



# Assessment of Factors Affecting Customer's Behavioral Intention on the Adoption of Cashless Transaction in Bauchi Metropolis

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### ABSTRACT

This study examines the factors influencing the behavioral intention to adopt cashless transactions in Bauchi Metropolis, Nigeria. The research investigates four independent variables: perceived ease of use, perceived usefulness, subjective norms, and internet security, with behavioral intention as the dependent variable. A quantitative research approach was employed, targeting 480 commercial bank customers in Bauchi Metropolis. The study utilized probability sampling techniques and structured questionnaires for data collection. The collected data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). The findings reveal that perceived ease of use, perceived usefulness, subjective norms, and internet security significantly influence behavioral intention. All independent variables demonstrated a strong and meaningful relationship with the dependent variable. This study provides valuable insights for managers and researchers, enhancing their understanding of the factors affecting the adoption of cashless transactions. It concludes with practical recommendations and highlights limitations, offering directions for future research.

# INTRODUCTION

Although banks have shown significant interest in offering cashless services, research has shown that customers remain reluctant to use of the innovation. Despite the benefits that internet banking offers to customers, the majority of customers are still highly reluctant to implement internet banking transactions (Njeru, 2017). Since the announcement of CBN new policy mandating savings banks and other financial institutions to ensure OTC (over the counter) cash withdrawals by individuals. Nigerians have been facing challenges such as long queues at banks and poor-quality mobile banking services due to congestion on the sites. However, reactions have since trailed the development as Nigerians didn't fail to express their views on what they perceive of the policies (Punch, 2022). Factors such as educational attainment, financial inclusion, income level, availability internet service and other financial services infrastructure such as point of

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sale machines and mobile banking services are problems Nigerians think hinders the attainment of a cashless society.

Most of the studies done in developing countries (Anouze & Alamro, 2019; Ilmudeen, 2021; Teka, 2020; Alhassany & Faisal, 2018; Ayudya, Alfalia & Ami, 2018) have focused on Technology acceptance model and theory of planned behaviour. The result of their studies has shown mixed reaction as regard to the result of the finding as some variables have shown positive result in some places and negative result in some places. This study therefore seeks to understand the factors influencing internet banking adoption by customers in Bauchi metropolis while using an Integration of TAM and TPB Framework with extension of internet security as suggested by Karim et al. (2020), which states that future research should examine cashless banking adoption using different adoption models including trust, perceived risk, internet security, ease of use

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and usefulness of services as connective concepts.

Recent studies such those of Kazaure (2019), Olaolu (2022), Tarawneh, Nguyen, & Fie, (2021). used non-probability sampling method. In line with the above the sample was not a representation of the population as such results cannot be generalized. To this end, the above researchers suggested that further study should employ probability sampling method so that sample will represent the population in which the results can be generalized. To fill in these gaps this study will use probability sampling technique as suggested by (Kazaure, 2019; Ashraf, 2019).

There are substantial numbers of studies conducted in Asian countries for example; Husin and Rahman (2016) conducted in Malaysian context. Alkailani and Nusairat (2021), Anouze Alamro and Awwad, (2018) conducted in Qatar context while Roy and Das (2019) were conducted in India, however, focusing on Asia as an area of study the result cannot be generalized to the broader context. A., U. and Mursid (2018), and Bhatti and Husin (2019) suggested that it will be interesting if the study can be replicated in other geographical areas.

Similarly, Lindgreen, Bendetto and kock (2021) stated that contextual gap is an adequate contribution to the marketing literature. To fill in these gaps, the study will be conducted in a racially homogeneous society such as Bauchi, in order to improve upon the external validity of the study. This study, therefore aims to bridge these gaps by integrating theory of planned behavior (TPB) and Technology acceptance model (TAM) and internet security as independent variable to assess the factors affecting customer behavioural intention to use of cashless transaction in Bauchi metropolis.

# **Objectives of the Study**

The main aim of the study is to assess the factors affecting customer behavioural intention to adoption of cashless transaction in Bauchi state metropolis. Specifically, the study has the following objectives:

1. To assess the influence of perceived ease of use on customer's behavioral intention to adopt cashless transaction in Bauchi metropolis.

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- To assess the influence of perceived usefulness on customer's behavioral intention to adopt cashless transaction in Bauchi metropolis.
- To assess the influence of subjective norm on customer's behavioral intention to adopt cashless transaction in Bauchi metropolis.
- To assess the influence of internet security on customer's behavioral intention to adopt cashless transaction in Bauchi metropolis.

# LITERATURE REVIEW

#### **Behavioural Intention**

Behavioural Intention to use is one's desire or interest to perform certain behaviour. Interest is related to behaviours or actions, yet interest can change with time, the wider the time interval, the more possible changes in one's interest (Ojoajogulnuwa, & Lame, 2023; Yani, Lestari, Amalia, & Puspita, 2018). For example, Bratman's (2017) work on rational agency in the context of practical reasoning takes intention as the core attitude that directs future planning. For the past three decades human behavioural intention was theoretically debated by numerous scholars (Xing, Lv & Cao, 2020). From the cognitive psychology perspective, behavioural intention means an opinion that an individual has prior to perform an action (Carruthers, 2007).

#### Perceived Ease of Use

Davis (1989) describes the perceived ease of use as the extent to which a person thinks that using a given device should be effortless. Nethananthan and Shanmugathas (2018) revealed that easy to use is one of the reasons for customers adopting advanced technology product or service. If consumers find it difficult to operate, they will not use the product or services. Consumers preferred banks to make banks' websites the simplest and easy way to understand and use. If the banking website is more intricate and difficult to use, Customers do not plan to use

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E-banking services. Customers' decision on whether to accept or reject innovation depends on how easy it is used to them. Technologies such as E-banking, it must be convenient and easy to use, and the first experiences of customers about the service should be excellent and significant (Mano, Anuja &Karunakaran, 2020).

# Perceived Usefulness

Davis (1989) defined perceived usefulness as the degree to which a person believes that using a particular system would enhance his or her job performance. Users of electronic banking will adopt the system if they believe it will benefit them such as by reducing the time spent on going to the bank and improving efficiency (Hossain, Bao, Hassan & Islam, 2022). Similarly, Davis (1989) considers perceived usefulness as a direct predictor of the buyer's intention to use the technology. Moreover, it means the degree to which online users feel that particular website could enhance efficacy and value to them at the time of purchasing goods online (Lai & Wang, 2012). Perceived usefulness of the retailer's website normally depends on the effectiveness of technological features like services provided by an online retailer to consumers and advance technology in finding goods (Iqbal, Saeed, Raza, Mushtaq & Ahmad, 2018).

#### Subjective Norm

According to Ajzen and Fishbein (1975) subjective norm serve as one of the original constructs of theory of reason action TRA that concern with impact of social pressure on individual intention. In TRA and TPB subjective norm is presented as determinant of behavioural intention. Subjective norm is a person's perception that people around him can influence his decision to perform in a specific behaviour or not. (Ajzen & Fishbein, 1975). Subjective norm has been conceptualized as the main characters in the individual decision-making process through his life. Toan Le Duc et al. (2021) In his study results shows that subjective norm has a good explanatory power and influencing indicator of adopting internet banking

#### Internet Security

Internet security in online banking context is becoming a critical issue hindering the adoption of online banking services. Information about the destinations, activities, and demographic qualities of people using online banking is very valuable to online businesses. Away from the general anxieties with exchange personal information, people may specifically have concerns about becoming increasingly recognition due to increasing the required of personal data (Kumar & Gupta, 2020). Security is considered the main operational risk of e-banking, some of the specific problems cut across risk categories like breach of security letting unauthorized access to customer information (Hammouri, Majali, Aljamali, Aloqool & Abhilash, 2021;). Such security issues may expose the bank to legal and reputational risks. Moreover, risk perception can be classified into six categories as the followina: financial risk. time risk. psychological risk, performance risk. confidentiality risk and safety risk. Basically, risk perception could be higher for electronic banking services (Hammouri et al., 2021).

# Hypotheses Development

### Perceived Ease of Use and Behavioral Intention

Perceived ease of use (PEU) was described as the degree to which people think that it would be easy to use a specific system (Davis. 1989). Perceived ease of use is constructed as people's evaluation of the intellectual effort needed in the use of new technologies. It refers to simply easy to do and free from stress to using the system (Nugroho, Najib & Simanjuntak, 2018). The consumer can free of effort to learn and use the cashless payment method. For mobile wallet, perceived ease of use is the extent to which consumers think that effortless to learn and use a mobile wallet. Prior studies showed that perceived ease of use has a positive influence on the intention of the people. Perceived ease of use affects the user's attitude whilst adopting a mobile wallet. Perceived ease of use is a significant factor influence users to adopt bank card transactions

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(Hanudin, 2007). Therefore, it is hypothesized that;

H<sub>1</sub>: - Perceived ease of use has significant and positive effect behavioural intention

# Perceived Usefulness and Behavioural Intention

Perceived usefulness (PU) has been known as the subjective probability that the use of technology will enhance performance (Davis et al., 1989). The user uses the technology will increase their performance (Olaolu, 2022). The user will use the cashless payment method when they found that the cashless system is useful for transaction needs. Bagla and Sancheti (2018) claim that perceived usefulness affects attitude of the user that adopt and use the digital wallet. The mobile wallet needs to be used Smartphone's and the internet to make the payment. The consumer believes that the mobile wallet is more beneficial compared to the traditional way of conducting the transaction which is paid with cash. Therefore, it is hypothesized that;

H<sub>2</sub>: - Perceived Usefulness has significant and positive effect behavioural intention

# Subjective Norms and Behavioural Intention

Subjective norm can be defined as a person's perception that most people who are important to her or him should or should not perform behaviour in question (Fishbein & Aizen. 1975; Karim, et al., 2020). The studies have investigated the significance of social science studies in banking studies (Amin, et al., 2006; Nysveen, Pedersen, & Thorbjørnsen, 2005; Kleijnen, Wetzels, & de Ruyter, 2004; Venkatesh& Morris, 2000) People surrounding them to accept and utilize internet banking. Amin et al. (2006) on their research with 200 questionnaires were provided which 115 respondents return the questionnaire. In addition, respondents profile found Male (64 respondents) more than female (51 respondents) education bachelor's degree was found the most frequency education level. Additionally inspected that subjective norm has significant impact strong influence over the

behavioural Intention to use cashless transaction. Therefore, it is hypothesized that;

H<sub>3</sub>: - Subjective Norms has significant and positive effect behavioural intention

#### Internet Security and Behavioural Intention

Kim, Kim and Nam (2010) examined the effect of perceived security on behavioural intention. They developed a research model that delineates the role of perceived security in building the customers' trust and their positive effect on customer intention to use internet transaction (Smith, 1999) The main security issues while transacting business on internet are related to data encryption and user authentication (Olaolu, 2022). To prevent fraud and to resolve the weak points in security system, a close cooperation is required from service provider as well as individual users. Technology should give effective response to ensure protection from unauthorised access and security and privacy of data (Linck, Pousttchi, & Wiedemann, 2006).

H<sub>4</sub>: - Internet Security has significant and positive effect behavioural intention

# Theoretical Framework

The study is underpinned Theory of Planned Behaviour. Ajzen (1991) extend TRA theory that developed (Fishbein & Ajzen, 1975) because TRA theory has some limitations in dealing voluntary behaviour of consumers while theory of planned behaviour (TPB) proposed that consumer behaviour is not fully under control hence a voluntary action. TRA hypothesize that individual positive attitude jointly with the thought of the individual formed the behavioural intention of that individual (Fishbein & Ajzen, 1975). While, TPB theory present a better explanation regarding behavioural model as compared to TRA that an individual is supposed to execute definite behaviour only if that individual has their actual control over his/her behaviour (Aizen, 1991). Therefore, a person has positive subjective norms, attitude, and perceived behavioural control and intention that a specific person will execute actual behaviour (Ajzen, 1991). Both TRA and

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TPB theories predict the behaviour of consumers and TPB considers the best theory that predicts the behaviour of consumers (Taylor & Todd, 1995), and this theory is used extensively in predicting behaviour (Knowles, Hyde, & White, 2012). One of the prior researchers suggested that TPB theory is good as compared to TRA in predicting the behaviour of individuals, particularly ethical intentions (Chang, 1998).

# **Conceptual Framework**

The conceptual framework represents the basis of the research and it provides the interrelationships or linkages between the concepts, variables or constructs of the study.

Independent Variables

This framework results into the development of a conceptual model that tries to address the research problem and research questions of the study and provides the required answers. According to Gupta (2013), the conceptual framework attempts to explain either graphically or in narrative form the main things to be studied (key factors, constructs or variables and the presumed relationship among them). Therefore, Figure1 preset relationship between independent variables (perceived ease of use, perceived usefulness, subjective norm and internet security) and the dependent variable (customer behavioural intention to use cashless transaction).



Dependent Variable



Figure 1: Research Framework

# METHODOLOGY

This research adopted a quantitative research design based on survey approach. The target population in this study comprised all customers who held a bank account with any of the Twenty (20) commercial banks operating in Bauchi metropolis. on the basis of the rule of thumb that "the larger the sample size the better the result, this present study would add 10% (38.4) of the 384 minimum sample size obtained from Fisher, Ury and Patton (1991)'s formula. Hence the sample size for the study is 422 respondents.

Fisher, Ury and Patton (1991) describe formula for sample calculation as follows:

$$n = \frac{z^2 pq \times 100}{d^2}$$

# Where:

n = desired sample size assuming population is more than 10,000  $\,$ 

z = standard normal deviation set at 1.96 which statistically corresponds to 95% confidence level p= proportion of target population estimated to have adopted cashless transaction. Since there is no reasonable estimate, this study has used the maximum of 50%

d = degree of desired accuracy. This study sets it at 0.05 which correspond to 1.96

$$n = \frac{(1.96)^2 \times 0.5 \times (1.0 - 0.5)}{(0.05)^2} \times 100$$

n = 384.16 Approximately 384 bank customers Using the population size of 670,000 at

95% confidence level at 5% error of precision

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level, for the purpose of increased representation, minimum of 20% of the sample size as recommended by Israel (2013) Will be added bringing the total to 461.16 (384.16 x 20 /100 = 77+ 384.16 = 461.16). This study used a multistage cluster sampling procedure. This study used structured questionnaire; a closed ended questionnaire. In this study, a combination of both descriptive and structural equation modelling will be used as methods of data analysis. Smart Partial Least Square (PLS 3.8) was employed for hypotheses testing.

# RESULTS

First, the survey data was used to assess validity of the measurement, second the assessment of the structural model and third the results of the hypotheses were tested. As mentioned in the previous Chapter the Smart-PLS, a software programme for PLS-SEM, which also includes path modelling, was employed to determine the reliability and validity survey instrument. The model for pilot study is presented in Figure 1.



Figure 2: Measurement Model

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#### Reflective Measurement Model Assessment

In reflective measurement model, three assessments criteria need to be examined at the beginning. The three assessments are internal consistency reliability, convergent validity (indicator reliability/ outer loadings and AVE) and discriminant validity. The summary of the results of these three assessments regarding this research are shown in the Table 3.

#### Indicator Reliability

The purpose of evaluating indicator reliability (factor loadings) is to examine the degree to which the indicators are consistent with what these indicators attempt to measure (Urbach & Ahlemann, 2010). The recommended loading for each indictor is above 0.708; however, if the loading of the indicator exceeds 0.7, 0.6, 0.5 or 0.4 is satisfactory if other indicators have high loadings value to complement the CR and AVE (Hair, Babin, & Krey 2017). Therefore, all the items have loadings above 0.7, and the AVE of the constructs is all above 0.5.

#### Internal Consistency Reliability

On reflective measurement model, the internal consistency reliability can be achieved

|  | Table | 1: | Reliability. | convergent | validity | / and | VIF |
|--|-------|----|--------------|------------|----------|-------|-----|
|--|-------|----|--------------|------------|----------|-------|-----|

when the composite reliability (CR) value of each construct surpasses the satisfactory threshold value of 0.7 (Hair, Babin, & Krey 2017). Table 3 shows that each construct has the value of 0.870 to 0.924 as composite reliability which exceeds the recommended threshold value of 0.7. Therefore, the results indicate that the internal consistency reliability of the constructs represented by the indicators of this research is satisfactory.

#### Convergent Validity

Convergent validity is demonstrated as the extent to which individual items reflect the converging of a construct compare to measuring other constructs (Urbach & Ahlemann, 2010). The convergent validity of the measurement model can be exanimated by the average variance extracted (AVE) value of 0.5 and above (Hair, Gabriel, & Patel 2014). As shown on Table 1 all of the AVE values of constructs are ranging from 0.573 to 0.710 the result has achieved the minimum requirement value of 0.5. This indicates that the reflective measurement model of this research has a satisfactory and adequate convergent validity.

| Construct             | ltems | Loadings | Cronbach's Alpha | CR    | AVE   | VIF   |
|-----------------------|-------|----------|------------------|-------|-------|-------|
| Perceived ease of use | PEU1  | 0.868    | 0.889            | 0.919 | 0.695 | 2.336 |
|                       | PEU2  | 0.887    |                  |       |       | 2.891 |
|                       | PEU3  | 0.840    |                  |       |       | 2.690 |
|                       | PEU4  | 0.853    |                  |       |       | 1.903 |
|                       | PEU5  | 0.711    |                  |       |       | 2.796 |
| Perceived usefulness  | PU1   | 0.735    | 0.870            | 0.906 | 0.659 | 1.668 |
|                       | PU2   | 0.818    |                  |       |       | 2.715 |
|                       | PU3   | 0.871    |                  |       |       | 2.718 |
|                       | PU4   | 0.841    |                  |       |       | 2.399 |
|                       | PU5   | 0.788    |                  |       |       | 1.723 |
| Subjective norm       | SBJN1 | 0.784    | 0.814            | 0.870 | 0.573 | 3.286 |
|                       | SBJN2 | 0.779    |                  |       |       | 3.489 |
|                       | SBJN3 | 0.741    |                  |       |       | 2.434 |
|                       | SBJN4 | 0.757    |                  |       |       | 2.476 |
|                       | SBJN5 | 0.723    |                  |       |       | 1.484 |
| Internet security     | INTS1 | 0.744    | 0.879            | 0.911 | 0.674 | 1.651 |
| -                     | INTS2 | 0.865    |                  |       |       | 2.014 |
|                       | INTS3 | 0.849    |                  |       |       | 2.627 |

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| Construct                      | Items | Loadings | Cronbach's Alpha | CR    | AVE   | VIF   |
|--------------------------------|-------|----------|------------------|-------|-------|-------|
|                                | INTS4 | 0.843    |                  |       |       | 2.373 |
|                                | INTS5 | 0.796    |                  |       |       | 1.804 |
| Customer Behavioral intentions | CBI1  | 0.839    | 0.897            | 0.924 | 0.710 | 1.818 |
|                                | CBI2  | 0.875    |                  |       |       | 2.076 |
|                                | CBI3  | 0.858    |                  |       |       | 1.694 |
|                                | CBI4  | 0.767    |                  |       |       | 2.303 |
|                                | CGI5  | 0.868    |                  |       |       | 2.200 |

#### **Collinearity among Indicators**

In formative measurement model, the indicators are not inter-changeable. Therefore, high correlations should not be existed between the indicators. If two formatives are highly correlated, it is known as collinearity (Hair, Gabriel, & Patel 2014). The high collinearity among formative indicators may have negative impact on the evaluation of weights and their significance by increasing standard error and reduce the accuracy of result demonstration (Ramayah et al. 2016). The level of collinearity of formative indicators in SEM-PLS is examined by Variance Inflation Factor (VIF). The rules of thumbs depict that a potential issue with collinearity problem exists when VIF value is 3.3 and above (Diamantopoulos & Siguaw 2006) or 5.0 (Hair, Ringle & Sarstedt 2011). Table 1 demonstrates the range of VIF value is from 1.484 to 3.489. Applying stricter threshold, the VIF values of constructs are lower than 5.0 according to Hair, Ringle and Sarstedt (2011). Thus,

### Table 2: Fornell-Larcker Criterion

collinearity of constructs is not a concern for the evaluation of PLS path model.

### **Discriminant Validity**

#### Fornell and Larcker's Criterion

Fornell-Larcker criterion is the second method adopted to assess the discriminant validity of reflective measurement model. The square roots of AVE values are calculated using Smart PLS algorithm function as well. Based on the results of Table 2, the bolded values represent the square root of the AVE while non-bolded values are the intercorrelations between constructs. Thus, all the square root of AVE on the diagonal is higher than the off-diagonal correlations in their corresponding columns and rows. It concludes that the reflective measurement model of this research has satisfactory discriminant validity upon the Fornell and Larcker's criterion.

| Variables                     | CBI   | INT   | PEU   | PU    | SBJN  |
|-------------------------------|-------|-------|-------|-------|-------|
| Customer Behavioral Intention | 0.842 |       |       |       |       |
| Internet Security             | 0.673 | 0.821 |       |       |       |
| perceived Ease of Used        | 0.688 | 0.614 | 0.834 |       |       |
| Perceived Usefulness          | 0.699 | 0.643 | 0.738 | 0.812 |       |
| Subjective Norm               | 0.691 | 0.719 | 0.712 | 0.741 | 0.757 |

#### **HTMT Criterion**

The third method to examine the discriminant validity of this research is Heterotrait-Monotrait ratio of correlations (HTMT). It is the percentage of average value of within the constructs' correlations to the average value of between the constructs' correlations. (Ramayah et al. 2016). Gold, Malhotra and Segars (2001) suggest that if HTMT value is not above 0.90, there will be no problem of discriminant validity. Based on the analysis, the value of HTMT is examined and bolded in the Table 6. The values in the table illustrate that there is appropriate discriminant validity of the research.

Further, HTMT inference is assessed as it is used as statistical test (Henseler, Ringle,

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&Sarstedt 2015). It is calculated using bootstrapping technique with two tailed, 0.1 significant level and 90% confidence interval by SmartPLS. When HTMT value's confidence interval for the path of structure includes 1, it means the data has the problem of discriminant validity. Based on the result in Table 3, there is

satisfactory discriminant validity since the value is less than 0.90. Taken together, the results of HTMT value and HTMT inference indicate that the discriminant validity is established for the reflective measurement model of this study

| Table 3 · Heterotrait-Monotrait Ratio | (HTMT) |
|---------------------------------------|--------|
|                                       |        |

| Variables | ĊBI   | INT   | PEU  | PU | SBJN |  |
|-----------|-------|-------|------|----|------|--|
| CBI       |       |       |      |    |      |  |
| INT       | 0.744 |       |      |    |      |  |
| PEU       | 0.767 |       |      |    |      |  |
| PU        | 0.787 | 0.846 |      |    |      |  |
| SBJN      | 0.804 | 0.838 | 0.76 |    |      |  |

# Importance-Performance Matrix Analysis (IPMA)

The IPMA contrasts the overall effects, which show the importance of the previous constructs in forming a given target construct as presented in Figure 2 ad 3 with their average latent variable scores, which indicate their performance IPMA offers advancement in the partial least square-structural equation modelling (PLS-SEM) analysis, which was employed in this study by selecting the customer behavioural intention constructs as the target construct (Inuwa, Male, & Aminu, 2023). IPMA widens the understanding of PLS-SEM analysis outcomes by involving the average value of the latent constructs and their indicators (Inuwa, Male, & Aminu, 2023). The IPMA posits that the total effects show the importance value of the preceding factors in framing the target factor (customer behavioural intention), while the average of latent construct values indicates the performance value of those constructs.

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Figure 3: IPMA Modelling

The importance and performance value of the four constructs such as internet security, perceived ease of use, perceived usefulness and subjective norm, were calculated and depicted in Figure 2 and 3. The findings pointed out that perceived usefulness exhibits the highest values on customer behavioural intention. Furthermore, perceived ease of use and subjective norm exhibits the second and third highest values on customer behavioural intention. Moreover, internet security contributes the lowest values of the customer behavioural intention. Therefore, there is no need to improve the perceived usefulness because it's already performing better compared to all other constructs. With regards to the construct the internet security performance is low and improving this construct will not make much difference for the construct's customer behavioural Intention.



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#### Structural Model

This subsection is to discuss the validity assessment of the structural model for this research. As discussed in Chapter Three of this thesis, the validity of the structural model is examined. To test for the significance of path coefficient, all of the data are run using bootstrapping by 500 subsamples, one-tailed type of test at p<0.05 significance level. The details and importance of these findings are discussed in the sub-sections of the study. Similarly, the structural model for this study is presented in Figure 4.



Figure 4: structural Modelling

# **Coefficient of Determination (R Square)**

The next step of structural model assessment is evaluating the predictive accuracy of the model by the coefficient of determination score which is also known as R square (R2). R square is considered as the combined effect of the exogenous variables for the endogenous variable(s) within the model (Ramayah et al. 2016). It is viewed as the extent to which the exogenous constructs could explain the variance in related endogenous construct. The higher value of R square means more predictive accuracy of the model (Jin, Chen, and Simpson 2001).

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According to the rule of thumbs for R square acceptance from Cohen (1988), 0.26 (26%), 0.13 (13%) and 0.02 (2%) respectively represent three levels of predictive accuracy: substantial, moderate and weak.

The result of the combined effect of exogenous constructs Internet security, Perceived ease of used, Perceived usefulness, Subjective norm on customer behavioral intention indicates that the exogenous constructs explain 60.15% of the variance in customer behavioral intention as presented in Table 4.

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| Variables                      | DV    | R Square | R Square Adjusted |
|--------------------------------|-------|----------|-------------------|
| Customer behavioural intention |       | 0.615    | 0.612             |
| Internet security              | 0.079 |          |                   |
| Perceived ease of used         | 0.060 |          |                   |
| Perceived usefulness           | 0.051 |          |                   |
| Subjective norm                | 0.020 |          |                   |

#### **Hypotheses Testing**

In order to assess the validation of proposed hypotheses and the structural model of this research, the path coefficient between latent variables and confident intervals bias are examined. According to Hair, Hult, Ringle, and Sarstedt (2016), there are three rules for the indicator of significance of the structural model relationship for one-tailed test.

The levels of acceptance are: p value < 0.05, t value > 1.965 (Hair, Hult, Ringle, & Sarstedt 2016). Besides, the confidence intervals bias results are also provided to further validate the significance and relevance of the structural model when using bootstrapping test. If 0 does not exist within the 95% confidence intervals bias result, it indicates a significant result of the relationship. Therefore, the outcomes of the hypothesis's tests for this research on the ground of the rules mentioned as presented in Table 8 and Figure 2.

 $H_{1:}$  - Perceived ease of used has a significant effect on customer behavioural intention to use cashless transaction. Based on the findings presented in Table 8 H\_1 is supported

Table 8: Hypotheses Testing

because  $\beta$  = 0.244, t = 4.932, p < 0.005, therefore, the null hypothesis is rejected.

 $H_2$ : - Perceived usefulness has a significant effect on customer behavioural intention to use cashless transaction. The findings of the study reveal that  $H_2$  is supported because  $\beta$  =0.236, t = 4.840, p > 0.005. The null hypothesis is rejected since the calculated value is less than 0.005.

H<sub>3</sub>: - Subjective norm has a significant effect on customer behavioural intention to use cashless transaction. The findings in Table 8 shows that H<sub>3</sub> is supported because  $\beta$  =0.155, t = 2.804, p < 0.005. The null hypothesis is rejected since the calculated value is less than 0.005.

 $H_4$ : - Internet security has a significant effect on customer behavioural intention to use cashless transaction. The findings of the study in Table 8 shows that  $H_4$  is supported because  $\beta$  = 0.260, t = 5.164, p < 0.005. Based on this result the null hypothesis is rejected since the calculated value is less than 0.005.

| Variables  | Original<br>Sample<br>(Ο)(β) | Sample<br>Mean (M) | Standard<br>Deviation<br>(STDEV) | T Statistics<br>( O/STDEV ) | P<br>Values |
|--|------------------------------|--------------------|----------------------------------|-----------------------------|-------------|
| Perceived ease of used -> customer behavioural intention | 0.244                        | 0.243              | 0.049                            | 4.932                       | 0.000       |
| Perceived usefulness -> customer behavioural intention   | 0.236                        | 0.236              | 0.049                            | 4.840                       | 0.000       |
| Subjective norm -> customer behavioural intention        | 0.155                        | 0.154              | 0.055                            | 2.804                       | 0.005       |
| Internet security -> customer<br>behavioural intention   | 0.260                        | 0.265              | 0.050                            | 5.164                       | 0.000       |

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# DISCUSSION OF FINDINGS

The broad objectives of the study are to examine the factors affecting customer behavioural intention to adoption of cashless transaction in Bauchi state metropolis. Based on the findings of study, perceived ease of used has significant effect on customer behavioural intention to use cashless transaction at 0.005 levels significant. The findings of this study are in line with study of Hiba and Faisal (2018) Phan. Ho. and Le-hoang (2020), Tran (2020), who fund significant effect of perceived ease of used has significant effect on customer behavioural intention to use internet banking. In contrast to the findings of this study perceived usefulness has significant effect on customer behavioural intention to use cashless transaction at 0.005 levels significant. This study finding is consistent with previous study of Olaolu (2022) who found that attitude; subjective norm, perceived usefulness, and E-service quality were found to be the factors that affect customer's intentions to use internet banking in Mongolia.

Subjective norm has significant effect on customer behavioural intention to use cashless transaction at 0.005 levels significant. The findings of this study are in line with study of Karim et al. (2020), Nugroho, Najib, and Simanjuntak (2018) who found significant effect of Subjective norm has significant effect on customer behavioural intention. Internet security has significant effect on customer behavioural intention to use cashless transaction at 0.005 levels significant. This study shows that the internet security tends to affect custom behavioural intention to use cashless transaction. The result is consistent with the previous studies done by Mehta et al. (2019); Alalwan, Rana, Dwivedi and Algharabat (2017),

# CONCLUSION

In a nutshell, the study seeks to investigate the factors that influence the use of cashless payment in Bauchi metropolis. At the present time, cashless transaction has become the new payment method by replacing the physical cash to perform the transaction. Consumers are more likely to use cashless transactions such as debit cards, online and mobile wallet to perform the transaction in their daily life. Bank customers are more likely to access new technology. Therefore, this study was conducted to determine the level of awareness of consumer on cashless transaction mode and factor influences consumer's intention to use cashless transaction mode bank customers. The researcher has developed the questionnaire to collect data and use Statistical Package for Social Science and Smart Pls 3.8 to analyse the data. The data were analysed by using descriptive analysis, reliability analysis, normality test, and modelling.

The level of awareness of consumers on cashless transaction mode was high. The customers are aware cashless transaction mode is convenient and brings benefit to them. The factors which are perceived usefulness, perceived ease of use, subjective norm and internet security as the independent variables in this study whereas consumer's intention to use cashless transaction is the dependent variable. The result of showed p-value for variables was less than 0.05. It indicated all independent variables dependent variable have a significant relationship which is pvalue less than 0.00. In summary, the factors that influence the intention to use the cashless transaction are perceived usefulness, perceived ease of use, subjective norm and internet security. This study provides an opportunity for the bank customers and more get to know about the cashless transaction mode. There are some limitations during carrying out this study.

# RECOMMENDATIONS

- 1. The service provider can enhance mobility by expanding the network of partners to make the mobile wallet usable at anytime, anywhere.
- Moreover, offering discount on 3G, 4G data plan subscription in cooperation with telecommunication carriers to encourages customers to stay connected, thus use cashless transaction wherever and whenever needed.
- 3. In order to avoid incidents where internet connectivity can be unstable, service

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provider shall consider adding the ability to pay even without the internet connection.

 It is suggested that service providers offer tangible or intangible rewards including discount, free trial, gifts for a period of time to encourage customers to use an existing service or try a new one.

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