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# Integrating attitude, trust, and risk perceptions to understand customers' online shopping intention: An empirical study.

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**Abstract**
Online shopping is fast becoming a norm for developed and developing countries. However, online purchasing is preceded by the intention to shop online. Anecdotal evidence suggest that attitude, trust, functional, financial, and privacy risk perceptions impacts customers online shopping intentions. There are, however, scant research into the impact of these dependent constructs on the intention to transact online. This article responds to this gap by quantitatively assessing the impact of trust, attitude, and risk perceptions on online shopping intention, especially in a developing country. The research followed the non-probability sampling to collect data from South African consumers and employed Smart-PLS for data analysis. The outcomes of the research reveals that, of the four independent constructs, only attitude significantly impact the intention to shop online. The study contributes to academia by proposing a new research framework that could be further interrogated to find out some of the reasons for the unexpected findings. It will also assist online retail management to concentrate organizational resources on what matters for in developing countries.

**Keywords:** Attitude; trust; privacy; financial risk; functional risk; privacy risk; perception.

## Introduction

The internet's continuous development strongly influences the worldwide marketing environment. It has penetrated people's lives so completely that it has become an important channel for consumers to buy products and commodities (Prashar, Sai & Parsad, 2017), to transfer funds, money, and data (Neger & Uddin, 2020). By providing a new platform for organizations to develop their business through an online network (Bhatti, Saad & Gbadebo, 2019), the Internet is rapidly becoming the fastest growing shopping channel (Lee, Yewa & Kamarulzamanb, 2020). As the Internet continues to progress, network companies and e-commerce have flourished. Boasting such special features as boundlessness, timelessness, great interaction, immediate response, low costs, and few barriers to entry, Internet has arisen to be the perfect media of advertising, marketing, and online transactions for business owners. For marketing practitioners, it also means endless online marketplace potential (Quelch & Klein, 1996). The internet and big data (BD) need to be discussed together because they are a family of related concepts (Kirbia, Nguyen, et al 2018; Obsschanka & Audretsch 2019). Together with the development of BD, the internet has ushered in big changes to electronic transactions (Negere & Uddin 2020). BD and the internet provide a vast amount of information sources that have improved the consumers' online shopping experience (Fu, Manogaran, Wu, Cao, Jiang & Yang, 2020). During internet shopping, trade organizations process a vast amount of data and personal information (Pinto, Santos & Marques, 2009). These new technologies can be used to analyze the consumers' loyalty, purchasing power, and demand degrees (Fu et al., 2020). They thus give organizations a competitive edge by ensuring that they get more information about their customers (Wilson, 2018).

However, the increased sophistication in ways of collecting, storing, mining, and trading of consumer data has also raised concerns over customers' social welfare (Mgiba, 2020), online privacy (Bandara, Fernando

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& Akter, 2020), security, and trust (Agyapong, 2018). Many studies have shown that these factors affect online shopping intention and behavior (Choshin & Ghaffari, 2017; Hallikainen & Laukkanen, 2018; Huseynov & Yildirim, 2016; Makwana et al., 2017). Because of these potential pitfalls, Makhita and Ngobeni (2021) and Hong, Zulkiffli, and Hamsani (2016) both recommend further research on the impact of trust, attitude, and the risk factors inherent on online shopping intentions, especially for developing countries.

**Problem statement and the purpose of the study**

Although a large body of extant literature exists on the factors that affect online shopping, (see Martín & Camarero, 2009; Pereira, Salgureiro & Rita, 2016; Pilík, Juřičková, & Kwarteng, 2017a; Safa & Ismail, 2013; Svatosova & Veronika, 2020), the authors are not aware of any studies that have attempted to evaluate the association between trust, attitude, risk perceptions, and shopping intentions quantitatively using the ABC model and TAM as grounding theories. It has, therefore, remained unclear in empirical terms whether, consumers' attitudes, trust, risk perceptions, and online shopping decisions are directly linked, and if yes, to what extent each of them affects online shopping intentions. Consequently, knowledge concerning the impact of these factors on online shopping intentions and behavior has not yet been adequately developed. The prime purpose of this research was to analyze whether trust, attitude, and risk perceptions significantly influence consumers' online shopping intentions. Understanding the relationship between these constructs should lead to a successful determination and implementation of a marketing strategy on the Internet (Huseynov & Yildirim, 2016). Further, this study integrates ABC and TAM theories and extant literature to illuminate the understanding of online shopping intentions. It, therefore, fills the gap in the literature by proposing a new research model based on these two theories (Kirikkaleli, 2020). Its findings could serve as the basis for further research activities in the online shopping field as well as for digital business managers and owners to improve the effectiveness of their strategic management processes for online business competitiveness (Huseynov & Yildirim, 2016). The rest of the document is organized in the following way. Literature review, methodology, data analysis, results discussion, limitations, conclusions and direction for future research.

**Literature review**

The literature review section covers the Grounding theories, construct and hypotheses development, and proposes a research framework.

**Grounding theories**

The study is grounded on two well-known theories, namely: the ABC and TAM theories. ABC model is one of the most cited (Eagly & Chaiken, 1998; Jain, 2014; Van den Berg et al. 2006) models of consumer attitude. The ABC model suggests that attitude has three elements (i.e. Affect, Behavior, and Cognition) (Jain, 2014; Syyeda, 2016). According to Jain (2014), Affect denotes the individual's feelings about an object. Behavior denotes the individual's intention towards an attitude object. Cognitive denotes the beliefs an individual has about an object. As suggested by Davis (1989, 1993), TAM is an applied model of attitude in which the intention to use technology is influenced by the attitude towards that technology and the perception of its usefulness. Attitude, in turn, is influenced by a person's beliefs in how useful the technology is and how easy it is to use. In this context, attitude is influenced by both ease of use and its usefulness. The perception of ease of use is measured by the degree to which using the technology is free of effort and the perception of usefulness is measured by the degree to which the technology can help to improve task performance (Djamasbi et al., 2009). The rationale for combining these two theories follows.

These two theories together combine attitude, perceptions, and intentions (Wang, Mangmeechai & Su, 2021), which are the constructs of interest for this study. As an illustration, Zhao, Fang, and Jin 2018 link trust, attitude, using TAM. The ABC theory also links attitude and perceptions (Dhir, Sadiq, Talwar & Sakashita, 2021). Further, trust and online purchase intentions have been linked in another study (Ha &

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Nguyen, 2019). Lastly, it has been confirmed that research findings that leverage concepts from more than one field provide better guidance than those grounded in just one (Ketchen Jr & Craighead, 2020).

**Construct and hypotheses development**

As previously mentioned the constructs of interest are Online shopping intention, Attitude, Trust, Security, Risk, and Privacy. This subsection describes each of the constructs and concludes with the proposed hypothesis.

**Online shopping intention (ONL)**

Ajzen (1991) considers intention as an indicator that evaluates how people are willing to engage in a certain behavior and how much effort they are willing to expend to perform it (Doan, 2020). In respect of purchase behavior, purchase intention is the willingness of an individual to buy an item (Raza et al., 2014; Tirtiroglu & Elbeck, 2008). Specifically for the online platform, shopping intention is consumers' intention to create a relationship with web retailers online and to make online transactions with them (Ahmed, Ali & Top, 2021). It can also be seen as a customer's inclination to engage in online shopping or willingness to involve in online buying activities (Nesha, Rashed & Raihan, 2018; Wen & Maddox, 2013). Some authors consider Online shopping intention as the precursor to a customer's online purchase (Salisbury et al., 2001). Indeed, how the business operates can be evaluated on the shopping intention of its customers (Howard & Sheth, 1967). According to He, Lu & Zhou (2008), the lack of online purchase intention is a serious obstacle to e-commerce development which greatly influences online business (Doan, 2020). The understanding of consumers' online shopping intention can be useful for influencing customers' attitudes, desires, and purchase decisions (Demoulin & Willems, 2019; Hong et al., 2015; Ma, Zhang, Ding & Wang, 2021).

**Attitude and online shopping intention (AT-ONL)**

Attitude is often used as an umbrella expression covering such concepts as preferences, feelings, emotions, beliefs, expectations, judgments, appraisals, values, principles, opinions, and intentions (Bagozzi, 1994a and 1994b; Jain 2014). Various authors have defined this concept in different ways to suit their contexts. Mazana, Yahya Mzomwe, & Suero Montero (2019) defined it as a learned tendency of a person to respond positively or negatively towards an object, situation, a concept, or a person. Joseph (2013) regards it as a belief held by individuals that reflects their opinions, and feelings which sometimes manifest in their behavior. Ajzen and Fishbein (1980) define it as an acquired coherent response to a certain subject and an individual's positive or negative assessment toward taking a certain action. It is one of the most essential internet shopping dimensions (Neger & Uddin, 2020) which gained its importance because of its influence over an individual's behavior and its power to predict and explain human behavior (Ajzen, 1991). People's attitudes determine their behavior towards objects, situations, and people (Mazana, Yahya Mzomwe, Suero Montero, 2019). For instance, consumer attitude towards online shopping is the main factor influencing actual buying behavior (Baba & Siddiqi, 2016). Kothari & Maindargi (2016) state that online shopping attitudes provide the best alternative for customers in online purchases. Gleaning from both the definitions and characterization of attitude, it can be hypothesized that:

**H1:** Attitude has a positive influence on the intention to shop online.

**Trust and online shopping intention (TR-ONL)**

Different definitions of trust reveal many aspects of this concept that are relevant to the present study. Siau and Wang (2018) define trust as the belief that another party is benevolent, competent, honest, or predictable in a given situation and it includes the willingness to depend on another. From this definition, trust can be viewed as a set of beliefs dealing with integrity and the willingness of one party to depend on another in a risky situation. In a trust situation, one party is willing to be vulnerable to the actions of another party, irrespective of the ability to monitor or control the other party (Kumar, Capraro & Perc, 2020). Trust can therefore be viewed as the primary reason for acceptance and adoption. Trust can also define the way people interact with technology (Li, Hess & Valacich 2008; Siau, Sheng & Nah 2004). The level of trust a person

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has in someone or something can determine that person's behavior (Siau & Wang 2018). Trust is crucial in all kinds of relationships (Coppola, Hiltz & Rotter, 2004), such as human-social interactions (Hengstler, Enkel & Duelli., 2016), and seller-buyer relationships (Hengstler et al., 2016; MckNight, Choudhurry & Kacmar, 2000). It also forms the basis for continued economic interactions with the hope of high returns (Kumar et al., 2020). It is essential for promoting the adoption of new technology (Li et al., 2008). Trust is expected to increase the intention to buy (Nuryanto, Sugandini & Winarno, 2020). According to Winch and Joyce (2006), Ha, Nguyen, Nguyen & Nguyen (2019), if trust is not built, no online transaction can be executed. Given the above discussion, the study proposes the following hypothesis:
**H2:** Trust has a positive influence on the intention to shop online

**Financial and functional risks, their impact on online shopping intention (FIN-ONL and FUN-ONL)**
The use of innovative ideas and new technologies is always accompanied by risks (Omelchenko & Rats, 2018). Risk is usually associated with undesired outcomes, which people usually proactively identify and control (Smith & Merritt, 2002). Risk can be defined as the possibility that an undesired outcome or the absence of the desired outcome, that involves the possibility of loss (Smith & Merritt, 2002). It is the probability of deviation from the expected result (Omelchenko & Rats, 2018). Financial risk is the first major and big risk during buying online (Sinha & Singh, 2017). Financial risk refers to the loss in the monetary terms associated with a commercial transaction which creates a bad purchasing experience (Bhatti, Saad & Gbadebo, 2019). It can happen when money is lost through fraud and when credit card information is disclosed to a third party (Masoud, 2013; Sinha & Singh, 2014). This risk is problematic for the online buying process (Bhatti et al., 2019), as it can cause people to avoid buying online (Masoud, 2013; Sinha & Singh, 2014). For these reasons and many others, financial risk plays a major role in consumer decision-making for buying online (Haider & Nasir, 2016). It is safe to say that, financial risk is the strongest predictor of online shopping behavior (Egeln & Joseph, 2012). Another important risk is the product performance risk (functional risk). Performance risk is related to the service attributes and whether it functions properly (Batch, da Silva, Souza, Kudlawicz-Franco & Veiga, 2020). This speaks to the chances of failure to perform to the consumer's requirements or expectations (Bhatti, 2018). In an online shopping environment, consumers have limited information about the products they are buying. They also don't have an opportunity to experience the product whilst purchasing online, so the risk of buying the products is high in their minds as they might also feel that the products may fail to meet their expectations (Mishra, Malhotra & Tiwari, 2021). Online consumers assume the high likelihood of the products being in the worse state after the purchase has been made, and that it does not meet their expectations (Hong et al., 2017). Online consumers can feel frustrated thinking that the product that they purchased online might not meet the expectation. This is because of the fact that consumers cannot touch the product or even test to see how the product functions (Hong et al., 2017). Therefore, consumers' attitude and their online purchase behaviour can be influenced by product functional risk (Javadi et al., 2012). Online consumers are likely to purchase famous brands from well-recognized online retailers to minimize product functional risk perception. Based on the above discussion on financial and functional risks, the following hypotheses are proposed:
**H3:** Financial risk perceptions have a positive influence on the intention to shop online.
**H4:** Functional risk perception has a positive influence on the intention to shop online.

**Privacy and online shopping intention (PRI-ONL)**
Allmer (2019) sees privacy as restricted access to personal information, data protection, defense of personal integrity, immunity from undesirable accessing one's identity, control of information about oneself, sustain of personal space from interference by other people or organizations, control over an aspect of the identity one projects to the world. Concepts that have been viewed as an integral part of privacy include secrecy, security, confidentiality, anonymity, autonomy, and liberty (Pelteret & Ophoff, 2016). Privacy perceptions refer to the consumer's willingness to share information over the internet as part of the process of a service or concluding a purchase (Belanger, Hiller & Smith, 2002). The perceptions are therefore linked to privacy risks in a given situation. Aggarwal and Rahul (2018) argue that the security of privacy signifies transaction

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integrity and, accordingly, affects transaction choices (Akter, 2020). Therefore, ensuring a customer's privacy is critical for online transactions, as it signifies the integrity of the transaction and affects customer choices in terms of engaging or not engaging in online shopping (Akter, 2020). Data is the key input into technology to make predictions about individuals (Mgiba, 2020). The development of technology implies that organizations know more about customers. This is reshaping the risks of consumer privacy (Jin, 2019). The concerns are not unfounded as there have been incidents of customer information being leaked, stolen, sold, or amended by online shopping platforms for their benefit (Carlos et al., 2009; Liu et al., 2008; Portilla, 2018). Based on the discussion on privacy, the study proposes the relationship between privacy and online shopping intention as follows:

**H5:** Privacy risk perception has a positive influence on the intention to shop online.

The above set of hypotheses can be diagrammatically represented by the proposed conceptual framework in figure 1 below.

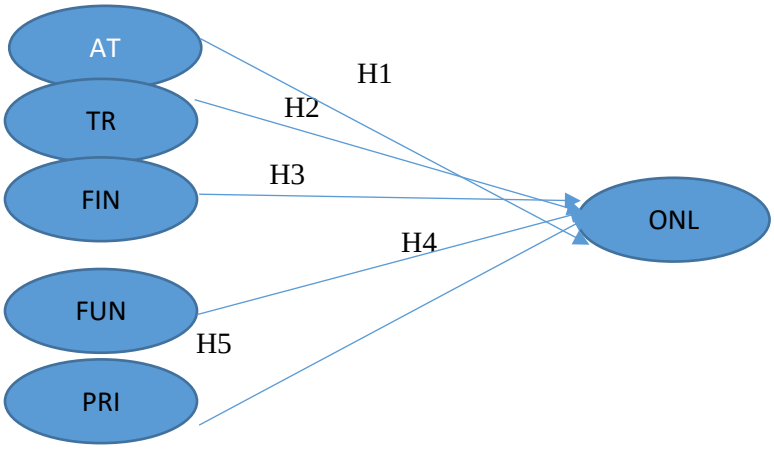


**Figure 1:** Proposed research framework

**Methodology**

This research was aimed at understanding the basic origins of online shopping phenomena (Polit & Beck, 2006). In pursuit of that, the researchers followed the positivist philosophy, one of the most popular philosophies in quantitative research (Bhattacherjee, 2012). The quantitative approach was chosen because it simplifies data collection and analysis (Mkansi & Acheampong, 2012), it can be utilized to develop objective knowledge (Petty et al., 2012), and it uses numerical data for mathematical analysis (Muijs, 2011).

The study aimed to reach a wider online consumer market that participates in online brand-consumer interaction (Constantinides, 2014). Because of that, a random sample of over 300 people made up of ages of 18 years who can be affected by online media marketing was targeted (Harun & Husin, 2019; Yadav & Rahman, 2017). The target audience was people who are assumed to be extensive telecommunication media users, and acceptors of social meanings from influencers (Mgiba & Nyamande, 2020). Considering the nature of the target market, the fulfillment of the purpose of the study (Diggines & Wiid, 2015), and the difficulty of obtaining a sampling frame, this study employed the non-probability convenience sampling (Malhotra et al., 2017). This method assumes that every respondent in the population gets an equal chance of being included in the research, and it reduces bias toward certain respondents (Galpin, 2013). Data collection achieved a sample size of 250 responses, which is well within the required number. PLS-SEM requires a suitable sample size of 10 times more than the highest number of model construct items (Bartlett, Kortlik & Higgins; 2001; Peng & Lai, 2012).

For data collection, questionnaires were used because of their known user-friendliness (Rowley, 2014). A structured multi-item scale was used to measure the constructs of the study, as adopted from previous studies (Seo & Park, 2017; Yadav & Rahman, 2017). Each construct had 8 items, with a 7-point Likert

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scale used (i.e. from 1 = strongly agree to 7 = strongly disagree). The item statements were designed to ensure that the information needed was obtained (Kumar, 2011). The first part of the questionnaires dealt with the demographic information.

The questionnaires were distributed online using Facebook, Instagram, and Twitter accounts and their participation in the study was voluntary. Before data gathering, and ethical clearance certificate (protocol number CBUSE/1576) was issued from a Johannesburg-based university in South Africa. No data were collected to identify the participants.

**Data analysis**

Data obtained were analyzed via IBM SPSS statistics version 23.0 and Smart PLS version 3.2.7. The PLS was used due to its ability to depict the relationship among all latent constructs simultaneously while dealing with the measurement errors in the structural model (Farooq & Markovic, 2016).

**Descriptive statistics**

The analysis follows the academically sound approach of doing the descriptive part before analyzing the direct effects as hypothesized. The demographic profiles sought were gender, age, marital status, education, occupation, monthly income level, and religion, and they are summarized in table 1 below.

| Demographic | Frequency | Percentage |
|---|---|---|
| Gender | | |
| Male | 92 | 30.7 |
| Female | 189 | 63.0 |
| Prefer Not To Say | 19 | 6.3 |
| Age | | |
| 18-25 | 27 | 9.0 |
| 26-35 | 96 | 32.0 |
| 36-45 | 136 | 45.3 |
| 46+ | 42 | 13.7 |
| Employment Status | | |
| Employed | 168 | 56.0 |
| Unemployed | 80 | 26.7 |
| Self-Employed | 52 | 17.3 |
| Most Preferred Mode Of Shopping | | |
| Online Shopping | 117 | 39.0 |
| In-Store Shopping | 183 | 61.0 |

**Table 1:** Descriptive statistics

Reading from the descriptive statistics table, interesting observations emerge. Given a choice, the majority of the study participants still prefer in-store (61%) over online shopping (39%). However, in the context of the study, the 39% of participants who preferred online shopping cannot be ignored. Further, the number of respondents was mostly females (63% versus 30% males). Further, the age groups 26-35 and 36-45 accounted for about 77% of the participants. The worrying observation is that the 18-25 age group formed a small part of the participants. This is supposed to be the group that online business is targeting, given the relationship between the youth and technology. Also, the formally employed group formed a bigger portion of the respondents (56%).

Following Hair et al., (2017) suggestion, after the descriptive statistics, the measurement model was investigated before the evaluation of the structural model.

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**Measurement model**

To assess the measurement model accuracy, the researchers checked on the reliability and validity of the model. For reliability assessment, the researchers used both the Cronbach alpha and Composite reliability ratios. Cronbach alpha measures the internal consistency of scale items. A value above 0.7 is deemed acceptable for reliability (Stephanie, 2014). According to Hair et al., (1998), the CR index of 0.6 is adequate. The researchers assessed both the discriminant and convergent validities. To prove convergence, AVE values should be above 0.5 (Kumar, 2014). Following Henseler et al., (2015), the researchers evaluated discriminant validity through the Heterotrait-monotrait ratio (HTMT). The HTMT ratio measures the extent to which a construct is truly distinct from another construct both in terms of how much it correlates with other constructs and how distinctly measured variables represent only this single construct (Mar'ruf, Honeyta & Chan, 2019). From Table 2, all the HTMT values between the constructs are (from 0,162 to 0,586) below the 0.85 threshold, a sign that discriminant validity has been achieved (Chena et al., 2019). Therefore, the measurement model possesses adequate convergent validity and discriminant validity.

| **Research Construct** | | **Descriptive Statistics** | | **Cronbach's Test** | | **CR Value** | **Ave** | **HTMT Ratio** | **Factor Loading** |
|---|---|---|---|---|---|---|---|---|---|
| | | **Mean Value** | **Standard Deviation** | **Item Total** | **α value** | | | | |
| TR | TR1 | 3,18 | 1,186 | 0,610 | 0,789 | 0,822 | 0,543 | 0,448 | 17.008 |
| | TR2 | 3,16 | 1,187 | 0,665 | | | | | 10.508 |
| | TR3 | 3,36 | 1,215 | 0,634 | | | | | 12.778 |
| | TR4 | 2,98 | 1,329 | 0,494 | | | | | 4.431 |
| AT | AT1 | 3,31 | 1,229 | 0,679 | 0,861 | 0,842 | 0,523 | Deleted | 34.178 |
| | AT2 | 3,55 | 1,286 | 0,686 | | | | | 16.181 |
| | AT3 | 3,41 | 1,203 | 0,700 | | | | | 7.112 |
| | AT4 | 3,22 | 1,346 | 0,701 | | | | | 7.991 |
| | AT5 | 3,37 | 1,293 | 0,633 | | | | | 4.538 |
| FIN | FIN1 | 3,27 | 1,331 | 0,704 | 0,862 | 0,862 | 0,611 | 0,251 | 3.066 |
| | FIN2 | 3,37 | 1,256 | 0,719 | | | | | 4.037 |
| | FIN3 | 3,43 | 1,356 | 0,679 | | | | | 5.053 |
| | FIN4 | 3,59 | 1,299 | 0,738 | | | | | 4.732 |
| FUN | FUN1 | 3,47 | 1,307 | 0,739 | 0,884 | 0,884 | 0,658 | 0,586 | 2.923 |
| | FUN2 | 3,49 | 1,302 | 0,742 | | | | | 3.124 |
| | FUN3 | 3,7 | 1,258 | 0,731 | | | | | 2.004 |
| | FUN4 | 3,74 | 1,237 | 0,777 | | | | | 2.203 |
| PRI | PRI1 | 3,41 | 1,249 | 0,632 | 0,757 | R0,690 | 0,610 | 0,250 | 1.710 |
| | PRI2 | 3,57 | 1,256 | 0,743 | | | | | 1.785 |

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| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | PRI3 | 3,55 | 1,254 | 0,677 | | | | | 1.828 |
| | PRI4 | 3,31 | 1,272 | 0,227 | | | | | 1.177 |
| ONL | ONL1 | 3,43 | 1,282 | 0,755 | 0,878 | 0,849 | 0,542 | 0,161 | 22.802 |
| | ONL2 | 3,55 | 1,296 | 0,773 | | | | | 45.777 |
| | ONL3 | 3,72 | 1,244 | 0,757 | | | | | 12.445 |
| | ONL4 | 3,92 | 1,277 | 0,684 | | | | | 4.222 |
| | ONL5 | 3,59 | 1,332 | 0,586 | | | | | 4.586 |

**Table 2:** Measurement model accuracy results

**The Structural model assessment**

As scholarly recommended, the $R^2$ value measures the goodness and the quality of the structural model (Aluwihare-Samaranayake, 2012; Ramayah et al., 2016). It represents the degree to which a dependent construct is determined by the independent construct (Aluwihare-Samaranayake, 2012). The study value of 0.477 suggests that 48% of the variance of online purchase intention could be explained by trust, attitude, perceived financial, perceived functional, and privacy risks. The study applied the bootstrapping technique to assess the significance of items' loadings and path coefficients in the structural model as scholarly recommended (Muijis, 2011; Ringle et al., 2015; Tehseen, Qureshi, Johara & Thurasamy, 2019).

**Bootstrapping (t-statistics) and Path modeling results**

Henseler, Ringle, and Sinkovics (2009) state that path modeling in SmartPLS delivers latent variable scores, which are measured by manifested variables. SmartPLS path modelling avoids problems with small samples testing, thus making it suitable for the current study (Henseler et al., 2009). Following the sound academic practice, this study's structural model was evaluated by examining the t-values as well as the standardized regression coefficient (Thaker, Khaliq, Mand, Hussain, Thaker, Pitchay, 2020). The final validated model is represented as in figure 2.

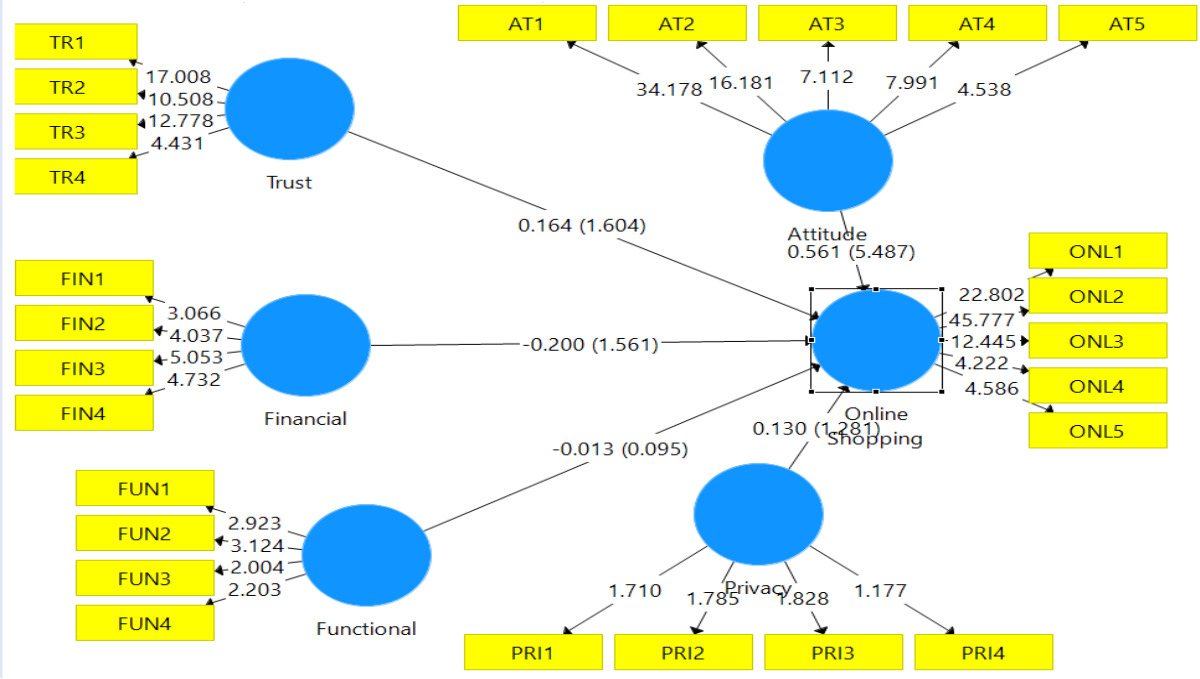

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**Figure 2:** Validated model with t-values in brackets

| Hypothesized relationships | Hypotheses | Path Coefficients | P-Values | T-Values | Significant/Insignificant |
|---|---|---|---|---|---|
| Attitude -> Online Shopping Intentions | H1 | 0.561 | 0.000 | 5.487 | Significant and Supported |
| Trust -> Online Shopping Intentions | H2 | 0.164 | 0.109 | 1.604 | Insignificant and not Supported |
| Perceived Financial Risk -> Online Shopping Intentions | H3 | -0.200 | 0.119 | 1,561 | Insignificant and not Supported |
| Perceived Functional Risk -> Online shopping intention | H4 | -0.013 | 0.925 | 0.095 | Insignificant and not Support |
| Perceived Privacy Risk -> Online shopping intention | H5 | 0.130 | 0.201 | 1.281 | Insignificant |

**Hypotheses testing**

Having our measurement and structural model properties solidly enhanced, our confidence in testing our hypothesized relationships using t-tests was established. The t-test has the advantage that the significance level is included in the test itself (Sander & Lee, 2014). The hypothesized relationships tests dealt with TR-ONL, FIN-ONL, FUN-ONL, PR-ONL, and AT-ONL relationships. In testing these relationships, the expected results are a minimum of 1.65 with a 10% probability of error or larger than 1.96 with a 5% probability of error (Sander & Lee, 2014). For the present study, the recommended t-value is $\geq 1.96$ and the significance value or p-value $\leq 0.05$. The table below (Table 3) displays the results of the hypothesis testing. Results above the t-value (greater than 1.96) show there is a significant relationship between the two variables, whereas if the t-value is less than 1.96, the relationship between the two variables is insignificant.

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**Table 3:** Hypotheses test results

**Summary of the Hypotheses Results**

H1: Consumer attitudes tend to influence online shopping intentions. Behavioral intention to purchase online is caused by people's attitude" (Ha & Stoel, 2008). The more favourable a person's attitude is towards some considered behavior, the more likely it is that the person will want to engage in the behavior (Hansen, 2008).

H2: Hypothesis two (H2) is insignificant and not supported. With a path coefficient of 0.164 and a t-value of 1.604, the relationship between Trust and online shopping intentions was found to be weak and did not meet the threshold of a level of significance at a 5% confidence interval. Therefore, based on the present study, there is not enough evidence to conclude that Trust positively influences Online shopping Intentions.

H3: Hypothesis three (H3) is insignificant and not supported. With a path coefficient of -0.200 and a t-value of 1,561, the relationship between Perceived Financial Risk and online shopping intentions was found to be weak and did not meet the threshold of a level of significance at a 5% confidence interval. This means that although there is, in line with the proposed hypothesis, a positive relationship between Perceived Financial Risk and Online shopping Intentions, this relationship is found to be non-significant. Therefore, there is not enough evidence to conclude that Perceived Financial Risk positively influences Online shopping Intentions.

H4: With a path coefficient of -0.013 and a t-value of 0.095, the relationship between Perceived Functional Risk and online shopping intentions was found to be weak, and did not meet the threshold of a level of significance at a 5% confidence interval. Therefore, there is not enough evidence to conclude that Perceived Functional Risk positively influences Online shopping Intentions.

H5: With a path coefficient of 0.130 and a t-value of 1.281, the relationship between Perceived Privacy Risk and online shopping intentions was found to be weak, and did not meet the threshold of a level of significance at a 5% confidence interval. This means that although there is, in line with the proposed hypothesis, a positive relationship between Perceived Privacy Risk and Online shopping Intentions, this relationship is found to be non-significant. Therefore, there is not enough evidence to conclude that Perceived Privacy Risk positively influences Online shopping Intentions.

**Results discussion**

This study attempted to understand how online shopping intentions are impacted by attitude, trust, privacy, functional and financial risk perceptions of customers using the TAM and the ABC model. In pursuit of that, it attempted to connect and extend these two different theories of technology adoption with online shopping intentions, trust, and risk perceptions (financial, functional, and privacy risks). The discussion of the study results follows.

H1 was supported. Therefore, this study has shown that attitudes do affect online shopping intentions, in line with several other studies on the intention to shop online (Akroush & Al-Debei, 2015; Chetoui et al, 2020; Dai, Arnulf, Lao, Wan, Dai, 2019), and the intention for shopping online (Alsmadi, 2002). Online shoppers often share their experiences when they are extremely delighted about a service (Kar, 2020), which can result in potential customers gaining a priori perception of a service (Khan, Ruhterford & Williams, 2019). This in turn would impact their attitude toward their online purchasing intentions.

H2-H5 were not supported at the chosen level of significance. This shows that, contrary to popular belief, risk perceptions and trust are not major considerations for people when deciding on online shopping as they do not have a direct impact on online shopping intentions. The outcomes on perceived risk and the intention to shop online are both at odds with other studies and supported by others (see Ha, 2020; Mosunmola, Adegbuyi, Kehinde, Agboola & Olokundun, 2019). In other studies, trust and risk perceptions have been shown to affect online shopping intentions indirectly (see Akroush & Al-Debei 2015; Chetioui, Lebdaoui & Chetioui, 2020). As an illustration, Nuryanto, Sugandini, and Winarno (2020) state that attitude is influenced by people's trust levels.

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From these outcomes, it can be concluded that the effects may be indirect, via satisfaction perceptions and attitude effect (Tran, 2020).

**Conclusions from the study and direction for future research**

Online shopping technology offers novel and unparalleled opportunities to create value for customers and academics. The main theoretical contribution of this paper was the integration of the Technology Acceptance Model (TAM) and the ABC theory by adding the factor of trust and perceived risk in the investigation of consumer online shopping intention. By augmenting the conceptualization of the effect of trust, risk (functional, financial, and privacy) perceptions, and attitude on online shopping intentions, it enriches the current sparse research on retail-based economies and technology. The model proposed in this study not only contributes to the existing literature but also helps researchers to better understand shoppers' engagements with technology. The model provides a better explanation and richer insights into technology adoption in the field than each of the individual grounding theories used in the study. Future researchers can refine the proposed framework by looking at additional constructs that impact the relationships between these independent variables and shopping intentions using other theories to deepen the understanding of online shopping, especially for the African context. The present constructs only account for about 47.7% of the online shopping intentions. In addition, this article also contributes to the improvement of management practices for businesses that are impacted by new technology. This study provides evidence that attitude is a major contributor to people's decisions to shop online. This should help managers to fine-tune their marketing campaigns, especially in the present COVID-19 context.

**Limitations and concluding remarks**

This article was written for academics, management practitioners, and policy-makers. It presents opportunities for future research (Gordon, Jerath, Katona & Narayan, 2021), for improving marketing efficiencies, and also gives pointers for policy-making. However, as in almost every study, this research has some limitations that are caused by the time limit, cost considerations, sample size, and the localized nature of our participants. Also, the study findings are limited to online shoppers in South Africa. These factors would limit the generalizability of the study findings. However, the study provides a base for further extension in the field of online shopping in general in the South African market. Future research is encouraged to conduct comparative studies between local customers and international ones to shed light on factors that impact consumers' attitudes. A fruitful area of research is to conduct a comparative analysis between online and offline shopper attitudes toward online shopping. Also, replications of the current study's model in different countries would most likely confirm or dispute the strength and validity of its findings. Lastly, the design of the study is quantitative. Future research is encouraged to use qualitative research design and methodology to provide a deeper understanding of consumers' attitudes and intentions toward online shopping in South Africa.

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