Intention Towards Online Shopping: A Pakistan Based Study

Ather Akhlaq
Institute of Business Management, Karachi Pakistan, ather.akhlaq@iobm.edu.pk

Ejaz Ahmed
Institute of Business Management, Karachi Pakistan

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Ather Akhlaq
Institute of Business Management, Karachi Pakistan.

Ejaz Ahmed
Institute of Business Management, Karachi Pakistan.

Institute of Business Management, Korangi Creek, Karachi- 75190, Pakistan

Email: ather.akhlag@iobm.edu.pk

Abstract

Online shopping environment is still in an infancy stage in Pakistan. The intent of this research is to develop a model on the basis of the traditional technology acceptance model (TAM), to find factors that affect online shopping adoption in Pakistan. With a survey sample of 286 respondents which includes university students and professionals from various walks of life, the proposed model was evaluated by confirmatory factor analysis and regression analysis. The significant findings of the study indicate that perceived usefulness, perceived ease of use, perceived risk, perceived enjoyment, distrust and legal framework are the main factors affecting online shopping acceptance except that the cultural environment has a negligible influence.

Keywords: Online Shopping, Technology Acceptance Model , Factor Analysis, E-Commerce
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Abstract

Online shopping environment is still in an infancy stage in Pakistan. The intent of this research is to develop a model on the basis of the traditional technology acceptance model (TAM), to find factors that affect online shopping adoption in Pakistan. With a survey sample of 286 respondents which includes university students and professionals from various walks of life, the proposed model was evaluated by confirmatory factor analysis and regression analysis. The significant findings of the study indicate that perceived usefulness, perceived ease of use, perceived risk, perceived enjoyment, distrust and legal framework are the main factors affecting online shopping acceptance except that the cultural environment has a negligible influence.

Keywords: Online Shopping, Technology Acceptance Model, Factor Analysis, E-Commerce

1. Introduction

Online shopping is defined as the shopping behavior of customers or buyers purchasing in online/virtual stores or websites used for online purchasing transactions (Monsuwe et al. 2004). Unfortunately there is no significant development in the adoption of internet shopping despite favorable policies and infrastructure and this negative trend is due to the attitudinal factors rather than technological infrastructure (Ramayah and Ignatius, 2010).

Kamen (2010), an inventor and entrepreneur describes the rigidity in accepting technology as follows:

“Technology is easy to develop. Developing a new attitude, moving the culture from one mental model to another, that’s the difficult part. You give people a solution to a problem and the great irony is that even though they’re unhappy, they have high inertia. People don’t like change. The reason it takes technology 15 or 20 years to come in is because 15 years is the time it takes a kid who saw it when he was young to become a functioning adult.”

Online shopping technology is still immature, little is known of the factors that influence online shopping attitude (Haque et al. 2006). Consumer decisions regarding online
shopping are to be understood in order to develop online shopping systems (Lin, 2007). Since few studies investigates consumer acceptance of online shopping (Ha and Stoel, 2009), this study extends the technology acceptance model to identify the factors that affects online shopping. A better understanding of online shopping technology can help the firms in their efforts to sell their products online (Van der Heijden et al. 2003).

This study attempts to find the causes that effect online shopping in business to consumer environment of Pakistan. The rapid growth in numbers of internet users in Pakistan from 133,900 users in 2000 to 18,500,000 in 2010 (Internetworldstats.com) provide opportunities for retailers and wholesalers to explore ways in finding new businesses on the internet. The theory used in this study is the Technology Acceptance Model (TAM) (Davis 1989) which basically includes perceived usefulness and perceived ease of use as two external variables. The model is being modified by adding five variables: Perceived risk, Perceived Enjoyment, Trust, Legal Framework and Cultural Environment to two major variables of TAM, perceived usefulness and perceived ease of use. Though prior studies such as Lu et al. (2005), Huwang and Kim (2007) and Ha and Stoel (2009) have used different combinations of these variables but no study has incorporated all the seven variables at the same time in finding out the intention of consumers towards online shopping. The hypotheses are validated with the sample size of 286 local respondents. In this study the research questions need to be answered are about the negative and positive impact on online shopping intention by Perceived Risk and Trust; and by Perceived usefulness, Perceived ease of use, perceived effectiveness of Legal framework and Cultural environment respectively. This study comprises of the users who have or have not transacted online.

The paper is organized as follows. Section 2 explains a theoretical back ground describing the technology acceptance model and discusses previous research on online shopping technology. In section 3 a new model is proposed followed by hypothesis development based on literature findings. Methodology is explained in section 5 while discussion and future research directions are given in section 6 and 7.
2. Literature review

Technology Acceptance Model (TAM) (Davis et al., 1989) used extensively in studying information system acceptance (Davis et al. 1989; Mathieson, 1991; Davis and Venkatesh, 1996; Gefen and Straub, 2000) in which usage of the system (actual behavior) is determined by Perceived Usefulness (PU) and Perceived Ease Of Use (PEOU) which are the antecedents of attitude towards use which in turn is related finally to behavior. TAM also includes a causal relationship between PEOU and PU. TAM 2 was proposed by Venkatesh and Davis (2000) in which attitude was dropped from the model because it came out to be a weak mediator.

TAM is based on Theory of Reasoned Action (TRA) (Ajzen and Fishbein, 1975) which suggests that social behavior is motivated by the attitude and intention to perform (Li and Huang, 2010). There are three constructs in TRA namely Behavioral Intention (BI), Attitude (A) and Subjective Norm (SN). Figure 1 shows the traditional TAM model.

![Figure 1. Traditional Technology Acceptance Model (Source Davis et. al. (1989))](image)

Initially TAM was focused on Information Systems (IS) in the workplace (Venkatesh and Davis, 2000). TAM is also applicable and successfully adopted to study online shopping behavior (Chiu et al. 2009). Previous studies have extended TAM by incorporating new and additional constructs and integrating other models with TAM. Klopping and
McKinney (2004) extended TAM by adding the Task Technology Fit (TTF) Model. In doing so, similar results were found as of Chen et al. (2002). Goodhue and Thompson (1995) developed a TTF model that has a formal construct called TTF. It states that the information technology (IT) has the ability to support a task and be used if IT has the capabilities to do the task user wish to perform. Individual performance is likely to have a positive impact by using IT.

Wang et al. (2006) developed the conceptual model about how cognition and personality would affect the individual’s attitude towards online shopping using TRA and TAM. Findings show that the individual’s cognitive abilities to think and feel influence his buying intentions. It also showed that purchasing online is more inclined to those individuals who are more risk taking, open to new experience and had higher level of self efficacy (Wang et al. 2006).

Internet shopping is still very slow due to lack of consumers’ trust (Hoffman et al. 1999). A theoretical model in which consumers’ trust in online shopping is affected by two groups of antecedents of factors, namely “trustworthiness of internet vendors” and “external environment” discussed by Cheung and Lee (2000). Their research added to the development of the trust theory in e-commerce and resulted in validated instruments to measure various trust related constructs. A multidisciplinary approach again discussed by Cheung and Lee (2006) includes three diversified trust perspectives, namely sociological view, social psychological view and the personality. Their result showed strong evidence for the validity of the proposed research model based on three trust perspectives.

Li and Huang (2010) developed a conceptual model by integrating Theory of Perceived Risk (TPR) and TAM to apply in online shopping behavior. Many scholars have discussed the issue of perceived risk and have presented many classifications (Huang et al. 2004, Pires et al. 2004, Mitchell 1999). If the purchasing goals differ from actual purchasing experiences of online customers then they will perceive higher risk in purchasing online (Pires et al. 2004). The customer does not really get the specific intended thing when bought from an online store which would in turn make the customer
unwilling to buy things online in future. Therefore, perceived risk has to be considered as an antecedent in the TAM.

The perceived ease of use plays a mediating role between the technological system and the potential e-shopper (Ramayah and Ignatius, 2010) thus suggesting that the impact of online customer service on intention to shop online largely depends upon the interface of the e-purchasing system. Koufaris (2002) considered both computer user and shopper as an online consumer. Constructs from TAM, marketing (Consumer Behavior) and psychology (Flow and Environmental Psychology) were integrated into theoretical framework of online consumers. The study of Koufaris (2002) gave a better understanding of consumer behavior on the web.

Atmospheric cues, design elements used to earn customers’ attention and to create a positive purchasing environment, are vital for the online store’s ability to retain customers globally (Kotler 1974). The findings of Wang et al. (2007) specify that culture does affect the ways in which online customer respond to atmospheric cues. The study of Ackerman and Tellis (2001) examines differences between the consumers shopping behavior and the prices of the product due to cultural orientation. Their findings suggest that cultural orientation can have influence upon consumer behavior as well as on firm behavior. Therefore, we have included the Cultural Environment factor in this study as a part of the modified TAM model.

Factors such as perceived risk, perceived usefulness, perceived ease of use, perceived enjoyment, legal framework, trust and cultural environment have been used by the researchers individually or in combination but not used together in any of the previous studies. Factors that inhibit or stimulate the users who are already purchasing online and users who still need to adopt online shopping technology will be known through this study. This study may be considered as a pioneering case for Pakistan environment.
3. Proposed model

In this section we develop the constructs for our proposed model. The model is modified from the original TAM (Davis, 1989) and from the other versions of modified TAM used by Wang et al. (2006), Pikkarainen et al. (2004), Li and Huang (2010), Prompattananapakdee (2009). The model consists of seven factors that are speculated to have an effect on intention towards online shopping. Figure 2 portrays flow diagram of the variables in the model.

![Proposed Model Diagram]

Figure 2. Proposed Model
Hypothesis Development

4.1 Perceived Risk

Dowling and Staelin (1994) defined the concept of perceived risk as "the consumer's perceptions of the uncertainty and adverse consequences of buying a product or service". Online shopping involves more uncertainties and risk than traditional offline shopping (Li and Huang, 2010). The components of perceived risk as stated in the previous research (Jacoby and Kaplan, 1972; Kaplan et al., 1974; Shimp and Bearden, 1982; Garner, 1986; Kim and Lennon, 2000) are social, financial, physical, performance, time and psychological.

<table>
<thead>
<tr>
<th>Risk Types</th>
<th>Definition</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Risk</td>
<td>The likelihood that the product purchased would be disapproved by friends and family.</td>
<td>Dowling and Staelin, 1994</td>
</tr>
<tr>
<td>Financial Risk</td>
<td>The perception that there would be hidden costs or lack of warranty that would be required to make a product work properly will result in financial loss.</td>
<td>Garner, 1986</td>
</tr>
<tr>
<td>Physical Risk</td>
<td>When the product does not work properly, it may be hazardous to health and safety.</td>
<td>Roselius, 1971</td>
</tr>
<tr>
<td>Performance Risk</td>
<td>The opinion that the product purchased failed to meet the expected performance requirements.</td>
<td>Kim &amp; Lennon, 2000</td>
</tr>
<tr>
<td>Time Risk</td>
<td>Time, effort and convenience would be wasted if the product is replaced, repaired or customized.</td>
<td>Bauer, 1967</td>
</tr>
<tr>
<td>Psychological Risk</td>
<td>The inconsistency between the self image of the buyer and the product causing a negative effect on the consumers mind due to defective product.</td>
<td>Jacoby and Kaplan, 1972</td>
</tr>
<tr>
<td>Overall Risk</td>
<td>The probability that the purchase of the product will result in the displeasure of the consumer.</td>
<td>Peter and Taprey, 1975, Jacoby and Kaplan, 1972</td>
</tr>
</tbody>
</table>

Table 1. Types and definitions of Perceived Risks of Online Shopping
Modified from Peter and Taprey, 1975, Jacoby and Kaplan, 1972
Table 1 shows types of risks involved in online shopping that are addressed in literature, with their definitions and authors’ references.

Based on the above we can hypothesize the following:

Hypothesis 1

$H_0$: Perceived Risk (PR) has no negative effect on consumer intention to shop online

$H_1$: PR has a negative effect on consumer intention to shop online

4.2 Perceived Usefulness PU

In TAM, PU is defined as the extent to which a person finds his job performance to be enhanced by using the particular system. PU is the individual evaluation of the utility offered by using the new information systems or technology in a specific perspective (Davis, 1989). In the TAM model, PU reflects task-related productivity, performance and effectiveness (Davis, 1989). In the views of user a positive use-performance relationship makes the system high in perceived usefulness (Davis, 1989). Accordingly the following hypothesis is proposed.

Hypothesis 2

$H_0$: PU has no positive effect on consumer intention to shop online.

$H_1$: PU has positive effect on consumer intention to shop online.

4.3 Perceived Ease Of Use PEOU

Similarly TAM defines PEOU as the extent to which a person finds that job free of effort. Effort is a finite resource that is allocated to various activities by a person responsible for the activities (Radner and Rothschild 1975). Hence an application or the system perceived to be easier to use is more likely to be adopted by user than the application or the system giving high difficulty level. On the basis of the above definition we hypothesize:

Hypothesis 3

$H_0$: PEOU has no positive effect on consumer intention to shop online.
$H_1$: PEOU has positive effect on consumer intention to shop online.

In TAM, PU and PEOU are the major and secondary belief factors respectively in determining behavioral intention towards using IT (Davis, 1989; Gefen et al, 2003; Yu et al. 2005)

### 4.4 Perceived Enjoyment

Perceived Enjoyment (PE) is defined as the intrinsic motivation to use new technology (Baroudi et al. 1996). Enjoyment refers to the extent to which the activity of using the computer is perceived to be enjoyable (Davis, 1989). This is in contrast with PU, which is an extrinsic motivation, whereas PE is an intrinsic motivation to use application or information system (Pikkarainen et al. 2004). Just as shopping offline is very much enjoyable (Morris 1987, Forman and Sriram 1991, Blakney and Sekely 1994), it can be equally enjoyable online where it can have significant impact on intention towards online shopping (Jarvenpaa and Todd 1997b, Eighmey 1997). Also perceived fun and perceived playfulness are used in some of the studies (Igbaria et al. 1994; Moon and Kim, 2001) though they are quite similar to the idea of PE.

Past studies have confirmed that shopping enjoyment can be an important determinant of online customer loyalty (Jarvenpaa and Todd 1997b; Rice 1997; Eighmey and McCord, 1998; Pikkarainen et al. 2004). On this basis we hypothesize the following:

Hypothesis 4

$H_0$: PE has no positive effect on consumer intention to shop online.

$H_1$: PE has positive effect on consumer intention to shop online.

### 4.5 Legal Framework

Legal framework (LF) refers to the “perceived effectiveness of the law and code of practice established to protect Internet shoppers during electronic transactions” (Cheung and Lee, 2006). Legal framework is for the protection of the online users doing electronic transactions. Legal framework refers to the law and code of practice established to protect Internet Shoppers during their electronic purchase (Cheung and Lee, 2000). There are
very few studies adding this construct. It would be necessary for this research to use this construct because the internet users are becoming aware of the legal and ethical issues of shopping online. This construct would determine their choice whether to shop online or not in the future. Thus the proposition is:

Hypothesis 5

$H_0$: The perceived effectiveness of legal framework has no positive effect on consumer intention to shop online.

$H_1$: The perceived effectiveness of legal framework has a positive effect on consumer intention to shop online.

4.6 Trust

Trust in the context of the buyer – seller relationship can be defined as “a consumer’s willingness to rely on the seller and take action in circumstances where such action makes the consumer vulnerable to the seller” (Jarvenpaa et. al 1999). Lack of trust of the buyer is an obstacle for the seller to do business online. Previous studies (Friedman et. al 2000; Hoffman et. al, 1999; Schoder and Yin, 2000; ) showed that lack of trust is the main hindrance in the online transaction environment that inhibits the adoption of online shopping. Consumers often are uncertain about the online seller’s information given on their websites. They avoid indulging in online purchasing when they were asked to give their private information such as credit card numbers; also they have a fear of being fooled by unfair pricing, breach of privacy and passing on inaccurate information (Gefen et al. 2003). Increasing trust of the buyer can play a positive role in adopting online shopping. We postulate the following hypothesis by reversing trust into distrust

Hypothesis 6

$H_0$: Distrust has no negative effect on consumer intention to shop online

$H_1$: Distrust has a negative effect on consumer intention to shop online.
4.7 Cultural Environment (CE)

Culture is the attitude and behavior that are the characteristics of a social group. It is the deposit of beliefs, knowledge, values and attitudes that figure people’s behavior (Md Nor K., 2008). Culture influences the adoption rate of Information and communication technologies (ICT) in the country; also culture shapes the attitude of the consumers to adopt the technology or not (Erumban and Jong, 2006). Therefore it is postulated that to use a certain technology, culture shapes the individual whether to use it or not. We can hypothesize the following:

Hypothesis 7

$H_0$: Culture has no positive effect on consumer intention to shop online.

$H_1$: Culture has a positive effect on consumer intention to shop online.

4. Methodology

The data is collected via online questionnaire survey. The survey link (https://www.kwiksurveys.com?s=KLKKGN_57d8e60c) was sent to number of people through broadcasting the link on their email addresses on one of the local institute’s network domain. The domain consists of more than 100 faculty members, 1000s of alumni graduates and fresh students. It was also sent to relatives and friends on social networks such as Facebook®.

The questionnaire contains three demographic variables gender, age and qualification; four general variables to assess how much time an individual spends on internet daily and what percentage of income is spent on offline / online shopping activities; and 31 items of 8 unobserved variables. The latent variables are perceived risk, perceived usefulness, perceived ease of use, perceived enjoyment, legal framework, trust, cultural environment and intention to shop online as given in figure 1. All the unobserved variables are required five-point Likert-scale responses ranged from 1 = “strongly agree,” through 3 = “neutral,” to 5 = “strongly disagree.” The population in the study is a mix of consumers who have or have not transacted online.
5.1 Data Analysis

Confirmatory factor analysis (CFA) was conducted on the selected items for the construct validity and to measure the indicators for the latent variables. CFA was used because it helps the researcher to reduce the number of variables used in the survey and helps the researcher to converge the variables into few required factors. CFA was the first step to test the measurement model, followed by the checking of the internal consistency reliability of the indicators using Cronbach Alpha values. Finally the regression analysis is conducted on the factor model to analyze the “intention towards online shopping” construct, taking intention as a dependent variable. Statistical software SPSS 17 was used for the analysis.

5. Results

Initially the profile of respondents is discussed followed by the factor analysis, reliability analysis and regression analysis.

6.1 Profile of Respondents

There were 286 local respondents altogether (n = 286). Of the respondents 68% were male. The age slot of 18-24 years shows in the first place 61% of the respondents followed by the 25-34 year age slot having 30% of the respondents. Majority of the respondents, that is 41% are qualified as Bachelor followed by 36% as Masters. Internet shopping experience for any products or services was answered in affirmation by 57% of the respondents. Respondents spending less than 25% of their income on online shopping activities were 97%.

6.2 Factor Analysis

A Confirmatory Factor Analysis was conducted on the items of PU, PEOU, PR, PE, LF, Trust and Cultural Environment. The factor analysis was accomplished using Principal Component Factoring (PCF) with Varimax rotation as an extraction method (Hair et al. 1998) as shown in Table 2. Two variables from the list of 31 items did not fit into the factor model. Both the variables were associated with the Cultural Environment. The six
factors identified were chosen in terms of eigenvalue greater than 1.0. The Kaisera-Meyer-Olkin (KMO) measure of 0.847 is a meritorious value and indicates that variables are measuring a common factor. The Bartlett’s test of sphericity confirmed that variables in the sample correlation matrix are uncorrelated.

Rotated Component Matrix

<table>
<thead>
<tr>
<th></th>
<th>Perceived Risk</th>
<th>Trust</th>
<th>Perceived Enjoyment</th>
<th>Perceived Ease of Use</th>
<th>Perceived Usefulness</th>
<th>Legal Framework</th>
</tr>
</thead>
<tbody>
<tr>
<td>PU1</td>
<td>-.027</td>
<td>-.104</td>
<td>.296</td>
<td>.300</td>
<td>.597</td>
<td>.077</td>
</tr>
<tr>
<td>PU2</td>
<td>-.117</td>
<td>.047</td>
<td>.136</td>
<td>.256</td>
<td>.750</td>
<td>.011</td>
</tr>
<tr>
<td>PU3</td>
<td>.000</td>
<td>.005</td>
<td>.151</td>
<td>.221</td>
<td>.791</td>
<td>.011</td>
</tr>
<tr>
<td>PU4</td>
<td>-.026</td>
<td>-.088</td>
<td>.251</td>
<td>.363</td>
<td>.677</td>
<td>.016</td>
</tr>
<tr>
<td>PEOU1</td>
<td>.002</td>
<td>-.036</td>
<td>.171</td>
<td>.767</td>
<td>.297</td>
<td>.014</td>
</tr>
<tr>
<td>PEOU2</td>
<td>.033</td>
<td>-.060</td>
<td>.253</td>
<td>.733</td>
<td>.253</td>
<td>-.044</td>
</tr>
<tr>
<td>PEOU3</td>
<td>.012</td>
<td>-.056</td>
<td>.327</td>
<td>.778</td>
<td>.164</td>
<td>-.057</td>
</tr>
<tr>
<td>PEOU4</td>
<td>.003</td>
<td>.022</td>
<td>.236</td>
<td>.726</td>
<td>.193</td>
<td>.007</td>
</tr>
<tr>
<td>PR1</td>
<td>.707</td>
<td>.067</td>
<td>-.263</td>
<td>-.020</td>
<td>.079</td>
<td>.142</td>
</tr>
<tr>
<td>PR2</td>
<td>.617</td>
<td>.352</td>
<td>-.055</td>
<td>-.044</td>
<td>.072</td>
<td>-.132</td>
</tr>
<tr>
<td>PR3</td>
<td>.756</td>
<td>.227</td>
<td>.049</td>
<td>-.010</td>
<td>-.060</td>
<td>.073</td>
</tr>
<tr>
<td>PR4</td>
<td>.637</td>
<td>.349</td>
<td>.062</td>
<td>-.201</td>
<td>.109</td>
<td>-.067</td>
</tr>
<tr>
<td>PR5</td>
<td>.782</td>
<td>.189</td>
<td>-.009</td>
<td>.033</td>
<td>-.143</td>
<td>.087</td>
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<tr>
<td>PR6</td>
<td>.769</td>
<td>.125</td>
<td>-.106</td>
<td>.076</td>
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<td>.138</td>
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<td>PE1</td>
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<td>.107</td>
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<td>PE2</td>
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<td>.094</td>
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<td>PE3</td>
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<td>-.075</td>
<td>.805</td>
<td>.239</td>
<td>.262</td>
<td>.153</td>
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<tr>
<td>PE4</td>
<td>-.028</td>
<td>-.036</td>
<td>.812</td>
<td>.247</td>
<td>.150</td>
<td>.173</td>
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<tr>
<td>LF1</td>
<td>.210</td>
<td>-.174</td>
<td>.148</td>
<td>-.089</td>
<td>.165</td>
<td>.756</td>
</tr>
<tr>
<td>LF2</td>
<td>.108</td>
<td>-.093</td>
<td>.156</td>
<td>-.071</td>
<td>.084</td>
<td>.806</td>
</tr>
<tr>
<td>T1</td>
<td>.210</td>
<td>.777</td>
<td>-.099</td>
<td>.080</td>
<td>-.160</td>
<td>-.002</td>
</tr>
<tr>
<td>T2</td>
<td>.329</td>
<td>.768</td>
<td>-.084</td>
<td>-.017</td>
<td>-.099</td>
<td>-.028</td>
</tr>
<tr>
<td>T3</td>
<td>.185</td>
<td>.840</td>
<td>.016</td>
<td>.011</td>
<td>.003</td>
<td>-.025</td>
</tr>
<tr>
<td>T4</td>
<td>.240</td>
<td>.785</td>
<td>.054</td>
<td>-.065</td>
<td>-.009</td>
<td>-.070</td>
</tr>
<tr>
<td>CE1</td>
<td>-.055</td>
<td>.104</td>
<td>.067</td>
<td>.104</td>
<td>-.139</td>
<td>.639</td>
</tr>
<tr>
<td>CE2</td>
<td>-.123</td>
<td>.283</td>
<td>-.041</td>
<td>.445</td>
<td>.143</td>
<td>.083</td>
</tr>
<tr>
<td>CE3</td>
<td>.209</td>
<td>.592</td>
<td>-.374</td>
<td>.047</td>
<td>.160</td>
<td>.043</td>
</tr>
<tr>
<td>CE4</td>
<td>.322</td>
<td>.192</td>
<td>-.313</td>
<td>.237</td>
<td>.186</td>
<td>.305</td>
</tr>
</tbody>
</table>

Table 2. Rotation Method: Varimax with Kaiser Normalization.
The six factors acknowledged representing 64.9% of the variance of the variables. The final model shown in Figure 3 reduced to six latent factors.

![Diagram showing the final proposed model with factors like Perceived Risk, Perceived Usefulness, Perceived Ease of Use, Perceived Enjoyment, Legal Framework, Trust, and their connections to Intention towards online shopping.]

**Figure 3. Final Proposed Model**

### 6.3 Reliability Analysis

Cronbach’s alpha reliability coefficient normally varies between 0 and 1. Acceptable value of Cronbach’s value can vary between 0.5 and 0.95 as pointed by (Peterson 1994). Table 3 shows the alpha values of the variables. Four trust variables and one CE variables (T1, T2, T3, T4, and CE3) that are reversed showed convergence to a single factor and were named as Distrust. LF’s two variables and one variables of CE (LF1, LF2, and CE1) together made a common factor but CE1 was dropped due to questionable alpha value.
Factor | Alpha Value | Comments
---|---|---
PR (six variables) | 0.848 | Good
Distrust (5 variables) | 0.862 | Good
PEOU (4 variables) | 0.866 | Good
PE (4 variables) | 0.922 | Excellent
PU (4 variables) | 0.823 | Good
LF and CE1 (3 variables) (eliminated) | 0.653 | Questionable
LF (2 variables) | 0.816 | Good

Table 3. Cronbach Alpha Values

The overall reliability of the factor analysis was 0.824. The first factor, PR, explained 24.6 percent of the variance followed by Distrust that explained 17.6 percent of the variance.

6.3 Regression Analysis

The factor model evolved was used to analyze the intention towards online shopping. The three dependent variables related to intention (IN1, IN2 and IN3) were manipulated to form one dependent variable, Intention (IN) by taking their mean.

The regression analysis was conducted to explore that how intention towards shopping online is being affected by different factors. The results of the regression analysis are presented in Table 4. It shows the overall model is statistically significant ($R^2 = 0.387, p = 0.00$). All the independent variables are also statistically significant. PR and Distrust have negative effect whereas all the remaining variables have positive effect on intention towards online shopping. This in turn validates the theory underneath the model.
### Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.622&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.387</td>
<td>.374</td>
<td>.68162</td>
</tr>
</tbody>
</table>

<sup>a</sup> Predictors: (Constant), Legal Framework, Perceived Usefulness, Perceived Ease of Use, Perceived Enjoyment, Distrust, Perceived Risk

### ANOVA<sup>b</sup>

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Regression</td>
<td>81.850</td>
<td>6</td>
<td>13.642</td>
<td>29.362</td>
<td>.000&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>Residual</td>
<td>129.623</td>
<td>279</td>
<td>.465</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>211.473</td>
<td>285</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<sup>a</sup> Predictors: (Constant), Legal Framework, Perceived Usefulness, Perceived Ease of Use, Perceived Enjoyment, Distrust, Perceived Risk

<sup>b</sup> Dependent Variable: Online Shopping Intention

### Coefficients<sup>a</sup>

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>2.942</td>
<td>.040</td>
<td>72.987</td>
</tr>
<tr>
<td></td>
<td>Perceived Risk</td>
<td>-.156</td>
<td>.040</td>
<td>-.181</td>
</tr>
<tr>
<td></td>
<td>Distrust</td>
<td>-.132</td>
<td>.040</td>
<td>-.154</td>
</tr>
<tr>
<td></td>
<td>Perceived Enjoyment</td>
<td>.376</td>
<td>.040</td>
<td>.436</td>
</tr>
<tr>
<td></td>
<td>Perceived Ease of Use</td>
<td>.187</td>
<td>.040</td>
<td>.218</td>
</tr>
<tr>
<td></td>
<td>Perceived Usefulness</td>
<td>.249</td>
<td>.040</td>
<td>.289</td>
</tr>
<tr>
<td></td>
<td>Legal Framework</td>
<td>.085</td>
<td>.040</td>
<td>.098</td>
</tr>
</tbody>
</table>

<sup>a</sup> Dependent Variable: Online Shopping Intention

**Table 4: Regression Output of the Proposed Model**
6. Discussion and Conclusion

The primary purpose of this study was to know the intention towards online shopping among Pakistanis using TAM and other new variables that are derived from online shopping literature. It is of worth to note that young and vibrant users are always ready to learn and know new things. Since marketers can take advantage of this fact, a major part of the research sample (almost 60%) comprises of respondents falling in age bracket 18-34 years. We see that the percentage of the respondents who used online shopping facility is 43% but they spend only 0-25% of their income online. This further suggest that there is still a gap of 25-75 % of the income that needs to be spend on buying products or services online. The online sellers still have a lot of room to generate more revenues by attracting these consumers to their virtual stores.

The fitted model therefore is

\[
IN = 2.942 - 0.156PR - 0.132Distrust + 0.376PE + 0.187PEOU + 0.249PU + 0.085LF
\]

From the regression analysis as shown in Table 4 it is clear that all the factors assumed to effect intention towards online shopping proved to be statistically significant. PR and Distrust show negative relationships with intention towards online shopping and merely suggest that user’s intention to use or adopt the online shopping technology is surely suppressed when user finds the transaction risky and untrustworthy. PE, PEOU, PU and LF show positive relationships with intention towards online shopping. These positive relations strongly infer that online businesses should pay more attention on these factors to expand their customer base and in turn increased returns. Table 4 also reveals 38.7% variation (R^2) in online shopping intention is explained by the fitted model.

This research identifies factors that obstruct and motivate users to continue or adopt online shopping technology. This study is very much beneficial for both government and businesses, as it develops a model to study and follow for those possibilities that affect online shopping environment. This research supports societies to work on minimizing PR, Distrust and making a stronger LF for both merchants and online shoppers. An effective LF would involuntarily induce trust in the online shopping technology which
would help in diminishing distrust and PR. Also for the developers of the online shopping interfaces and technologies, it is worth to know that PE, PEOU and PU need to be given more attention as these factors attract online users to shop.

Intention towards online shopping is not affected by the cultural environment as confirmed by the factor and reliability analysis. Online shopping is borderless and it can be accepted by the people of any culture who find it useful, easy to use, enjoyable, having minimum distrust in vendors and business environment, have low perceptions of risk and finally an authentic legal framework is available to them which abide by all the rules and regulations for any transaction to occur.

As indicated by Li and Huang (2009) online shopping channel is emerging, providers of products or services have to realize purchase behaviors and potential needs of the consumers. Previous researches (Karahan and Straub, 2003; Gefen and Straub, 2004) showed that PU and PEOU lead to amplification of online shopping intention. The more the user finds the website or the related technology useful, the more the user will be ready to adopt the technology. Moreover, after the adoption, if the user does not find its ease of use then there are chances for the new innovation to fail. Li and Huang (2009) suggested that the online vendors need to adjust their contexts of websites to match the preferences of their different groups of customers. Again, the level of difficulty has to be considered for each of their major customer group. PE retains the customer with the online seller. The consumer enjoys and amuses along with shopping online. Online retailers have to give importance to this factor of enjoyment when planning to develop their websites and virtual stores minimizing the boredom of the user. Intention towards online shopping is affected negatively by Distrust and PR. Buyer perceives the risk of being fooled by many aspects as discussed in the types of perceived risk (Table 1) in literature review. Online sellers need to find ways and work upon methodologies to minimize the risk perceived by buyer. Distrust of consumers upon online merchants can be minimized if the legal system of the country is established and well defined for the cybercrimes. In a country where LF is not even justifiable or trusted for the common daily mishaps other than things online, it will be very difficult for the person even to think to migrate towards online shopping.
Overall, these findings highlight the reasons behind the success and failures of the online shopping systems.

7. Limitations and Future Research

This study has limitations that it can not be generalized as it is based on responses from a particular region. Comparative study to know the differences in the perceptions of online shopping of the people living in diverse geographical areas is in progress. Intention is to expand this research by focusing on those customers who have lived abroad for many years and had used online shopping technology there that might give an opportunity to understand the overseas approach that make people use this online shopping facility.

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