
	Graduate school or above	38.4

Household Income	Rs 500 or below	26.7
	>Rs 500 and ≤ Rs 1000	38.8
	>Rs 1000 and ≤ Rs 3000	24.2
	Over Rs 3000	10.3
Length of member history	≤ 6 months	13.8
	>6 months and ≤ 1 year	17.2
	>1 year and ≤ 2 years	38.8
	>2 years and ≤ 3 years	25.9
	Over 3 years	4.3
Types of B2C websites	Daraz.pk	91.4
	Azmalo.pk	0.9
	shopdaily.com	2.6
	Others	5.2
Types of goods	Experience goods	31
	Search goods	69

III. Data Analyses And Results

To test the proposed research model, data analyses for both the measurement model and structural model were performed using Partial Least Squares (PLS). Compared with covariance-based structural equation modelling, such as LISREL, PLS is a component-based approach which can be used for theory confirmation as well as prediction. PLS has several strengths that made it appropriate for this study, including its ability to handle both reflective and formative constructs, and the no normality of the data, and the limited sample size. We used Smart PLS with bootstrapping. To ensure the appropriateness of the research instrument, it was tested for content validity, reliability and construct validity.

Validity

Content Validity

To ensure content validity, a thorough review of the literature on the subject of the study was conducted. Most of the indicators were used by much literature in similar studies. The questionnaire was also taken pilot studies. After necessary changes, this study improved both the content and clarity of the questionnaire. Then, this study got questionnaires from other respondents. And all pilot test respondents were excluded from the main sample used for

reliability testing, construct validation, and hypothesis testing.

Construct Validity

Construct validity was examined by assessing convergent validity and discriminant validity Convergent validity is considered acceptable when all item loadings are greater than 0.50, and the items for each construct load onto only one factor with an Eigen value greater than 1.0. Hair et al suggested that a measure is significant if its factor loading greater than 0.5; this criterion was adopted to examine the item reliabilities of all measures. As calculated, the factor loadings of all measures on their underlying constructs exceeded 0.5. Overall, the convergent validity test indicated that the proposed constructs of the model were adequate. For adequate discriminant validity, the diagonal elements should be greater than the off diagonal elements in the corresponding rows and columns. As the results in Table 2, in all cases, the square root of AVE for each construct is larger than the correlation of that construct with all other constructs in the model. Therefore, we have adequate construct validity.

Reliability

The assessment of the measurement model includes the estimation of internal consistency for reliability, and tests of convergent and discriminant validity for construct validity. Internal consistency was calculated using Cronbach's alpha and Fornell's composite reliability. Table 2 shows the descriptive statistics for the constructs, the reliability (Cronbach's alpha) of the scales, and the sources from which they were adapted. The Cronbach's alphas of all variables were higher than the minimum cut off score of 0.70. Comparing with Cronbach's alpha, which implicitly assumes that each item carries the same weight, composite reliability relies on the actual loadings to construct the factor score and is thus a better measure of internal consistency.

Common Method Variance

According to the technique of Harman's one factor test, if a single factor emerge from the factor analysis or one factor accounts for more than 50 % of the variance in the variable, common method variance is present. Table 3 shows the total variance explained.

Our analysis revealed 4 factor structure with no general factor present (the 1st factor account for 33.46 % variance). It does provide support for the absence of such general bias in the finding.

Table 3 Total Variance Explained

| Component	Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %
1	14.053	33.460	33.460
2	3.743	8.911	42.371
3	2.376	5.657	48.028
4	2.076	4.944	52.972

Extraction Method: Principal Component Analysis.

Structural Model Assessment

The assessment of the proposed research model includes estimating path coefficients and R^2. They indicate how the model is performing. Figure 2 shows the results of assessment and hypothesis testing. As shown in Figure 2, H1b, H2, H3 are supported, and we can see that in B2C e-commerce, trust, perceived risk and perceived benefit have a certain effect on consumers' purchasing intention. It is in line with people's imagination in real life. The higher the degree of trust the seller is, the easier it is to deal with each other; and the lower the perceived risk is, the easier it is to deal with each other. However, in this study, trust doesn't have a significant effect on perceived risk.

Table 2 Correlations of latent variables

	SA	FAM	GP	INF	PB	PR	PI	ROS	WS	TRUST	Composite Reliability	Cronbach's Alpha	Communality
SA	0.579										0.871	0.813	0.579
FAM	0.264	0.638									0.875	0.808	0.638
GP	0.386	0.226	0.725								0.888	0.816	0.725
INF	0.222	0.236	0.392	0.623							0.892	0.848	0.623
PB	0.130	0.130	0.398	0.469	0.675						0.889	0.826	0.675
PR	0.129	0.004	0.210	0.054	0.266	0.824					0.904	0.800	0.824
PI	0.324	0.234	0.372	0.136	0.476	0.151	0.697				0.902	0.854	0.697
ROS	0.164	0.485	0.515	0.332	0.550	0.082	0.385	0.792			0.920	0.869	0.792
WS	0.261	0.201	0.235	0.239	0.468	0.005	0.236	0.433	0.628		0.909	0.878	0.628
TRUST	0.345	0.301	0.475	0.322	0.510	0.027	0.388	0.526	0.372	0.642	0.837	0.704	0.642
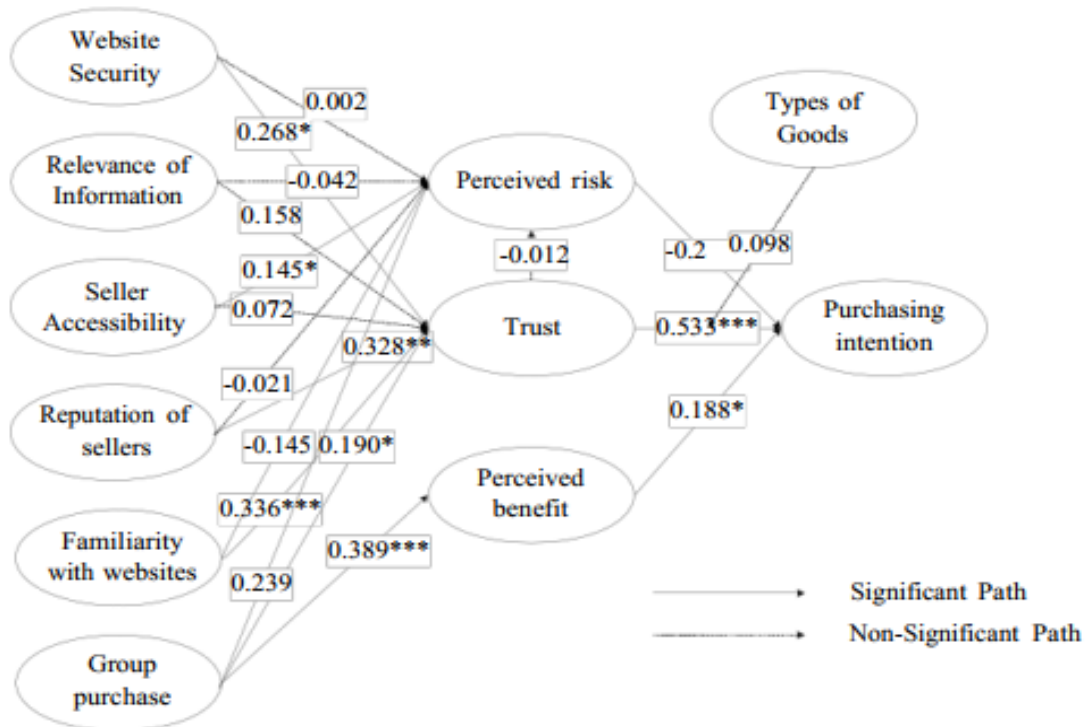
Note: * Significant at 0.1 level, ** Significant at 0.05 level, *** Significant at 0.01 level.

Fig.2 Results of Proposed Research Model

For H4, the moderating variable "types of goods" didn't have a significant effect on the correlation between trust and purchasing intention. For the consumers, "types of goods" may be their own personal preference. Although it would have some influence on consumers' purchasing intention, the effect may not be significant. Then, we can find that H5b, H8b, H9b, and H10b are supported by the sample. That is, the better Website Security is, and the stronger trust is. The higher reputation of sellers is, and the stronger trust is. The more familiarity with websites is, and the stronger trust is. Group purchase has a positive effect on customers' trust to online transactions. But to perceived risk, only seller accessibility has a significant effect. H5a, H6a, H8a, H9a, H10a are not supported by the data. Because of fewer data, there is no verification to prove these assumptions effective. H10c is also supported by the sample. Group purchase has a strong effect on perceived benefit. In some degree, it explains why customers like group purchase in B2C e-commerce.

IV. Discussion And Conclusion

Research Findings

The empirical results suggest that a consumer's trust and the perceived risk directly affect his or her purchasing intention. This is consistent with previous studies on the relationship between trust and consumer purchasing intention, and between perceived risk and consumer purchasing intention. However, a consumer's trust has a non-significant positive effect on perceived risk. This study also provides evidence that a consumer's perceived risk reduces the consumer's intention to purchase, whereas a consumer's perceived benefit increases the consumer's purchasing intention. Interestingly, familiarity with websites had a strong direct influence on consumers' trust as expected, however familiarity did not have a significant direct effect on consumers' perceived risk. This is consistent with scholar's arguments. As the new item in this study, group purchase has a significant effect on both trust and perceived benefit. Daily communication in the online shopping environment among consumers can increase trust to the sellers, also due to less fee, customers gain more perceived benefit from e-commerce compared with traditional e-commerce.

In this study, relevance of information didn't have a significant effect on both perceived risk and trust. According to the scholar's arguments, maybe in the process of online purchasing, more and more consumers found that information provided by sellers
were too much, and it brought some difficulty to find useful information to avoid risk or peruse trust.

Limitations

Firstly, because the verification of structural equation model needs larger volume of data, and the quantity of valid data in this study are only 298, so it may be lack of adequate data to verify the model. Therefore, we will continue to collect data in the later verification, as a supplement for the relationship which has not been verified. Secondly, the data were collected from the B2C websites users in Pakistan, and the model may be a little different from other countries. Its generalization will be tested in future researches with data collected from other countries.

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