

Proposed Research Model for an Acceptance of E-Commerce Services among the Students in Uzbekistan

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Abstract: This study investigates the factors that significantly affect the acceptance of e-commerce in Uzbekistan. These factors were Technology, Awareness, Trust, technology acceptance model and Innovation Diffusion theory Characteristics. This study adopted the deductive approach to reach its objectives. It presents a theoretical framework for the construction of hypotheses. The hypotheses were tested to obtain the findings that may be generalized afterwards. The primary data were collected from 384 valid questionnaires, which were distributed to random Uzbek students in four universities. After reviewing several related studies, the Likert five-point questionnaire was constructed for gathering the required data, which were then analyzed using the SPSS software.

Keywords: Perceived ease of use and perceived usefulness, compatibility, trust and technology factor with awareness and behavioral intention.

I. INTRODUCTION

1.1 Research Background

E-commerce has a wide reach in almost every industry, where one of the most frequently used business models is the B2C E-commerce (Laudon & Traver, 2008). The B2C model is developed through a website where all the communication and transactions are happening between the company and the consumer right away (Laudon & Traver, 2008). The consumer visits the website, places an order of the desired item and after receiving the order, the company will then ship the goods to the consumer. The companies are aiming to reach the individual consumers online in their everyday life, hence the orders and transaction volumes are not usually that big (Yu et al., 2016). The B2C businesses have grown exponentially since 1995, and is the kind of E-commerce most people are likely to encounter and take part of (Laudon & Traver, 2008). The phenomena of direct selling is furthermore something that the E-commerce market have enabled as it have questioned the distribution channels in areas such as music, images, book selling and software's (Andonova, 2003). The virtual distribution in these areas can be delivered with zero cost, hence the middlemen (physical stores) are threatened by the E-commerce market (Andonova, 2003). However, the non-virtually goods may cost more since the transportations needs to serve numerous buyers with different needs and thus the distribution gain from E-commerce is ambiguous (Andonova, 2003). B2C E-

commerce is generally characterized by high investments in both hardware and software, and the need of heavy advertisement to reach and attract customers and the importance of customer care service (Yu et al., 2016).

Online shoppers require fast and high quality services and to catch the potential customers the companies needs to focus on customer relationship management (Singh, 2002). Online services such as; product specifications, image and video specifications, secure payment systems, delivery information and customer service, are important factors to attract and keep the 6 customers for further purchases (Singh, 2002). The true value from E-commerce offerings are shown through its services, hence effective customer support and service is vital for the E-commerce companies (Singh, 2002). E-commerce in general does improve some of the purchasing attributes, e.g. the availability and the home delivery, but it also prevent attributes like inspection of the product before purchase and guaranteed secured payment (Andonova, 2003), thus trust is an important and vital element for E-commerce companies to consider (Choi & Mai, 2018). E-commerce is a product of Information and Communications Technology (ICT) and in fact, E-commerce is an explicit evidence of ICT's .

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awareness is the most questioned aspect of customer interest towards E-commerce. Awareness refers to the degree to which a person is confident that the significant others are of the view that he or she should make use of the new system (Ziadat et al., 2013). Awareness and trust have been reported to impede people's involvement in online shopping (Alzubi et al., 2017; Shia et al., 2015; Al Ziadat et al., 2013; Al-Azzam, 2014). Thus, the factors deemed crucial in the acceptance of E-commerce from the perspective of the customer performing online shopping should be identified. It is also clear, as evidenced by the past studies, that there are issues surrounding E-commerce implementation. For this purpose, this study expands the utilization of technology acceptance model (TAM) and the innovation diffusion theory (IDT). Also, in the context of developing countries within the same region, differences can also occur particularly with respect to the demographic, cultural, economic, and political attributes.

The present study mainly attempts to examine E-commerce across national borders in order to ascertain the linkages between a selection of factors and attitudes towards E-commerce.

In light of the talks in the past segment, three research questions will be tended in the current study. The questions are as follows:

1. Does the consequence of the Trust, Culture and Technology Factors on the acceptance of E-commerce services among the students?
2. Does the consequence of the compatibility and perceived ease of use on the usefulness of E-commerce services?
3. Does the development of Awareness Mediator by Compatibility, Perceived Ease of Use, Usefulness, Trust, Culture and Technology variables with E-commerce services Mediator in Uzbekistan E-commerce services?

II. LITERATURE REVIEW

Within the E-Commerce literature, there have been many studies that explore the prospect of the Internet being a tool to conduct activities associated with marketing, business and commerce, as has been highlighted by McCole and Ramsey (2004), Oliva (2004), Chaston and Mangles (2003), Siddiqui et al. (2003), Martin and Matlay (2003), Collins et al. (2003), Adam and Deans (2001), McGowan et al. (2001), Poon and Swatman (1996; 1997a; 1997b), Chaffey et al. (2000), Wilson and Abel (2002) and Kiang et al. (2000). The prospect of the Internet to function as an instrument used for marketing emerged from the considerable benefits achievable by companies of all sizes when they employ the Internet in carrying out their activities in marketing. Here, the use of the Internet as a commercial in-between and instrument of marketing allow companies to aggressively market their products within the cutthroat environment. Conversely, Berezai (2000) mentioned the companies being obligated to regard the Internet as an instrument of business and marketing

following the expansion of the utilization of the Internet amongst the customers for nearly all their daily activities. The same phenomenon may have also happened to SBEs when handing the leading companies who might either play the role of suppliers or as customers.

The innovative progresses happening within the domains of communications, IT, and computer science have caused the role played by the Internet to be expanded from being a mere communication tool into a distinctive and tremendously essential method of communication with the customers, 24 hours a day every day. Such communication is employed in the new markets, decreasing costs while increasing sales. As indicated by Adegoke (2004 referred to in Jensen, 2008) "web based showcasing correspondences has become a significant piece of a company's limited time blend". This view is additionally propelled by Shankar and Batra (2009) and they express that organizations are utilizing the web medium as another showcasing correspondence channel and advertising through web is developing quickly. Marketing department of a company to promote its websites, services and products in the online environment (Elley and Tilley 2009). The internet offers many opportunities for companies and it can be a useful platform for their marketing activities, such as to spread information, attract new customers, retain existing ones and even to improve relationships with existing customers by online customer relationship management (Ab Hamid 2008). Albeit the numerous definitions of E-commerce available, to ease the information exchange and transaction performances remains the key reason for the establishment of E-commerce (Tetteh & Burn, 2001). As mentioned by Tetteh and Burn (2001), numerous opportunities have been presented by E-commerce businesses of all sizes for the improvement of their performance. E-commerce has been generally deemed similar to procuring and selling of products as well as services online. However, E-commerce specifically revolves around the online transaction performances between diverse parties via the Internet.

III. RESEARCH MODEL

TAM as explained by Davis (1986 Davis (1986)), illustrates user acceptance in terms of the determining factors within a vast range of technologies of computing of the end user. The creation of TAM was grounded on TRA proposed by Ajzen and Fishbein (1980) (Tung et al., 2014). Being an established model, the usage of TRA is common amongst many researchers in countless areas relating to the description and prediction of human behaviour.

Initially, five components were the building blocks of TAM. They include: perceived ease of use (PEOU), perceived usefulness (PU), attitude toward using (ATU), behavioural intention to use (BI), and behaviour system use. Accordingly, Davis (1989) provides the description of each of these components as follows: Perceived Ease of Use (PEOU) signifies the degree to which a user is confident that the usage of a given service would be effortless; Perceived Usefulness (PU) signifies the degree to which a user is confident that the

usage of a given system would make his/her job performance better; whereas PEOU and PU are important factors for use of system. Regarding the constructs of PEOU and PU, Liu and Han (2010) describe them as containing the key beliefs which leads to user acceptance towards information technology.

The research framework is the base of the study problems. The framework shows that all concepts, meaning and proposition are related to the research problems. Meanwhile, despite many progressions made, the Technology Acceptance Model (TAM) is still the most popular tool among scholars in various domains (Davis, 1989). TAM is actually still efficient in describing the concept of acceptance. Nonetheless, using techniques of assessment corresponding with the assessment of a technology process, in this context, E-commerce, is just as crucial. Furthermore, a more comprehensive study should be carried out so that the effects of many types of environments in E-commerce could be understood (Chen, 2010). The use of TAM is progressing but notwithstanding its method of measurement, there exist problems in terms of carrying out an all-inclusive evaluation in order that the model application method within the E-commerce framework can be established.

In fact, some scholars have employed TAM and IDT in combined form. For instance, in evaluating and explaining the behaviour of consumers within a virtual store, Lee and Suh (2013) merged TAM with the construct of compatibility of IDT. Tung et al. (2014) also merged TAM with IDT in their work. Correspondingly, Figure 1 highlights the ground model of the E-commerce acceptance examination.

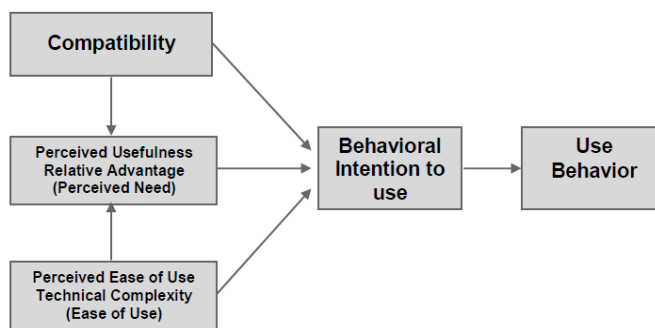


Figure 1: Basic Model for Acceptance of E-commerce

The use of TAM combined with other theories of acceptance and diffusion has been proposed by several studies (e.g., Hu et al., 1999; Wu & Wang, 2005; Lee & Suh, 2013; Wu, Weng & Kao, 2014; Tung et al., 2014) in order that the model's predictive and explanatory capabilities could be improved. Moreover, with the inclusion of the construct of compatibility (C) of IDT, the model could address the social environment. Compatibility is determined using the assessment of innovation compatibility with the already present values and beliefs, ideas formerly brought forth, and the needs of the prospective adopters (Rogers, 2003). Theoretically, C would affect PU considerably, exactly like PEOU.

The aforementioned supposition is supported by the ratiocination that the services of E-commerce will be deemed to be of value to the users providing that their E-commerce adoption is not encroaching their lifestyle and requirements. Somehow, the preliminary acceptance of E-commerce and its consistent utilisation show identical significance levels. Furthermore, in extending TAM research, the integral topic of Information System (IS) in terms of continuance in the last few years has been examined by a few researchers. The subject of technology potential discontinuity was discussed by Parthasarathy and Bhattacharjee (1998) and the authors were of the view that the prospective factors of discontinuity are discernible according to the sources of influence for the students first adoption (interpersonal), perceived usefulness, perceived compatibility, service usage, and complementary utilisation of product. Meanwhile, Bhattacharjee (2001) applied the theory of Expectation-Confirmation in his work and found that user's decision towards continuance of the Information System was impacted by their satisfaction with it. As also stated by the author, Information System comprises a direct result of user expectation of confirmation or disconfirmation.

Similarly, it is possible to predict the continuance of usage of the users of E-commerce by looking into the level of confirmation/satisfaction and the use of E-commerce service of students when they initially implemented the system. Also, since both TAM and IDT have been strongly supported, the validity of base model within E-commerce context has been recognised. The creation of the base model follows TAM which means that both the model and TAM share identical weaknesses. For instance, albeit its effectiveness in foretelling the potential user acceptance; TAM has no capacity in inventing and developing the systems that have high acceptance level. As a solution, PU, PEOU, and BI determinants should be determined (Venkatesh & Davis, 1996) in order that the noteworthy solutions could be presented to the designers of the system. The use of these determinants could ascertain the affirmation of students in addition to their level of satisfaction on E-commerce service as these would denote the important implications that would predict the prolongation of their usage. The next step for the researcher is therefore to determine the factors of the acceptance of students, and these factors would be addressed in the context of E-commerce.

Consumers (i.e., students, for the context of this study) acceptance, and adoption and behaviour expectations are two theoretical constructs that are connected. For this reason, the broadly employed science acceptance mannequin (TAM) and innovation diffusion principle (IDT) have been chosen in this study to establish the theoretical base. On the different hand, unified concept of acceptance models and the software of technological know-how (UTAUT) with recognize to novel technology presents insufficient clarification however it is distinct with respect to the context of technological know-how (Williams, 2009). Additionally, the component of Awareness mediates the relationship between Perceived usefulness,

Perceived ease of use and intention to use acceptance of new technology. Furthermore, in accordance to alzubi et al. (2018) it Awareness mediates with Perceived usefulness, Perceived ease of use shows a tremendous causal relationship between the intention to use acceptance of new technology.

IV. HYPOTHESIS DEVELOPMENT

The plan for the current research is to set up a hypothetical model that could explain and make a prediction on user's acceptance as well as usage of E-commerce services. The original TAM consisted of perceived usefulness and ease of use as the main predictors for the attitudes, intentions, and actual system used. However, the current study considers technology, perceived usefulness, compatibility, trust, and ease of use factors as the main predictors of attitude. There is a possibility of successful exploration with the inclusion of new predictor factors in the TAM to investigate the level of correctness of this theory in different contexts and situations (Davis, 1989).

Thus, the investigation focuses on the recognition among college students in the carrier region toward E-commerce services in Uzbekistan is anticipated to symbolize the new point of view of their attitude and appreciation of E-commerce in Uzbekistan.

The awareness will be further investigated as to what extent the five independent variables (Technology, Perceived usefulness, Compatibility, Trust, Perceived ease of use and Culture) are indispensable in influencing its direction. Previous literature indicated that there were no past studies that contained these five independent variables formed in one model to generate an effect on the awareness among students. Earlier discussions of the importance for each variable provided evidence that was able to create awareness among students, and has been proved by different researchers such as Lewison (1996), Shimp (1997), Futrell (1992), Kotler (2004) and Weisbord (1988) for the variable technology. This motivates this research, which will combine five factors and form them into one model to create more awareness among students, and consequently improve the issue of the intention to use E-commerce services in Uzbekistan.

4.1 *The Effect of compatibility on Awareness*

For an IT project to be taken up for implementation, it has to be consistent with the needs, goals and cultural values of the organization (E Altameem, R Almakki 2014), Al-Ghaith, W., Sanzogni, L., & Sandhu, K. (2010), Akbulut, A. (2002). Ascertaining compatibility is vital as it ensures safety among potential adopters. A highly compatible IT innovation is highly meaningful to an organization. When existing systems are compatible with internet-based transactions, organizations require lower effort to streamline a new innovation and this makes it more ready to utilize e-business Teo and Pavri (1997) In general, compatibility is considered a criterion for assessing the completeness of E-commerce initiatives and its important enabler for E-commerce implementation success (Ling, C. Y. 2001) Offering services such as E-commerce is

of great value, and not only does it improve the image of the commerce though its ability in providing a variety of services, but when that awareness through offers is combined with the accessibility of these services, it further enhances the security level in the presumption of the customers (Flavi n et al., 2004).

H1: The Compatibility of E-commerce service has a direct effect on awareness to use e- E-commerce services.

4.2 *The Effect of Compatibility on Intention to Use E-commerce service.*

Compatibility to the internet is a prerequisite for the intention to use e-commerce (Sathye, 1999). The more widespread the access to computers and the internet is, the greater the possibility of use e-commerce. O, Connell (1996) revealed that lack of access to computers as one of the reasons for slow intention to use e-commerce. Based on Daniel (1999), who conducted his study in the United Kingdom, lack of customer access to suitable personal computers as the main reason for low usage of electronic commerce. Musa and Hassan (2009) revealed that compatibility to computers and the internet have influenced their decision to use E-commerce in Malaysia. The relationship between compatibility and E-commerce use is significant and findings show that compatibility has a positive relationship with E-commerce use intentions. One possible reason is due to the support by the government and the cheaper cost of computers and internet access for Malaysians, as most of the respondents already own computers and has internet access. Additionally, most Malaysians have a device that supports internet connectivity (e.g., smart phone, tablet, laptop, etc.) and internet access is available in most public areas (universities, schools, malls, restaurants, shops, etc.). Aliyu et al. (2012) found that the construct compatibility mostly has a significant or direct impact on E-commerce adoption, and it could be noted that compatibility is an important factor for electronic based shop adoption, but there are limited empirical studies that found these constructs to have insignificant effect on E-commerce adoption. However, these prior studies on E-commerce adoption factors have produced mixed results, which have culminated to the difficulty in articulating the E-commerce adoption drivers. The factor was compatibility, which mainly refers to respondents being incapable of connecting to an E-commerce (Gerrard et al., 2006). This may have been because they did not own a PC, did not subscribe to an internet service provider (ISP), or because the technical specification of their PC did not satisfy the requirements of internet banks (e.g., there was no modem component in the PC). A further group, who presumably did not subscribe to a broadband service, commented that access would be far too slow for them. From this, it can be mentioned that inaccessibility was mainly due to respondents with no PCs, no internet connection, slow connection, or owning a PC that was incapable of connecting to the internet.

Based on the literature reviewed, this study offers the following hypotheses:

H2: The Compatibility of E-commerce service has a direct effect intention to use E-commerce services.

4.3 *Compatibility significantly effects Perceived Usefulness*

In wide terms, similarity incorporates "how much an advancement is seen as being reliable with the current qualities, needs, and past encounters of potential adopters" (Rogers, 1983, p. 15). A positive connection between the two builds - similarity and expectation to utilize - has been found in various past E-business contemplates (Dass and Pal, 2011; Kapoor et al., 2015; Schierz et al., 2010; Yang et al., 2012; Zhang et al., 2012). The apparent convenience and value develops are constantly parallel with one another, and they are the most critical pointers of innovation selection (Kim, Mirusmonov, and Lee, 2010). This examination conceptualized similarity to indirectly affect social goals of E-trade through apparent usability and saw value. Along these lines, this investigation offers the accompanying speculations:

H3: The Compatibility of E-commerce service has a direct effect on perceived usefulness to use E-commerce services.

4.4 *Perceived Usefulness of Intention to Use E-commerce service*

There is extensive research in the IS community that provides evidence of the significant effect of perceived usefulness on usage intention (Agarwal and Prasad, 1999; Davis et al., 1989; Hu et al., 1999; Jackson et al., 1997; Venkatesh, 1999, 2000; Venkatesh and Davis, 1996, 2000; Venkatesh and Morris, 2000). The ultimate reason individuals exploit E-commerce systems is that they find the systems useful when carrying out their shopping transactions. This leads to the hypothesis:

H4: The Perceived usefulness of E-commerce service has a direct effect intention to use E-commerce services.

4.5 *The Effect of Perceived Usefulness on Awareness*

Perceived usefulness is, —the degree to which a person believes that using a particular system would enhance his or her job performance (Davis, 1989; Davis et al., 1989; and Mathieson, 1991). It was revealed to influence awareness, and intention to using retail accepting new technology in a number of studies (Al-Sukkar, 2005; Liao and Cheung, 2002; Kolodinsky and Hogarth, 2001; Kolodinsky et al., 2004; Ravi et al., 2007; and Vatanasombut, Lgbaria, Stylianou and Rodger, 2008). Liao and Cheung (2002) revealed that individual expectations concerning accuracy, security, transaction speed, user friendliness, consumer involvement, and comfort are the most essential attributes in the perceived usefulness of E-commerce.

H 5: The Perceived usefulness of E-commerce service has a direct effect awareness to use E-commerce services.

4.6 *Perceived ease of use significantly affects Perceived usefulness*

Perceived ease of use refers to the degree to which an individual believes that using a target system will be free of

effort (Davis, 1989). In the E-commerce field, perceived ease of use refers to the degree to which E-commerce would be easy to use and free of mental and physical effort (Wei, et al., 2009). Davis suggested and confirmed that perceived ease of use was an antecedent of perceived usefulness and attitude. Furthermore, Davis (1989, p.334) concluded that, —the easier a system is to interact with, the less effort is needed to operate it and the more effort one can allocate to other activities. In this study, the researcher argues that m-commerce must be easy to learn and easy to use, with less complexity to develop a positive attitude and to enhance his/her performance in order to encourage users to adopt e-commerce services. This posited a similar effect in the following hypothesis:

H6: The Perceived ease of use of E-commerce service has a direct effect Perceived usefulness to use E-commerce services.

4.7 *The Effect of Ease of Use on Awareness*

The variable ease of use has a positive effect on awareness, since it is, in the view point of consumers, a perception that if a product or service is easy to use, then more consumers will use it. However, if consumers view a particular product or service as difficult to use, they will not be motivated to use it. Therefore, it is critical that providers of any product or service, in this case, the service of E-commerce, make their service as easy to use as possible, so that customers are motivated to use it.

H7: The Perceived ease of use of E-commerce service has a direct effect awareness to use E-commerce services.

4.8 *Perceived Ease of Use on Intention to Use E-commerce service*

Extensive research over the past decade provides evidence of the significant effect of perceived ease of use on usage intention, either directly, or indirectly, through its effect on perceived usefulness (Agarwal and Prasad, 1999; Davis et al., 1989; Hu et al., 1999; Jackson et al., 1997; Venkatesh, 1999, 2000; Venkatesh and Davis, 1996, 2000; Venkatesh and Morris, 2000). In order to prevent the —under-used| useful system problem, E-commerce systems need to be both easy to learn and use. Information technology (IT) that is easy to use will be less threatening to the individual (Moon and Kim, 2001). This implies that perceived ease of use is expected to have a positive influence on users' perception of credibility in their interaction with the e-commerce systems. This leads to the hypothesis that PEOU influence user's intention to use e-commerce both directly and indirectly. This hypothesis is summarized as:

H8: The Perceived ease of use of E-commerce service has a direct effect Intention to use E-commerce services.

4.9 *The Effect of Trust on Awareness*

Greenfield Online (1998) substantiated the importance of awareness of creating online trust. Although there has been a

dramatic rise in the quantity of net users all round the world, security and trust problems nonetheless persist (Suh and Han, 2002). The historical past records indispensable to this study, therefore, consists of the TAM, gadget security concepts, and trust and their consequences on usage. Davis' (1989) work has proven that person acceptance of records science is decided by using two influential factors, which are perceived usefulness, and perceived ease of use. Perceived usefulness is defined as the diploma to which a person believes that using a specific system would decorate performance while perceived ease of use refers to the degree to which a character believes that the use of a particular gadget would be free from effort. Perceived usefulness and perceived ease of use are recognised to positively affect the acceptance of E-commerce services (Kasemsan and Hunngam, 2011). When the service is easier to use, and the consumer has awareness on how to use it, they will trust the service more. With trust, there is a positive effect on awareness (Yoon, 2002; Yusof and Ismail, 2010; Olivero and Lunt, 2004). Therefore, the following hypothesis was formulated:

H9: The Trust of E-commerce service has a direct effect awareness to use E-commerce services.

4.10 Trust on the Intention to Use E-commerce service

The major factors contributing to trust in E-commerce are privacy and security. This extends to electronic commerce (Wang et al., 2003; Rotchanakitumnuai and Speece, 2003; Shih and Fang, 2004; Molla and Licker, 2001; Pikkariainen et al., 2004; Cheng et al., 2006). Wang et al., (2003) argued that information privacy is vulnerable on the internet and can lead people away from use E-commerce. As for security, it is a theme the dominates IT studies and development of IT technologies. Secure websites that contain several security features help encourage people to engage in E-commerce. As such, this research hypothesises that:

H10: The Trust of E-commerce service has a direct effect intention to use E-commerce services.

4.11 The Effect of Technology on Awareness

In today's economic awareness and the globally competitive business world, technology becomes essential for every business, which uses this technology for performance and accuracy. In recent years, technology has become increasingly important to the evolution of the commerce sector. One of the factors that drives the improvement in the quantum and quality of commerce is more widespread and more efficient use of information technology (Jamil and Kadam, 2013). Over the last two decades, commerce has increasingly come to rely on technology to support communication and information processing in all areas of their operations. Mansor et al., (2012) found that variables such as technology further demonstrate almost similar moderate strength of service quality in terms of their relationship toward the creation of awareness among the users. Based on the literature reviewed, this study offers the following hypothesis:

H11: The Technology of E-commerce service has a direct effect awareness to use E-commerce services

4.12 Technology on Intention to Use E-commerce service

Previous studies have shown that the intention to use technology by SMEs is still lower than expected (Mansor et al., 2012; Chong, 2009; Mutula and Brakel, 2006). Several studies investigated a wider perspective of internet intention to use and found that environmental factors such as government intervention, public administration, and external pressure from competitors, suppliers, and buyers play a critical role in the intention to use and implementation of technology, especially in E-commerce (Dube, 2009; Alam, 2009; Musa and Hassan, 2009).

Based on the literature reviewed, this study offers the following hypothesis:

H12: The Technology of E-commerce service has a direct effect on E-commerce services.

4.13 The Effect of Culture on the Intention to Use e-commerce service and Awareness

The last two decades have observed an explosive growth in the use of Internet technologies, especially the World Wide Web, for business purposes. Most of the organizations in the developing countries now conduct business through the Internet. Business organizations, regardless of their size, have applied Internet technological tools in a wide range of their business activities including advertising, online delivery of goods and services (Chung, 2008; Fillion, 2008; Kim, 2007).

The impact of culture on economic development is not limited to the size of value added produced in the sector, the volume of consumption of sector services, employment in the sector, as well as the contribution of culture to nearby sectors of the economy, for example, to tourism. Culture is not as a sector of economic activity, but as a combination of values and traditions has a much greater impact on economic development than macro-economic indicators can demonstrate.

H13: The culture of E-commerce service has a direct effect on intention to use E-commerce services.

H14: The culture of E-commerce service has a direct effect on Awareness to use E-commerce services.

4.14 The Effect of Awareness on the Intention to Use e-commerce service

The awareness on the risk associated with E-commerce has also been explored. There were concerns on addressing the issue of privacy, security risk, and personal data security (Leppäniemi et al., 2006; Tanakinjal et al., 2010). This is important, as when perceived risk is low, it will normally result in trustworthiness of the service offered (Tanakinjal et al., 2010). Although consumers are often faced with a particular degree of risk or uncertainty in using E-commerce, however the risk element itself is not the main

predictor of consumers' sensitivity (Kim, 2008). The significant relationship of awareness and usefulness is noticeable when consumers are able to gain acceptance and satisfaction with the transaction (Barwise and Strong, 2002; Wu and Wang, 2005; Kim, 2008). Mansor et al., (2012) demonstrated that variables such as promotion and technology indicated almost similar moderate strength in terms of their relationship toward the creation of awareness among users. In this setting, Rogers and Shoemaker (1971) stressed that individuals are involved in a process of knowledge, belief, decision making, and confirmation before adopting a product or service. Similarly, Pikkarainen et al., (2004) found that intention to use of E-commerce will be determined by the level of information that a customer has about it and its likely benefits. Sathye (1999) added that low awareness of this concept is a critical reason for the non-use of this service. E-commerce are undertaking marketing campaigns to create awareness of their services and their likely benefits.

H15: The Awareness of E-commerce service has a direct effect Behavioral Intention To Use (BI)E-commerce services.

4.15 The Factors on Behavioral Intention To Use (BI)E-commerce service in Uzbekistan is mediated by Awareness.

Padachi and Sectanah (2010) found that user's use of accepting new technology was usually determined by the role of the relevant factors which highly influence the decision of students. Among these factors are awareness, convenience, and compatibility. He added that there was awareness or some form of knowledge about E-commerce and highlighted that 54.5 % of the population accept new technology. However, 45.5% of users who are aware of it do not use these services, which suggests that awareness alone is not what is preventing most users from accepting new technology, and that other factors also influence this decision. Therefore, it is suggested that awareness plays its role as a mediator with concentration of these other factors, it will help increase the percentage of users to use E-commerce.

In this work, awareness is a mediator that will be placed between the relationships of the variables that have an impact on the intention to use E-commerce. The variables influence the mediator awareness, and, in turn, the awareness of students in Uzbekistan will influence the Behavioral Intention To Use (BI)accepting new technology, which is the main aim of this work. From the literature reviewed and previous studies, and based on the analysis of the hypotheses and the factors with their relation to the Behavioral Intention To Use (BI)E-commerce, we examine the following hypotheses:

H15: The influence of compatibility on Behavioral Intention To Use (BI)E-commerce service in Uzbekistan is mediated by Awareness.

H16: The influence of Perceived usefulness on Behavioral Intention To Use (BI)E-commerce service in Uzbekistan is mediated by Awareness.

H17: The influence of Perceived ease of use on Behavioral Intention To Use (BI)E-commerce service in Uzbekistan is mediated by Awareness.

H18: The influence of Trust on Behavioral Intention To Use (BI)E-commerce service in Uzbekistan is mediated by Awareness.

H19: The influence of Technology on Behavioral Intention To Use (BI)E-commerce service in Uzbekistan is mediated by Awareness.

H20: The influence of culture on Behavioral Intention To Use (BI)E-commerce service in Uzbekistan is mediated by Awareness

V. DATA ANALYSIS

Considering the measurement model, the assessment of the structural model was the subsequent step in the PLS Analysis; an analysis was performed towards the inner model. Hair et al.'s (2011) proposed requirements were perused. Thus, for the testing of hypotheses, the researcher employed bootstrapping to measure the significance level of the path coefficients. The researcher applied the PLS-SEM structural model for testing the hypothesized relationships. Here, the PLS algorithm and bootstrapping algorithm in SmartPLS 2.0 3M were used. The path coefficients show a high level of significance in PLS.

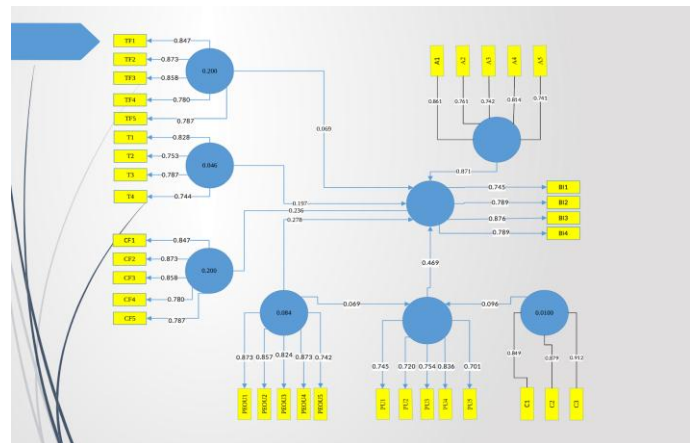


Figure 2: Items Loadings and R² Values

1.5.1Hypotheses Testing

Testing the hypothesized relationships is the last step in the structural model of PLS-SEM. For this purpose, PLS algorithm and bootstrapping algorithm are executed using SmartPLS 2.0 3M. In PLS analysis, path coefficients are highly crucial, but Hair et al. (2011) indicated that non-significant paths or those that show signs that are contradictory to the hypothesized direction means that the prior hypothesis cannot be accepted and hence, should be rejected. Conversely, significant paths demonstrate that the hypothesized direction is in support to the causal relationship proposed, empirically. The author further added that similar to the weights and loadings of indicators, the significance of

each path coefficient is assessable using the procedure of bootstrapping. Accordingly, Figure 1 can be referred to view the items loadings, path coefficient, as well as R^2 values.

The use of the bootstrapping method in the assessment of path coefficients entails the smallest bootstrap sample of 378 and the cases in terms of number should be identical to the amount of observations within the initial sample (Winnie, Poh-Ming Wong, 2014; Winnie & Ramayah, 2015; Sumo & Regien, 2015; Lorenzo-Romero & Carlota, 2014; Henseler, Jörg, 2012; Monecke & Armin, 2012; Rubel & Mohammad, 2014; Iivari & Juhani, 2005).

Furthermore, the two-tailed test shows the critical t-values as follows: 1.65 (10% level of significance), 1.96 (5% level of significance), and 2.58 (1% level of significance). Accordingly, to generate standard errors and acquire t-statistics, 500 re sampling was set with a replacement number obtained from the cases of bootstrap that correspond to the study's sample's initial number which is 384. The path coefficient and the results of bootstrapping are presented in Figure 4.4 and Table 4.11. The tables highlight the testing of the hypothesized relationships as clarified below:

H1: The Compatibility of E-commerce service has a direct effect on awareness to use e- E-commerce services shows association ($\beta = 0.687$, $t = 1.070$), and hence, the hypothesis not supported.

H2: The Compatibility of E-commerce service has a direct effect Behavioral Intention to Use (BI) E-commerce services shows association ($\beta = 0.548$, $t = 2.720$), and hence, the hypothesis was supported.

H3: The Compatibility of E-commerce service has a direct effect on perceived usefulness to use E-commerce services shows association ($\beta = 0.096$, $t = 2.092$), and hence, the hypothesis was supported.

H4: The Perceived usefulness of E-commerce service has a direct effect on Behavioral Intention to Use (BI) E-commerce services shows association ($\beta = 0.469$, $t = 2.469$), and hence, the hypothesis was supported.

H 5: The Perceived usefulness of E-commerce service has a direct effect awareness to use E-commerce services shows association ($\beta = 0.248$, $t = 2.324$), and hence, the hypothesis was supported.

H6: The Perceived ease of use of E-commerce service has a direct effect Perceived usefulness to use E-commerce services shows association ($\beta = 0.069$, $t = 2.651$), and hence, the hypothesis was supported.

H7: The Perceived ease of use of E-commerce service has a direct effect awareness to use E-commerce services shows association ($\beta = 0.269$, $t = 2.587$), and hence, the hypothesis was supported.

H8: The Perceived ease of use of E-commerce service has a direct Behavioral Intention To Use (BI) E-commerce services shows association ($\beta = 0.278$, $t = 2.612$), and hence, the

hypothesis was supported.

H9: The Trust of E-commerce service has a direct effect awareness to use E-commerce services shows association ($\beta = 0.548$, $t = 2.015$), and hence, the hypothesis was supported.

H10: The Trust of E-commerce service has a direct effect on To Use (BI) E-commerce services shows association ($\beta = 0.197$, $t = 2.021$), and hence, the hypothesis was supported.

H11: The Technology of E-commerce service has a direct effect awareness to use E-commerce services shows association ($\beta = 0.259$, $t = 2.158$), and hence, the hypothesis was supported.

H12: The Technology of E-commerce service has a direct effect on Behavioral Intention to Use (BI) E-commerce services shows association ($\beta = 0.069$, $t = 2.210$), and hence, the hypothesis was supported.

H13: The culture of E-commerce service has a direct effect on Behavioral Intention to Use (BI) E-commerce services shows association ($\beta = 0.236$, $t = 2.317$), and hence, the hypothesis was supported.

H14: The culture of E-commerce service has a direct effect on Awareness to use E-commerce services shows association ($\beta = 0.187$, $t = 2.548$), and hence, the hypothesis was supported.

H15: The Awareness of E-commerce service has a direct effect Behavioral Intention to Use (BI) E-commerce services shows association ($\beta = 0.871$, $t = 2.425$), and hence, the hypothesis was supported.

H16: The influence of compatibility on intention to use E-commerce service in Uzbekistan is mediates by Awareness shows association ($\beta = 0.365$, $t = 1.548$), and hence, the hypothesis not supported.

H17: The influence of Perceived usefulness on Behavioral Intention to Use (BI) E-commerce service in Uzbekistan is mediates by Awareness shows association ($\beta = 0.418$, $t = 2.157$), and hence, the hypothesis was supported.

H18: The influence of Perceived ease of use on Behavioral Intention to Use (BI) E-commerce service in Uzbekistan is mediates by Awareness shows association ($\beta = 0.014$, $t = 2.547$), and hence, the hypothesis was supported.

H19: The influence of Trust on intention to use E-commerce service in Uzbekistan is mediates by Awareness shows association ($\beta = 0.016$, $t = 1.370$), and hence, the hypothesis not supported.

H20: The influence of Technology on intention to use E-commerce service in Uzbekistan is mediates by Awareness shows association ($\beta = 0.784$, $t = 2.021$), and hence, the hypothesis was supported.

H21: The influence of culture Behavioral Intention to Use (BI) E-commerce service in Uzbekistan is mediates by Awareness shows association ($\beta = 0.542$, $t = 2.680$), and hence, the hypothesis was supported.

VI. CONCLUSION

The last decade has witnessed the expansion of E-commerce in the developed nations. This has fascinated the developing countries especially the Central Asian countries because the significant worth of being a player in the E-commerce arena is understood by these countries. Countries in Central Asia must employ the technology of Internet technology particularly in the marketing field. Tests were executed against the model using the data obtained from 384 E-commerce service users in Uzbekistan. For this purpose, SPSS version 22, PLSsmart 2M, in. The impact of users (Awareness), and (technology, perceived ease of use, perceived usefulness, compatibility, trust) toward intention to use electronic commerce through expanded TAM, was explored in this study. This brings to the formulation of a conceptual framework that illustrates the intent of an individual to employ electronic commerce grounded on users .

Unfortunately, Internet users are still lagging behind nearly all countries in Central Asia particularly with respect to the varied usage of the Internet. In fact, very few E-marketing sites can be found in Central Asia countries. The outcomes generated by this study fulfil its key objective: to increase the intention to use Uzbek E-commerce websites among Uzbek users. As such, the increased number of Uzbek e-commerce websites is expected to cause consumers to switch their online purchasing intentions towards the local Uzbek websites. This in turn will improve the microeconomics of Uzbek nations. The study offers a validated framework model for the establishment of Uzbek Websites and online shopping industry. This study is also an addition to the body of knowledge on the fundamental level. The findings obtained by this study can be used as a key guideline to the academia and practitioners in their practices of business development

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