Analyzing the Adoption of Online Shopping using Extended Technology Acceptance Model: An Empirical Study on Five Districts of Nepal

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ABSTRACT

Recently, in Nepal, penetration of the internet has increased making every internet user a potential buyer of growing online shopping trend but the question arises of what motivates the consumer to buy online and how it has been adopted currently. This research aims to analyze the perception of Nepalese consumers toward online shopping with Extended Technology Acceptance Model (TAM2) as framework for examining various factors that influence shopping online. Responses of 460 participants were recorded for this study. A quantitative research approach was used and the collected data were analyzed by CB-SEM method using SPSS and AMOS. The research result shows that perceived ease of use has positive influence on perceived usefulness; perceived enjoyment and perceived cost have significant positive influence on attitude toward online shopping whereas perceived risk has negative influence on it. Moreover, behaviour intention to shop online is positively influenced by perceived usefulness, subjective norms, and attitude toward online shopping. This research supports that when consumers enjoy online shopping and find products at the right cost then they are motivated to shop online whereas risks associated with online shopping demotivate it. And, people's behaviour to shop online is influenced by social influence, perceived usefulness, and attitude toward online shopping.

Keywords-- Online Shopping, Behavioural Intention, Technology Acceptance Model (TAM), Consumer Acceptability

I. INTRODUCTION

In today's age of technological advancements, the internet has become an integral part of human's everyday activities which has significantly helped make online shopping the latest trend, especially among youths [1]. Online shopping has become the latest trend to satisfy own's needs over traditional shopping due to the shifting toward e-commerce caused by an increase in adequate technology [2]. Online shopping has changed the process of doing business as it brings more competitive prices of a wide range of products with various offers making consumers more demanding and compelling companies come up with unique marketing strategies [3]. Perception of online shopping changes over time due to the experience consumer acquired over that period[4], [5]. Customers use the Internet to research products, prices, and the customer service they receive when purchasing them, in addition to online purchases from specific retailers [6].

With easy access and a reduction in the cost of technology-based goods and internet services, there is an upward trend in the popularity of online shopping among Nepalese consumers [7]. Many Nepalese banks support online payment systems during online shopping helping it to be adopted easily by youths and educated people. In Nepal, the COVID-19 pandemic has also positively helped online shopping as offline stores became difficult to access. Online shopping is no longer a new concept in Nepal as a huge penetration of the internet has provided a large consumer for an online shopping business. Perceived value (e.g. cost, risk, quality, benefits, etc.) of a consumer is the primary factor that helps any online business to be adopted by the consumer [8]. With this changing e-commerce market, online shopping customers have also evolved and their buying behaviour is also subjected to these phenomena. To get an insight into online shopping trends and help to expand the business in the future any online business should first understand the attitude of the consumer toward online shopping [9]. The success of e-commerce does not only come from the business side but the consumer side as well [10]. This research focuses on the TAM model which is best suited to study the adoption of online shopping on the basis of the perceived value of consumers.

II. LITERATURE REVIEW

E-commerce means buying, selling, and exchanging goods and services over a computer network or internet through which transactions or terms of sale are performed electronically. The use of the internet has revolutionized the way of buying and selling thus impacting every industry and resulting in an online presence for businesses to gain a competitive advantage over consumers that prefer to shop in a virtual marketplace [10]. Companies are able to attract a larger audience due to easy connection with customers in remote places and at a lower price due to the reduction in overheads required for the management of inventory [11].

Due to the limitation of offline sales because of the COVID-19 pandemic e-commerce contributed approximately 4.938 trillion dollars globally by 2021 and is expected to reach a 7.391 trillion-dollar market by 2025 [12]. Social media has also made shopping an entertaining and easy experience for consumers [13]. Many small businesses are reaching consumers via social media like Facebook, Instagram, TikTok, etc. rather than websites and mobile apps.

The E-commerce market is hugely influenced by customer buying behaviours and factors influencing this buying behaviour [14]. It is challenging to acknowledge and understand each customer's wants because everyone has a different need and desire for goods and services [15]. Consumer behaviour in E-commerce is mostly influenced by consumer perceptions like attitudes, lifestyle, personality, purchase decision process, post-purchase, culture, demographics, opinion leaders, motivation, income, enjoyment, skills, etc [16] and by other factors like website interface, website visibility, convenient time, payment security, privacy, websites credibility, reviews, education level, etc [17]. Some of the buying behaviour include the price of the product, ease of use of websites/pages, online reviews, availability of the product in offline stores, delivery time, mode of payment, etc.

Online shopping was first introduced in 1998 by thamel.com and Nepal's first-ever online department was muchahouse.com (later changed to mucha.com) started by Amrit Tuladhar in April 2000 [7]. Initially, Nepal faced a huge backlog in online shopping due to various barriers at the consumer level like economic barriers, socio-political barriers and cognitive barriers as well as barriers in a business level like the underdeveloped financial system, unavailability of ICT and other supporting infrastructures, high degree of risk aversion, lack of Data Encryption Standard laws, etc [18]. After the COVID-19 pandemic, online shopping in Nepal has shown an upward trend as the internet became a mandatory household needs and people got aware of online shopping due to restrictions to shop in offline retail stores.

A review of various literature related to online shopping shows that Technology Acceptance Model (Davis and Bagozzi, 1989) is best used to understand online shopping behaviour [9]. Subjective norms are not included in the TAM model and does not describe how consumer behaviour is influenced by expectancies [19]. So, TAM has many revisions most widely used ones are Extended Technology Acceptance Model (TAM2) and Unified Theory of Acceptance and Use of Technology (UTAUT).
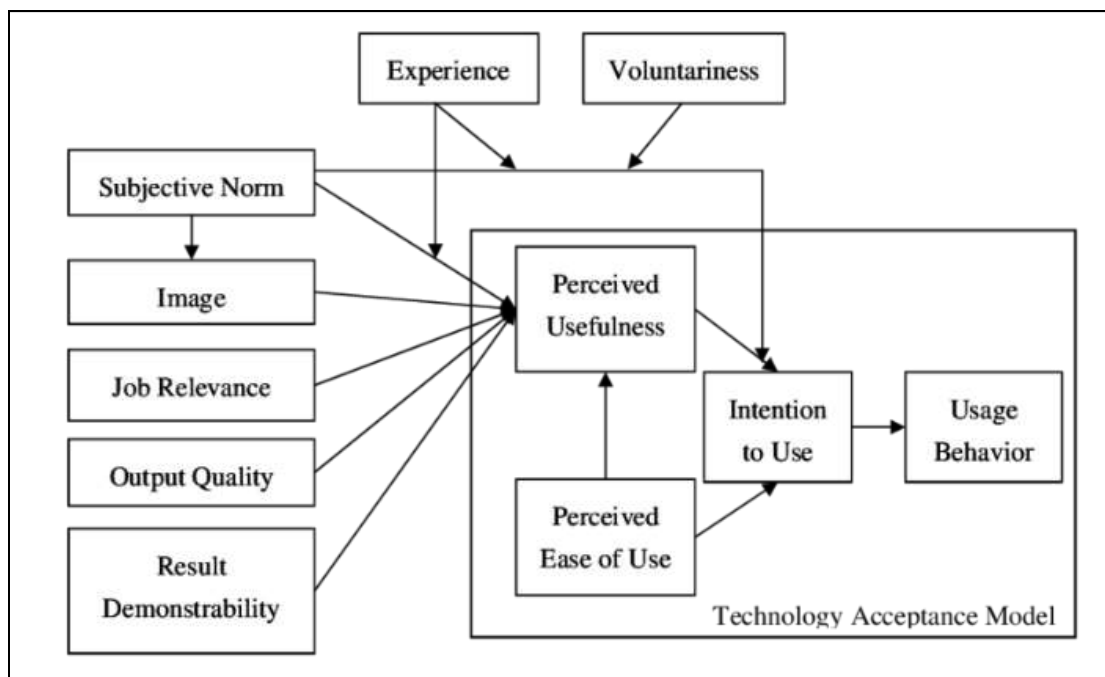

Figure 1: Extended Technology Acceptance Model, adapted from [20]

TAM2 is an extension of TAM which uses social influence and cognitive instrumental processes to explain perceived ease of use and perceived usefulness. Cognitive instrumental processes include job relevance, result demonstrability, output quality, and perceived ease of use while social influence includes subjective norms, voluntaries, and image [20]. By adopting TRA and TPB

models TAM2 uses subjective norms as additional factors that have correlation with perceived usefulness as well as intention to use [21]. TAM2 was developed for addressing TAM limitations which helps to explain in detail factors that influence perceived usefulness including other theoretical constructs where perceived

usefulness was found to be significantly influenced by job [22].

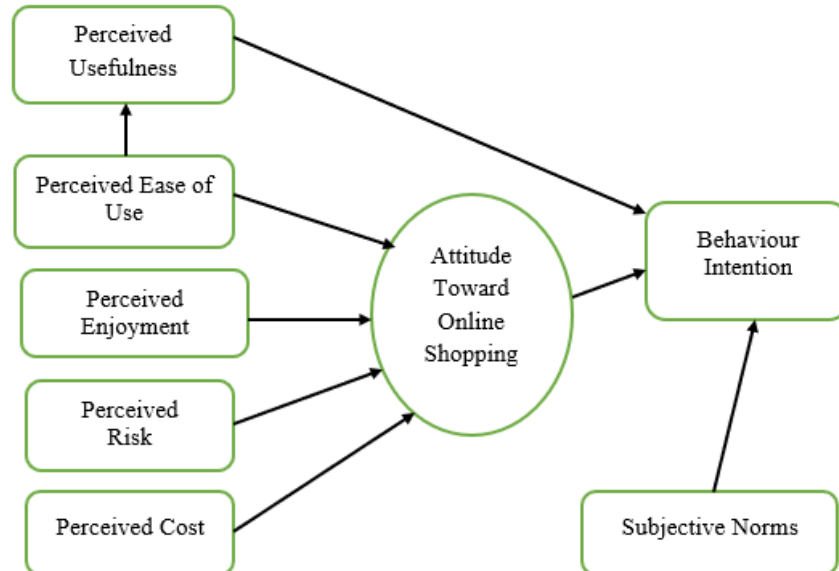## III.   RESEARCH FRAMEWORK

3.1 Research Model

Figure 2: Research Model

In many research to explain the acceptance of online shopping TAM2 have been used. This research is done with some changes in variables used in TAM2 as there are other variables too that affect the intention to shop online. Perceived Enjoyment and Perceived Risk are taken as third and fourth external variables which affect the intention to shop online [9]. In this research, Perceived Cost (PC) is also taken as an external variable along with Perceived Usefulness (PU), Perceived Ease of Use (PEU), Perceived Enjoyment (PE), and Perceived Risk (PR). In addition to these, demographic profiles, subjective norms, and previous shopping experiences of consumers are taken as important factors.

3.1.1   Perceived Usefulness

Perceived Usefulness (PU) is the term used to describe how consumers feel about the results of their interactions with new technology [23]. Customers must believe that online buying will increase their performance and efficiency, as well as have a beneficial impact on the overall purchasing process [24]. Consumers are more likely to purchase a product if its use is viewed as beneficial regardless of their dissatisfaction with its previous use [25]. Several past studies have shown that PU has a major impact in adjudicating the adoption process of innovation like online shopping [26]. Thus, the formulated hypotheses are:

H1: Perceived Usefulness has a significantly positive influence on attitude toward online shopping.

H2: Perceived Usefulness has a significantly positive influence on behaviour intention toward online shopping**.**

3.1.2   Perceived Ease of Use

Perceived Ease of Use (PEOU) refers to how much an individual thinks that utilizing a certain system would be effortless from a physical or mental standpoint [27]. Consumers are more likely to adopt simple, straightforward, and less complex technologies than more complicated ones for online shopping [28]. Online shopping is providing consumers with products and services that were not convenient in traditional shopping making it more useful to consumers' perceptions leading to a positive attitude toward online shopping [29]. Thus, the following hypotheses were formulated:

H3: Perceived Ease of Use has a significantly positive influence on Perceived Usefulness.

H4: Perceived Ease of Use has a significantly positive influence on attitude toward online shopping.

3.1.3   Perceived Enjoyment

The term "perceived enjoyment" describes the idea that a person will feel sudden pleasure after using a platform or piece of technology. A user will be inspired to utilize a system or piece of technology if it excites them to use it [2]. Hedonistic shoppers that engage in experimental purchasing habits look for knowledge as well as online shopping excitement, pleasure, joy, thrill, distraction, fancy, etc. and their hedonic values are mostly connected to the fun, thrill, and enjoyment of action, which are commonly acknowledged as important factors in consumer purchases [30], [31]. Perceived Enjoyment determines an important role as it is a motivating factor in online shopping and a crucial element to predict the adoption of any new and

innovative technology like online shopping by consumers [32]. Thus, the following hypothesis was formulated:

H5: Perceived Enjoyment has a significantly positive influence on attitude toward online shopping.

3.1.4 Perceived Risk

The perceived risk conceptualizes the behaviour of consumers entailing the risk in that decisions consumers make will have effects that they cannot predict with any degree of accuracy, and at least a portion of it is bound to be undesirable and unpleasant [33]. One of the main driving factors of online shopping is perceived risk, that exerts a big influence on other elements including attitude toward online shopping, pleasure, trust, enjoyment, and repeat purchases thus acting as big challenges to the company running e-commerce business [34]. A central element in behaviour of the customer, perceived risk is frequently employed to describe the perception of risk by the consumer as well as their risk mitigating strategies involving transactions. So, higher perceived risk means a low probability of buying or repurchasing by customers [35]. Thus, the following hypothesis was formulated:

H6: Perceived risk has a significantly negative influence on attitude toward online shopping.

3.1.5 Perceived Cost

Perceived cost in online shopping includes e-shopping value, information searching cost, moral hazard cost, and rewards [35]. Consumer overheads like delivery cost, internet costs, etc. make the perceived cost different from the real costs involved to enable a specific consumption [36]. As to the complexity of e-commerce, customers find risk while shopping online, their overheads are increased and influence their attitude toward online shopping. Perceived Cost has a significant relation to perceived value and it directly influences the intention of consumers toward online shopping and their repurchase intention [8]. Thus, the following hypothesis was formulated:

H7: Perceived Cost has a significantly positive influence on attitude toward online shopping.

3.1.6 Attitude Towards Online Shopping

An individual's attitude is their internal sensation that expresses whether they like or detest anything, such as a product or service which also depends on how many individual values the action or activity positively or negatively [37]. Several research has proposed that attitudes are an individual's positive as well as negative judgments, sentiments, and propensities for action toward a certain thing or concept with time [38]. Attitude toward online shopping is influenced by various other factors like perceived usefulness, perceived ease of use, perceived enjoyment, perceived risk, and perceived cost. Nepalese consumers were found to have a positive attitude toward shopping online with an increase in the rate is the use of the internet [39]. Thus, the following hypothesis was formulated:

H8: Attitude toward online shopping has a significantly positive influence on behaviour intention.

3.1.7 Subjective Norms

Subjective norms are the notion that a significant group or individual would acclaim and accept a specific action and the perceived social influence from another individual to act in a specific way and the urge to agree with other people (friends, family, colleagues, etc.) opinions are what constitute subjective norms [40]. In the beginning period of any new technology when an individual does not have more knowledge, subjective norms play a vital role in the adoption of such technology [41]. Subjective norms are found to be having a significantly positive influence on individual intentional behaviour toward online shopping [42]. Thus, the following hypothesis was formulated:

H9: Subjective Norms have a significantly positive influence on behaviour intention.

IV.   METHODOLOGY

This research used a quantitative survey study approach to analyze the perceived behaviour and acceptance of online shopping using TAM2 structure with the inclusion of some external variables. 50 survey questionnaire was developed in three parts: the first part containing 5 questions related to demographic data, the second part containing 7 questions related to the previous shopping experience, and the third part of questionnaire containing 38 questions that help to analyze the online shopping acceptance consisting of 8 constructs or latent variables PU, PEOU, PE, PR, PC, ATT, SN and BI of Extended TAM that is collected using 5-step Likert's scale. 5-step Likert consists of 5 categories of answers (5: "Strongly agree", 4: "Agree", 3: "Neutral", 2: "Disagree" and 1: "Strongly disagree"), ordered in the correct order. The reliability analysis was done using Statistical Package of Social Science (SPSS v26) and after structured equation modeling (SEM) to measure validity, model fit, and hypothesis test was performed in Analysis of a Moment Structures (AMOS v26).

4.1 Sample Size and Data Collection

For this study, purposive sampling technique is used where the survey is done on participants from selected districts (Kathmandu, Bhaktapur, Lalitpur, Rupandehi and Chitwan). Minimum sample size for the of selected five districts i.e. 4,837,484 as per Central Bureau of Statistics 2021 is found to be 385. Questionnaire were developed in Google Forms and distributed among various individuals using electronic mediums like messaging platforms, social media, and e-mail living in selected districts, and their responses were recorded in integrated Google Sheets.

V.   RESEARCH FINDINGS

5.1 Feasibility Analysis

Before conducting the final study, a pilot study of 39 respondents was conducted and reliability test on all the indicators were conducted which shows after deletion of PEOU_6 and PR_4 there was significant increase in reliability of their respective constructs. Thus PEOU_6 and PR_4 are considered as outliners.

Table 1: Cronbach alpha of variables before and after removing outliners

Variables	Cronbach Alpha Before Removing Outliners	Cronbach Alpha After Removing Outliners
Perceived Usefulness	0.750	0.750
Perceived Ease of Use	0.692	0.709
Perceived Enjoyment	0.784	0.784
Perceived Risk	0.725	0.769
Perceived Cost	0.705	0.705
Attitude toward Online Shopping	0.724	0.724
Subjective Norms	0.747	0.747
Behaviour Intention	0.888	0.888

5.2 The Demographic Data

For the final study, total 460 response were recorded in which 284 (61.74%) were male and 176 (38.26%) were female. Majority of respondents 234 (50.87%) were between 25-34 years and among other respondents 20 (4.35%) were above 45 years, 26 (5.65%) were below 18 years, 78 (16.96%) were of age group 35-45 years and 102 (22.17%) were of age group 18-24 years. 72 (15.65%) participant's annual family income was below 4 lakhs, 103 (22.39%) participants' annual family income was 4-7 lakhs, 154 (33.48%) participants' annual family income was 7-10 lakhs, 89 (19.35%) respondents had 10-15 lakhs annual family income and 42 (9.13%) respondents annual family income was above 15 lakhs. Among the respondents' educational level SLC/SEE, +2/Diploma, Bachelor, Masters, PhD and others were 22 (4.78%), 60 (13.04%), 234 (50.87%), 131 (28.48%), 7 (1.52%) and 6 (1.3%) respectively. 430 (93.48%) participants had access to good internet service, 10 (2.17%) did not have access to good internet service and 20 (4.35%) did not know if their internet service is good enough.

Table 2: Demographics Data of The Study Sample

Characteristics	Answer	Frequency	Percentage (%)
Age Group	Under 18	26	5.65
	18-24	102	22.17
	25-34	234	50.87
	35-45	78	16.96
	Above 45	20	4.35
Gender	Male	284	61.74
	Female	176	38.26
Annual Family Income	Below 4 Lakhs	72	15.65
	4-7 lakhs	103	22.39
	7-10 lakhs	154	33.48
	10-15 lakhs	89	19.35
	Above 15 lakhs	42	9.13
Education Level	SLC/SEE	22	4.78
	+2/Diploma	60	13.04
	Bachelor	234	50.87
	Masters	131	28.48
	PhD.	7	1.52
	Others	6	1.30
Access to good internet	Yes	430	93.48
	No	10	2.17
	Maybe	20	4.35

5.3 Previous Shopping Experience Data

Among all participants 92.83% (427) had previously shopped online whereas 33 (7.17%) had never shopped online. For the remaining analysis, the data of 427 respondents who had previously shopped online was used. Almost 209 (48.9%) of respondents have shopped for above 2 years and 144 (33.7%) have done shopping for 1 to 2 years whereas only 45 (10.5%) participants started doing online shopping 6 to 12 months ago and 29 (6.8%) participants have started online shopping for around 6 months. Among all participants 200 (46.8%) used Mobile applications, 131 (30.7%) used Website, 93 (21.8%) used Social Media and 3 (0.7%) used other platforms for shopping online. 172 (40.3%) participants usually buy electronics items online whereas clothing, beauty products, groceries, and other items are bought by 136 (31.9%), 46 (10.8%), 43 (10.1%), and 30 (7%) participants respectively. 148 (34.7%) and 144 (33.7%) respondents shop only for special occasions and a few times a year respectively whereas 71 (16.6%) participants shop once at least a month, 49 (11.5%) participants shop a few times a month and only 15 (3.5%) participants shop few times a week.

The research shows, most participants have done online shopping for more than 1 year that shows that consumers of these districts are well aware about online shopping. Mobile application and social media are used frequently platform for online shopping. It was found that consumers are more interested to buy electronics and clothing than other items. Beauty products is bought mostly by females (95.65%. Almost two third of respondents who shopped grocery were female. Consumers below 25 years age do not prefer buying grocery. Most of the participants (91.28%) those who shop electronics were male and preferred platform to buy electronics are mobile application and website. Daraz is the most used platform in selected districts and Sastodeal is mostly preferred for buying beauty products and grocery.

Table 3: Previous Online Shopping Experience Data of The Study Sample

Characteristics	Answer	Frequency	Percentage (%)
Time done online shopping	Around 6 months	29	6.8
	6 to 12 months	45	10.5
	1-2 years	144	33.7
	Above 2 years	209	48.9
Platform Used to shop online	Website	131	30.7
	Mobile App	200	46.8
	Social Media	93	21.8
	Others	3	0.7
Products usually bought online	Electronics	172	40.3
	Clothing	136	31.9
	Grocery	46	10.8
	Beauty Products	43	10
	Others	30	7
Online shopping frequency	Few times a week	15	3.5
	Few times a month	49	11.5
	Once at least a month	71	16.6
	Only for special occasion	148	34.7
	Few times a year	144	33.7
Mostly used online store	Daraz	218	51
	Sastodeal	37	8.7
	Others	172	40.3
Felt cheated before	Yes	178	41.7
	No	159	37.2
	Do not Know	90	21.1

5.4 Reliability Analysis

To calculate the reliability at first the mean, factor loadings, and standard deviation of the indicator and mean of the construct were computed in SPSS, and found that almost all the indicator means, standard deviation and factor loadings are in the tolerable range [43], [44].

Table 4: Mean, factor loadings, SD of indicator, and mean of construct

Items	Indicator	Mean	Factor Loadings	Mean of Construct	SD
Perceived Usefulness	PU_1	3.83	0.644		0.68
	PU_2	3.88	0.681		0.81
	PU_3	3.63	0.662	3.77	0.81
	PU_4	3.93	0.575		0.79
	PU_5	3.60	0.65		0.80
Perceived Ease of Use	PEOU_1	3.76	0.706		0.68
	PEOU_2	3.53	0.742		0.92
	PEOU_3	3.45	0.683	3.73	0.88
	PEOU_4	3.99	0.551		0.77
	PEOU_5	3.93	0.526		0.75
Perceived Enjoyment	PE_1	3.75	0.701		0.75
	PE_2	3.70	0.678	3.79	0.88
	PE_3	3.90	0.766		0.78
	PE_4	3.81	0.63		0.85
Perceived Risk	PR_1	4.00	0.449		0.60
	PR_2	4.13	0.556		0.64
	PR_3	3.94	0.593		0.78
	PR_5	3.57	0.694	3.87	0.92
	PR_6	3.62	0.576		0.89
	PR_7	4.09	0.563		0.72
	PR_8	3.76	0.447		0.87
Perceived Cost	PC_1	4.18	0.483		0.56
	PC_2	3.95	0.787		0.78
	PC_3	3.90	0.598	4.14	0.80
	PC_4	4.27	0.508		0.68
	PC_5	4.40	0.486		0.69
Attitude Toward Online Shopping	ATT_1	3.80	0.727		0.61
	ATT_2	3.88	0.713	3.81	0.67
	ATT_3	3.83	0.59		0.72
	ATT_4	3.74	0.701		0.74
Subjective Norms	SN_1	3.21	0.689		0.92
	SN_2	2.74	0.787	3.13	1.00
	SN_3	3.43	0.645		1.01
Behaviour Intention	BI_1	3.82	0.725		0.65
	BI_2	3.86	0.759	3.83	0.80
	BI_3	3.82	0.762		0.79

A measurement model was designed in AMOS with all the constructs covariates with each other for confirmatory factor analysis. The measurement model was analyzed to get a good model fit and the resulting Goodness of Fit (GOF) indices are shown in the table. The GOF indices of the model were interpreted as per new Cut-off criteria by Hu and Bentler (1999).

Table 5: Goodness of Fit Indices Measures of Measurement Model by [45]

GOF Measures	Threshold	Estimate	Remarks
CMIN/DF	Between 1 and 3	1.927	Excellent
CFI	>0.9	0.902	Acceptable
SRMR	<0.08	0.056	Excellent
RMSESA	<0.06	0.047	Excellent
PClose	>0.05	0.905	Excellent

As the GOF indices values of the measurement are within acceptable range so the research data yielded a good fit meaning that the data collected represents population as a whole. Cronbach's Alpha and Composite Reliability was determined to access the reliability of the construct. The Cronbach's alpha and composite reliability above 0.70 is termed acceptable [46]. Cronbach's alpha was computed using SPSS and composite reliability using AMOS.
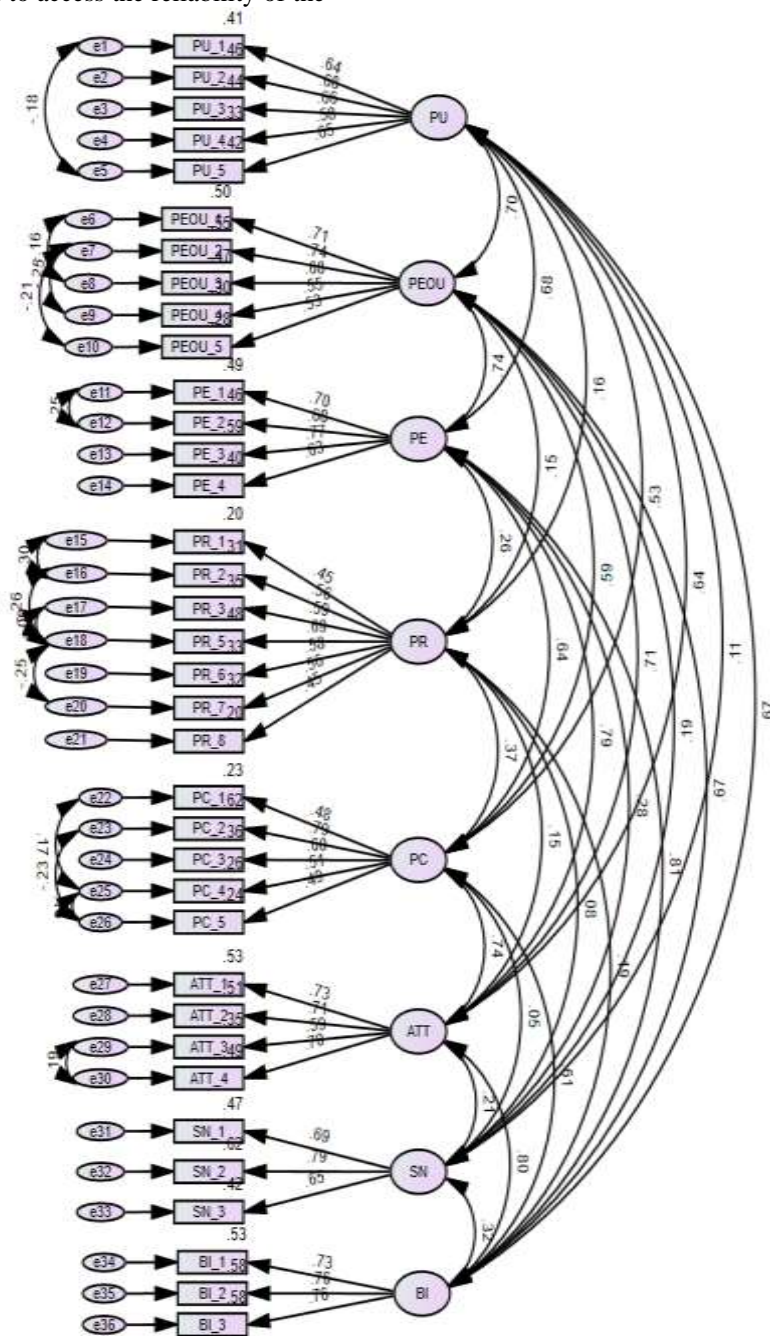

Figure 3: Measurement Model

Table 6: Reliability Measures of Measurement Model

Variables	Cronbach's Alpha	CR	Remarks
PU	0.769	0.779	Acceptable
PEOU	0.746	0.780	Acceptable
PE	0.798	0.789	Acceptable
PR	0.740	0.758	Acceptable
PC	0.723	0.713	Acceptable
ATT	0.786	0.779	Acceptable
SN	0.747	0.751	Acceptable
BI	0.788	0.793	Acceptable

Table 7: Heterotrait-Monotrait (HTMT) Ratio

	PU	PEOU	PE	PR	PC	ATT	SN	BI
PU								
PEOU	0.766							
PE	0.682	0.760						
PR	0.191	0.205	0.265					
PC	0.505	0.592	0.591	0.437				
ATT	0.634	0.743	0.778	0.168	0.659			
SN	0.112	0.186	0.290	0.104	0.033	0.244		
BI	0.680	0.698	0.800	0.229	0.565	0.796	0.315	

The Average Variance Extracted (AVE) for all the constructs PU, PEOU, PE, PR, PC, ATT, SN and BI are 0.414, 0.419, 0.484, 0.313, 0.341, 0.469, 0.503 and 0.560 respectively. The convergent validity of the construct is acceptable if CR >0.6, model fit indices are acceptable and Cronbach alpha > 0.70 but AVE < 0.5 [47], [48] and reliability could be measured only by CR only as AVE is strict often [49]. The factor loadings > 0.40 are set as threshold points for all the indicators and their loading with constructs. [50].

Discriminant Validity of construct is measured using Heterotrait-Monotrait (HTMT) Ratio, HTMT < 0.85 shows an establishment of strict discriminant validity between the constructs of the measurement model and demonstrates greater specificity as well as sensitivity rates than other discriminant validity measures like Fornell & Lacker, cross-loading results, etc. [51]. All the values in HTMT analysis are below the threshold region so the model passes the discriminant validity test.

5.5 Structural Model Evaluation

A structural model was constructed in AMOS and model fit evaluation was done. Most of the GOF indices of the structural model were in the excellent zone of Hu and Bentler (1999) cutoff criteria except CFI which is very near to threshold level showing that the hypothetical model and sample data have an acceptable fit.
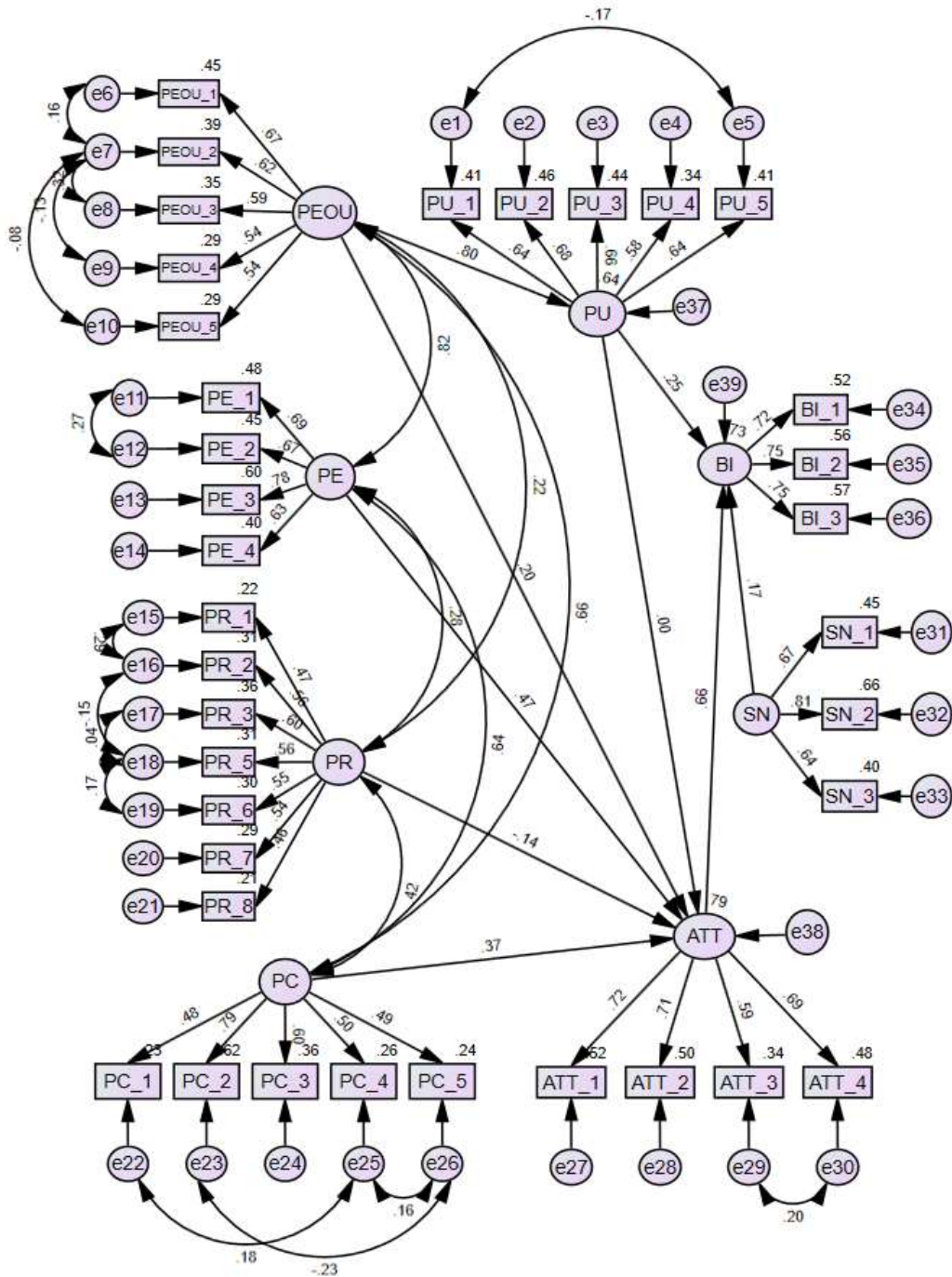
Figure 4: Structural Model

Table 8: Goodness of Fit Indices Measures of Structural Model by [45]

GOF Measures	Threshold	Estimate	Remarks
CMIN/DF	Between 1 and 3	1.947	Excellent
CFI	>0.9	0.898	Near Threshold
SRMR	<0.08	0.064	Excellent
RMSESA	<0.06	0.047	Excellent
PClose	>0.05	0.870	Excellent

The structural model predictive relevance is calculated by R^2 of the endogenous latent variables. The R^2 was 0.637 for PU, which shows that 63.7% variance in PU is accounted for by PEOU. Similarly, the R^2 for ATT was 0.793 indicating that 79.3% variance in ATT is accounted for by PU, PEOU, PE, PC, and PR. And, R^2 of BI was 0.731 meaning PU, ATT, and SN account for 73.1% of the variance in BI. Thus, it is concluded that all the endogenous constructs have a good correlation with their exogenous constructs.

VI. DISCUSSION

Multiple regression techniques were used for testing the hypotheses using AMOS v26 and testing was done as one-tailed hypothesis testing. The null hypothesis is rejected and alternate or proposed hypothesis is supported when $\beta \neq 0$, p/2 < 0.05 and t-value >1.657 (when β is negative, t value < -1.657) [52].

The standardized path coefficient (β), t-value, p-value, and p/2 value obtained from AMOS along with decision remarks are shown in Table 4.13. Out of 9 Hypotheses, H1 and H4 were not supported, and the rest 7 hypotheses were supported.

As per the finding of the research, perceived usefulness and perceived ease of use were found to have no statistical significance to attitude toward online shopping. However, it is found that perceived ease of use has a significantly positive influence on perceived usefulness, and perceived usefulness too has a significantly positive influence on behavior intention. Perceived Enjoyment and Perceived Cost were found to positively influence attitudes toward online shopping whereas the perceived risk was found to negatively influence attitudes toward online shopping. Additionally, attitudes toward online shopping and subjective norms have a significant positive influence on behaviour and intention to shop online.

Table 9: Results of Path Analysis of Structural Model

H	Relationship	β	t-value	p	p/2	Remarks
H1	ATT <--- PU	.003	0.027	0.979	0.4895	Not Supported
H2	BI < --- PU	.245	3.528	< 0.001	<0.001	Supported***
H3	PU < --- PEOU	.798	9.77	<0.001	<0.001	Supported***
H4	ATT < --- PEOU	.196	1.208	0.227	0.1135	Not Supported
H5	ATT < --- PE	.465	4.105	<0.001	<0.001	Supported***
H6	ATT < --- PR	-.136	-2.473	0.013	<0.0065	Supported**
H7	ATT < --- PC	.372	4.321	<0.001	<0.001	Supported***
H8	BI < --- ATT	.660	8.419	<0.001	<0.001	Supported***
H9	BI < --- SN	.172	3.771	<0.001	<0.001	Supported***

Note: significant at *p < 0.05; **p< 0.01; ***p <0.001

5.6 Demographics and Previous Shopping Experience Influence

For the study of how demographics and previous shopping experience influence the attitude toward online shopping and behaviour intention average of ATT and BI is taken as a measure for each indicator. Relevant factors with a minimum of 20 responses from each group are considered for this study.

The study shows that the participants under 18 years of age have the best attitude and behaviour intention toward online shopping whereas participants above 45 years have the worst. Gender, as well as annual family income, shows no significant difference in attitude and behaviour intention toward online shopping.

Those who have shopped online for around 6 months have slightly lower attitudes and behaviour intentions toward online shopping than those who have shopped for more than 6 months. Additionally, participants who felt cheated previously during online shopping have lower attitudes and behaviour intentions toward online shopping than those who did not feel being cheated and who did not know whether they were being cheated or not.

Table 9: Demographics and Previous Shopping Experience Influence on ATT and BI to shop online

Particulars	Grouping	Average of ATT	Average of BI
Age Group	Under 18	4.05	4.08
	18-25	3.82	3.91
	25-34	3.80	3.78
	34-45	3.86	3.90
	Above 45	3.25	3.38
Gender	Male	3.82	3.85
	Female	3.80	3.81
Annual Family Income	Below 4 lakhs	3.72	3.63
	4-7 lakhs	3.77	3.77
	7-10 lakhs	3.83	3.83
	10-15 lakhs	3.88	3.88
	Above 15 lakhs	3.85	3.82
Online Shopping Duration	Around 6 months	3.67	3.60
	6-12 months	3.82	3.76
	1-2 years	3.78	3.83
	Above 2 years	3.85	3.89
Felt Cheated	Yes	3.67	3.72
	No	3.95	3.95
	Maybe	3.84	3.85

VII. CONCLUSION

The result from the extended technology acceptance model revealed that perceived cost and perceived enjoyment have a significantly positive influence on attitude toward online shopping, perceived usefulness and perceived ease of use have no significant influence on attitude toward online shopping whereas perceived risk has a significantly negative influence on attitude toward online shopping. This shows that acceptance of online shopping would increase if consumers enjoy online shopping and provided cost benefits in online shopping. Similarly, to increase acceptance of online shopping in Nepal risk associated factors related to online shopping need to be reduced. Nepalese consumers' intention to shop online is influenced by family, friends, and colleagues as well as their attitude toward online shopping and the usefulness of online shopping.

The study shows above 45 years Nepalese consumers have a slightly lower acceptance of online shopping than other age groups whereas on gender and annual family income basis the acceptance is almost similar. Nepalese consumers who have started online shopping for around 6 months have slightly low adoption than those who have shopped for more than 6 months. Consumers who have felt cheated in their previous encounters with online shopping experiences tend to accept online shopping at a lower level than others who did not feel the same way.

VIII. RECOMMENDATION FOR FUTURE WORK

This research may be broadened further to uncover other external variables affecting TAM in the context of online shopping as well as any other relevant fields. This research is basically conducted in five districts of Nepal and generalizes the finding for the whole of Nepal by the means of the multiple cluster sampling technique. So, to increase the likelihood that the results would be applicable to a wide range of situations, the future researcher should include participants from various areas.

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APPENDIX

Variables	Items	Questions	References
Perceived Usefulness (PU)	PU_1	Getting to where I shop is hassle and online shopping saves me from chaos of traffic.	[42]
	PU_2	Online shopping saves time required to buy products.	[53]
	PU_3	Online shopping increases my productivity and efficiency while searching and browsing products.	[9]
	PU_4	Online store is always open so online shopping can be done 24/7.	[54]
	PU_5	The advantages of online shopping outweigh the disadvantages.	
Perceived Ease of Use (PEOU)	PEOU_1	Online ordering layout is easy and convenient.	[9]
	PEOU_2	Detailed information of product is available while shopping online.	[53]
	PEOU_3	Online products have got users/experts reviews making it easy to decide	[42]
	PEOU_4	There is no embarrassment if I don't buy online.	
	PEOU_5	I can take as much time as I want to decide in online shopping.	
	PEOU_6	Online shopping is more convenient due to COVID pandemic.	[55]
Perceived Enjoyment (PE)	PE_1	I have fun while purchasing products online.	[42]
	PE_2	I think buying online is enjoyable and pleasure process.	[9]
	PE_3	I enjoy using new technology like online shopping.	
	PE_4	I dislike online shopping.	
Perceived Risk (PR)	PR_1	Goods delivered in online shopping may be damaged during transportation due to mishandling.	
	PR_2	Quality of products purchased may not be good/guaranteed as needed.	[53]
	PR_3	There is risk of receiving products late in online shopping	[9]
	PR_4	There are chances of being cheated in online shopping	
	PR_5	Home Delivery by a stranger may not be safe.	
	PR_6	I feel that my personal information may be misused if I shop online.	[53]
	PR_7	I cannot get to feel/test the product physically when I shop online	[42]
	PR_8	If I shop online, I cannot wait till the product arrives.	
Perceived Cost (PC)	PC_1	Product Price is important to me when I shop online.	[56]
	PC_2	Online shopping provides easy price comparison	[42]
	PC_3	I like to check prices at different online and offline store before buying online.	[56]
	PC_4	I like different offers, discount and cash-back online shopping provides.	[42]
	PC_5	I do not like to be charged for shipping/delivery when I shop online.	
Attitude Toward Online Shopping (ATT)	ATT_1	I think positively about using online shopping to buy products or services	[53]
	ATT_2	Online shopping is a positive tool to buy products or services	
	ATT_3	Using online shopping for buying products or services is a wise idea	
	ATT_4	Online shopping is worth to use in buying products.	

Subjective Norms (SN)	SN_1	Most people who are important to me thinks I should use online shopping to buy products or services.	[38]
	SN_2	I feel under social pressure to shop online	
	SN_3	My family member's/friend's opinion matters a lot to me in shopping online.	
Behavioural Intention (BI)	BI_1	I intend to continue using online shopping to buy products or services.	
	BI_2	I plan to use online shopping to buy products or services on a regular basis in the future.	
	BI_3	Assuming I have access to online shopping for buying products or services, I intend to adopt it.	[20]