

# The Influence of Perceived Risk Factors on Emerging-Market Consumers' Attitude Towards Shopping for Clothes Online

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## Abstract

Engagement in online shopping by specific emerging-market consumers in South Africa is on the rise. Nevertheless, the online usage rate remains low. Online retailers need to understand the perceived risk factors influencing consumers' attitudes and intention in relation to online shopping for clothing products. To that end, an online survey was conducted among emerging-market consumers in Soweto, with 300 respondents being targeted and reached. Convenience sampling was adopted to collect data from the respondents. An independent research company collected data, and various statistical analyses were conducted. The findings revealed that perceived financial, convenience and security risks significantly influenced emerging-market consumers' attitude towards online shopping. None of the perceived risks were found to influence consumers' intention to shop online. The perceived financial, convenience and security risks were found to be mediated by attitude. The findings are significant for e-commerce merchants seeking to develop targeted online marketing strategies for emerging-market consumers.

**Keywords:** attitude, intention, mediation, clothing, emerging-market consumers, perceived risks

## 1. Introduction

The total sales value of the online retail sector in South Africa was estimated at around R30.2 billion in 2020, with the projection for the total online retail expected at around R42 billion in 2021 (Engineeringnews, 2021). In emerging markets, substantial growth in online shopping has been witnessed (Do, Nguyen & Nguyen, 2019:1). Emerging-market consumers in South African townships and informal settlements are vital to the online shopping industry, representing billions of rand in consumer spending power. However, there is limited research available to help marketers understand consumers' spending habits, what affects their shopping behaviour, preferred payment methods and forms of marketing communication messages (Rogerwilco, 2021:1). Online retailers in South Africa have been in operation for at least two decades, with Kalahari.com being one of the initial online retailers. From 2023, Takealot.com has been the most popular online retailer, while other prominent players are mainly large traditional retailers that provide alternative outlets for online sales (Goga, Paelo & Nyamwena 2019:5). A variety of product categories are sold online in South Africa, including food, furniture, clothing, electronics, toys, movies, alcohol, flowers, cars, houses and accessories. Euromonitor (2017) identified electronics, television sets, fashion and clothing as being among the fastest-growing consumer categories. Bizcommunity (2018) identified clothing as the most popular online shopping category in South Africa, accounting for 53 per cent of all purchases, followed by entertainment/education (51%), and tickets (51%). Regardless of the growth, consumers still perceive some degree of risk when shopping online for clothing. The above statement is confirmed by a study conducted by Pentz, Du Preez & Swiegers (2020a), in which it was observed that experienced South African online consumers perceived psychological and social risk when purchasing clothing online, whereas inexperienced South African online consumers perceived considerable financial and social risk when purchasing clothing online.

Studies investigating perceived risk in shopping behaviour have been conducted globally (Bhatti, Saad & Gbadebo, 2018; Farhana, Khan & Noor, 2017; Mosunmola, Omotayo & Mayowa, 2018; Tandon, Kiran & Sah, 2018). Studies examining perceived risks associated with buying clothing online have also been conducted in South Africa (Maziriri & Chuchu, 2017; Pentz, et al, 2020a; Swiegers, 2018). In addition, existing studies have determined which risk factors influence consumers' attitude towards online shopping (Aghekyan-Simonian, Forsythe, Kwon & Chattaraman, 2012; Ariffin, Mohan & Goh, 2018; Nawi, Mamun, Binti Hamsani & Muhayiddin, 2019). However, there are inconsistencies in the

findings, with some studies measuring general perceived risk and others concentrating on a specific type of risk. Marza, Idris and Abror (2019:594) state that it is important to examine perceived risk in different contexts and categories, as the outcomes could differ between various product levels, types and individuals. Bhatti et al (2018) concur and suggest that more research is needed to investigate perceived risk factors concerning purchasing behaviour in developing countries. This suggests that different strategies can be adopted by online retailers to reduce perceived risks in online shopping.

Studies have explored various factors to mitigate risk in online shopping: trust (Bhattacharya & Sharma, Gupta. 2021; Lavuri, Jindal, & Akram, 2022; Qalati, Vela, Li, Dakhan, Hong Thuy, & Merani, 2021), attitude (Bhatti et al, 2018; Tran & Nguyen, 2022), e-commerce experience (Mofokeng, 2021), demographics (Makhitha & Ngobeni, 2021a), usefulness and ease of use (Mutahar, Alam, Daud, Alam, Thurasamy, Isaac, & Alam, 2018), brand awareness (Rahmi, Ilyas, Tamsah & Munir, 2022), website quality (Hsieh & Tsao, 2014), and COVID-19 (Toska, Zeqiri, Ramadani & Ribeiro-Navarrete, 2022). Although research has been conducted to investigate the effect that attitude plays as a mediator in the relationship between perceived risks and intention to shop online, some of these studies were done from a perspective of developed nations. Studies that tested this relationship from the perspective of developing nations were conducted in countries outside Africa, and specifically outside South Africa (Bhatti et al, 2018; Tran & Nguyen, 2022). Kaur and Thakur (2021) concluded that emerging countries differ in several ways, implying that attitudes and perceived risk factors in online shopping vary across emerging markets. Smolian (2017) argues for the need to determine consumer attitudes towards online shopping, stating that such attitudes are determined by their level of trust and the perceived risk of online shopping. According to Bhattacharya and Sharma (2022), consumer attitude towards and intentions to engage in online shopping differ by country. It was deemed necessary to determine whether attitude mediates the relationship between perceived risk and consumer intention to shop online in the case of emerging-market consumers, as Bhatti et al (2018) argue that perceived risk must be moderated by certain factors to reduce negative impact in online shopping. As a result, the study sought to gain a better understanding of the risk factors associated with online shopping as perceived by emerging-market consumers in South Africa, and the mediation role of attitude in the relationship between perceived risk factors and online shopping intention.

### *1.1 Theoretical Grounding for the Study*

The theory of reasoned action (TRA), developed by Fishbein and Ajzen (1975), has been applied in various studies to determine consumers' attitude and online shopping behaviour, and has been proven to be a reliable theoretical basis (Arora & Aggarwal, 2018; Bhusene, 2018; Tandon et al, 2018). The TRA posits that the behaviour of an individual is an outcome of a behavioural intention, and that a behavioural intention is dictated by an individual's attitude and subjective norms towards a behaviour (Fishbein & Ajzen, 1975).

Behavioural intention is the cognitive reflection of an individual's willingness to engage in a particular behaviour (Ajzen, 1991). At the same time, a subjective norm refers to that person's perception of what the social group to which they belong thinks about engagement or non-engagement in the behaviour (Fishbein & Ajzen, 1975). Whereas attitude is defined as an individual's feelings towards carrying out a particular behaviour (Fishbein & Ajzen, 1975), it is also a positive or negative appraisal of their behaviour. Consequently, perceived risk represents the consumer's perception that certain negative effects will result from their purchasing of a product (Pathak & Pathak, 2017). Therefore, the TRA provides a robust theoretical foundation for investigating the perceived risk factors influencing the attitudes of emerging-market consumers towards online shopping.

### **Perceived risk in online shopping**

Perceived risk is an important factor affecting consumer decision-making in online shopping (Pappas, 2016; Hong & Yi, 2012). Pham and Ho (2015) state that perceived risk refers to the subjective expectation of loss or sacrifice associated with using an electronic platform. Consumers, particularly those purchasing clothing, focus on minimising the probability of loss and maximising the value of their purchase. Khan, Razzaque and Hazrul (2017) confirm this, stating that performance risk, financial risk, time risk and social risk have a negative influence on consumers' purchase intention in respect of luxury goods. Ariffin et al (2018) state that perceived risk has an influence on consumer attitudes, with Featherman and Wells (2010) having classified online perceived risk into six dimensions, namely financial, psychological, performance, time/convenience, social and privacy risks. The study investigated five online perceived risk factors as classified by Featherman and Wells (2010:114), namely financial, performance, time/convenience, social and privacy risks.

### *1.2 Consumer Attitude as Mediator: Perceived Risk and Intention to Shop Online*

Jiang, Qin, Gao and Gossage (2022) argue that perceived risks operate differently depending on the buying circumstances, which require that different mediation factors be used. It is for this reason that Siu and Ismail (2022) report that trust and subjective norms significantly mediate the effect of perceived risk in online purchase intention. Other studies have reported the need for mediation of perceived risk and online purchase intention. For example, Trivedi and Yadav

(2018) reported that perceived risks such as security risks can be mediated by e-satisfaction trust. A study by Tarawneh, Tambi, and Sobihah (2021) found intention to partially mediate the relationship between perceived risk and actual online shopping behaviour. Chetioui, Lebdaoui, and Chetioui (2021) confirm that attitude towards online shopping should be mediated by trust in online shopping. Trust was also mentioned by Lavuri et al (2022) as being effective in mediating the relationship between consumers' attitude in online buying. These authors stated, however, that perceived risk did not have such an effect. Makhitha and Ngobeni (2021b) found attitude to influence behaviour intention; this contention is supported by Doosti, Jalilvand, Asadi, Khazaei and Mehrani (2016), who found tourist attitude to influence travel intentions. Attitude was further identified by Tyrvaivenen and Karjaluo (2022) as an important factor mediating between determinants and intentions.

### **Perceived financial risk**

Financial risk refers to the potential monetary loss that can occur during the purchasing process (Ilmudeen, 2014). This risk increases when consumers shop online, as the transactional nature of such shopping requires consumers to pay for products and services in advance, without physical evaluation and immediate exchange. To mitigate the risk, most online stores have added an additional payment method, which allows consumers to place orders online and make the payment on delivery. Nevertheless, financial risk still deters consumers from purchasing online. Financial risk was found to be the most prominent perceived risk factor in the South African online shopping market (Malapane, 2019:1). According to Wai, Dastane, Johari and Ismail (2019), financial risk has a negative yet insignificant effect on online shopping behaviour, while Ariffin et al (2018) established that financial risk has a significant negative influence on consumers' online purchase intention. Furthermore, Hsu and Luan (2017) found financial risk to have a significant negative influence on consumer attitude. However, these findings contradict those of a study conducted by Han and Kim (2017), which explored consumers' hesitation and perceived risk in online shopping and concluded financial risk to be positively related to trust and purchase intention, suggesting that consumers felt financially secure about shopping online.

Therefore, the following hypotheses were formulated:

H<sub>1a</sub>: The attitude of consumers in emerging markets regarding online clothing shopping is significantly influenced by their perception of financial risk.

H<sub>1b</sub>: The intention of consumers in emerging markets to shop for clothing online is significantly influenced by their perception of financial risk.

H<sub>2</sub>: Consumer attitude mediates the relationship between perceived financial risk and the intention of emerging-market consumers to shop online for clothing.

### **Perceived time/convenience risk**

Purchasing products online cause consumers a certain degree of discomfort, as products may not be shipped or may be damaged in the distribution process, delays could occur, or the products may be delivered to the incorrect destination. All these potential obstacles are related to delivery and time risk. Delivery risk is the potential loss consumers might incur because of delayed product deliveries, non-delivery, or the delivery of damaged products (Tanadi, Samadi & Gharleghi, 2015:227), whereas time risk refers to time and effort spent navigating the website, completing the purchase, waiting for delivery, and returning the product in the case of dissatisfaction (Aghekyan-Simonian et al, 2012:327). Therefore, convenience risk can be defined as the risk associated with products being delivered to the wrong consumer, being damaged or being misplaced during transportation (Bhatti et al, 2019).

The existing body of research, however, reflects opposing views regarding the impact of time risk. According to Cherrett, Dickinson, McLeod, Sit, Bailey and Whittle (2017), time risk is not a significant barrier to consumers' intentions to purchase online. By contrast, Wai et al (2019) deem time risk to exert a significant negative influence on consumers' online shopping intention. Additionally, a study conducted by Hsu and Luan (2017) found time risk to have a negative influence on consumers' attitude toward online shopping, as confirmed by a number of researchers (Ariffin et al, 2014; Tanadi et al, 2015; Tariq, Bashir & Shad, 2016). Furthermore, in South Africa, consumers' attitudes regarding online shopping were found to be negatively influenced by delivery risk (Makhitha & Ngobeni, 2019b:7). Pentz, et al (2020b) and Tham, Dastane, Johari & Ismail (2019) reported that inexperienced online shoppers are influenced by product risk, while Bhatti et al (2018) concluded that attitude significantly moderates the effect of convenience/time risk, and shopping intention.

Against the above discussion, the following hypotheses were formulated:

H<sub>3a</sub>: The attitude of consumers in emerging markets regarding online clothing shopping is significantly influenced by their perception of convenience risk.

H<sub>3b</sub>: The intention of consumers in emerging markets to shop for clothing online is significantly influenced by their perception of convenience risk.

H<sub>4</sub>: Consumer attitude mediates the relationship between perceived convenience risk and emerging-market consumers' intention to shop online for clothing.

### **Perceived product risk**

Consumers who shop online experience a certain level of uncertainty and insecurity arising from a sense that they have minimum control over the outcome of their virtual purchase because they are not able to physically touch and feel the product (Farhana et al, 2017:225). This insecurity and uncertainty are linked to the risk associated with the product, and particularly its performance (Tariq et al, 2016:96). Product risk refers to the loss consumers feel when the product fails to meet or exceed their expectations (Tandon et al, 2018:68). According to Tariq et al (2016:98), product risk has no significant effect on consumers' attitude towards online shopping behaviour. Several studies have, however, found product risk to adversely affect the intention of consumers to purchase online (Aghekyan-Simonian et al, 2012:329; Han & Kim, 2017:24). This is consistent with studies that found product risk to have a negative influence on consumers' attitude towards online shopping (Bhatti et al, 2018:7; Hsu & Luan, 2017:25).

Furthermore, product risk was revealed to influence the attitude of South African consumers regarding online shopping (Makhitha & Ngobeni, 2021:7). Siu and Ismail (2022) found perceived risk to affect online purchase intention negatively, while Tham et al (2019) reported a positive impact. Therefore, the following hypotheses were formulated:

H<sub>5a</sub>: The attitude of consumers in emerging markets regarding online clothing shopping is significantly influenced by their perception of product risk.

H<sub>5b</sub>: The intention of consumers in emerging markets to shop for clothing online is significantly influenced by their perception of product risk.

H<sub>6</sub>: Consumer attitude mediates the relationship between perceived product risk and the intention of emerging-market consumers to shop online for clothing.

### **Perceived social risk**

Consumers who anticipate possible disapproval on the part of their social group of an online purchasing decision are more likely to discard their online carts to avoid criticism from those groups. Online shopping carts are in some instances discarded because consumers seek feedback from their families, friends, and opinion leaders so as to minimise negative opinions regarding their purchasing behaviour. Social factors are recognised as strongly influencing consumer attitude and online buying behaviour (Singh & Kashyap, 2017). Social risk in this context refers to the probability of a consumer's peer group forming a negative perception about the purchasing behaviour (Shang, Pei & Jin, 2017). Pentz et al, (2020b) investigated the impact of perceived risk factors on online consumers' shopping behaviour and concluded that both experienced and inexperienced South African online shoppers perceive social risk when shopping for clothing online. Hsu and Luan (2017), who examined consumers' attitude and purchase intentions in Vietnam, found a negative relationship between social risk and online shopping attitude, which suggests that those consumers are not concerned about the social risk of purchasing online. Of importance is the fact that Han and Kim (2017) found social risk to adversely affect customers' intention to purchase online. Furthermore, Maziriri and Chuchu (2017) found perceived social risk to be a factor influencing the online shopping behaviour of South African consumers. It can be postulated that:

H<sub>7a</sub>: The attitude of consumers in emerging markets regarding online clothing shopping is significantly influenced by their perception of social risk.

H<sub>7b</sub>: The intention of consumers in emerging markets to shop for clothing online is significantly influenced by their perception of social risk.

H<sub>8</sub>: Consumer attitude mediates the relationship between perceived social risk and emerging-market consumers' intention to shop online for clothing.

### **Perceived security risk**

Consumers avoid purchasing products online because most online retailers request personal information before a purchase can be made. In turn, privacy and security issues arise during the check-out process, leading to customers discarding their shopping carts. The use of online payment systems creates a degree of insecurity for consumers who shop online (Tanadi et al, 2015), as they fear that their personal and financial information will be misused (Thakur & Srivastava, 2015; Yadav, Sharma & Tarhini, 2016). Privacy and security risks have been reported as factors commonly affecting the online purchasing behaviour of consumers (Farhana et al, 2017; Hong & Yi, 2012; Rahman, Islam, Esha, Sultana, Chakravorty & Molnar, 2018). A correlation has also been found between perceived security risk, perceived privacy risk, and consumers' attitudes toward engaging in online shopping (Jun & Jaafar, 2011). Privacy risk is defined as the fears

consumers have about the privacy of their personal data and credit card details, which may be misused by the seller (Ariffin et al, 2014), whereas security risk refers to concerns about monetary loss using online payment systems (Thakur & Srivastava, 2015). Dai and Chen (2015) report that security issues have a negative effect on the purchasing intentions of customers on online shopping platforms. The above-mentioned finding is consistent with past studies, which found privacy risk to have a significant negative influence on consumers’ attitude towards online shopping behaviour (Hsu & Luan, 2017; Orubu, 2016).

Attitude was identified as one of the mediators of perceived risk and shopper purchase intention (Liebenberg, Benade & Ellis, 2018), and it was therefore hypothesised that:

H<sub>9a</sub>: The attitude of consumers in emerging markets regarding online clothing shopping is significantly influenced by their perception of security risk.

H<sub>9b</sub>: The intention of consumers in emerging markets to shop for clothing online is significantly influenced by their perception of security risk.

H<sub>10</sub>: Consumer attitude mediates the relationship between perceived security risk and emerging-market consumers’ intention to shop online for clothing.

1.3 Conceptual Model Development

Figure 1 shows the conceptual model for the study. The figure shows five risk factors that could potentially influence the attitude of emerging consumers towards online clothing shopping.

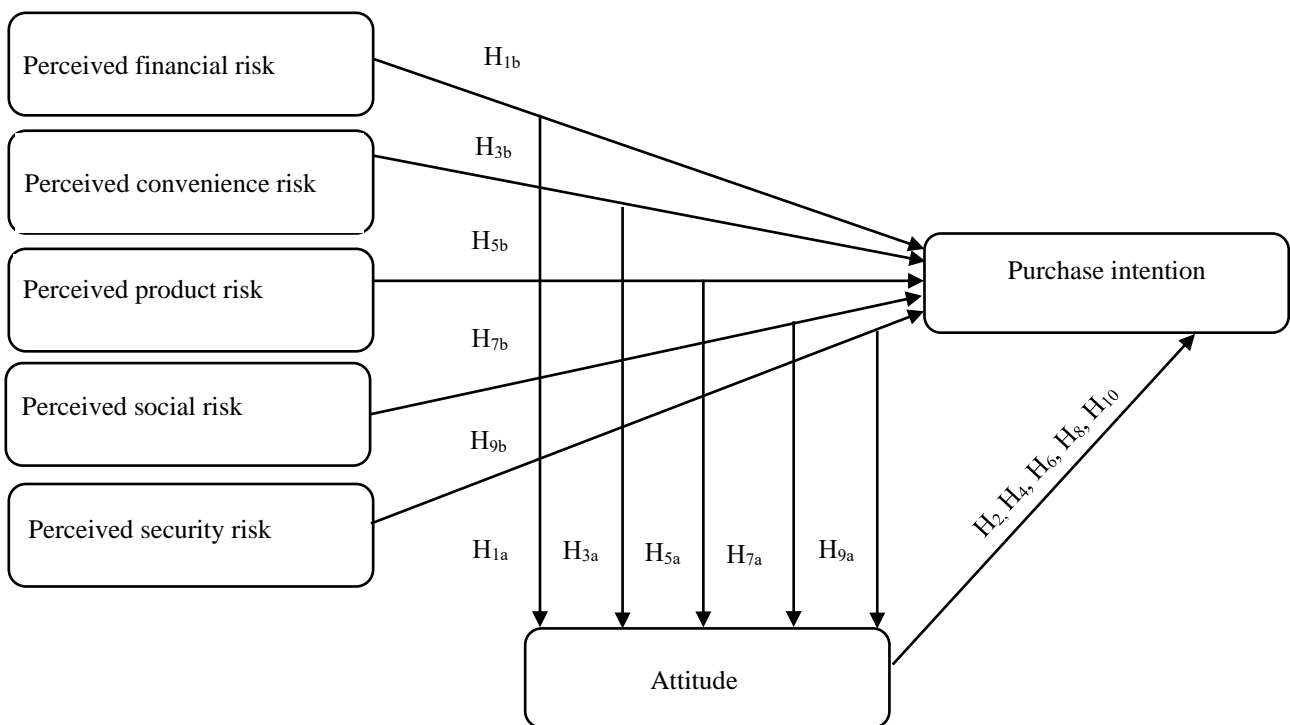


Figure 1. Conceptual model

2. Method

2.1 Study Design and Sample

A quantitative research method was adopted for the study; this was deemed appropriate, as quantitative research approaches have been widely adopted by researchers investigating online shopping (Orubu 2016; Tandon et al, 2018). It was therefore identified as suitable for achieving the main objective of the study reported on here, which was to determine the influence of perceived risk as a factor on consumer attitudes and intentions to shop online for clothing as these related to emerging-market consumers.

The study population consisted of emerging-market consumers residing in Gauteng townships who purchase clothing. The target population sample included shoppers who had previously shopped online.

## 2.2 Data Collection and Research Instrument

The questionnaire was designed on the basis of prior research studies investigating online shopping, with a specific focus on those that investigated risk in online shopping. The following sources were drawn on during the questionnaire design stage in order to formulate questionnaire items: perceived finance risk (Ariffin et al, 2014; Hsu & Luan 2017; Masoud, 2013); perceived convenience risk (Bhatti et al, 2018; Pi & Sangruang, 2011), product risk (Aghekyan-Simonian et al, 2012; Ariffin et al, 2018; Hsieh & Tsao, 2014; Tandon et al, 2018; Tariq et al, 2016; Thakur & Srivastava, 2015; Vijayasathy, 2004), perceived social risk (Pi & Sangruang, 2011; Thakur & Srivastava, 2015) and perceived security risk (Hong & Yi, 2012; Tandon et al, 2018; Tariq et al, 2016). The questions investigating perceived risk factors were measured using a five-point Likert scale, with 1 indicating “highly disagree” and 5 “highly agree”. Prior to conducting the study, the researcher obtained ethical clearance from the university’s relevant department. An independent specialist research company collected the data. Data collection was carried out online since the company had a large database of township consumers. The respondents completed 300 questionnaires in total. The sample size was comparable to previous research examining online shopping behaviour (Muda, Mohd & Hassan, 2016).

## 2.3 Validity and Reliability

Exploratory factor analysis (EFA) was conducted to determine whether the individual risk factors loaded onto the constructs as intended in the questionnaire. EFA also determined the construct validity of the study. The communalities ranged from 0.57 to 0.88, which is higher than the minimum threshold of 0.2 proposed by Child (2006). Constructs were developed from the existing questionnaire, as reported in the data collection instrument section, to achieve construct validity.

To assess the reliability of the different constructs in the questionnaire, the Cronbach’s alpha ( $\alpha$ ) coefficient was calculated. A Cronbach alpha of 0.96 was achieved for all the constructs and ranged from 0.94 to 0.97 for each of the individual constructs, which is supported by Malhotra (2010).

## 2.4 Analysis of Data

The SAS JMP version 15 for Mac and the R language version 3.5.2 were used to analyse the data. The following statistical tests were conducted to achieve the objectives of the study: descriptive analyses (e.g., mean and standard deviation), exploratory factor analysis, and structural equation modelling (SEM).

## 3. Results

This section presents the results of the study, starting with the profile of the respondents.

### Demographics of the respondents

Over 70 per cent of the population (73.6%,  $n=221$ ) were female, and 25.6 per cent ( $n=77$ ) male. Of the respondents, 42 per cent ( $n=126$ ) were between the ages of 18 and 24, 28 per cent ( $n=84$ ) were between the ages of 18 and 29 ( $n=84$ ), and 22 per cent ( $n=65$ ) were between the ages of 30 and 40. Most of the respondents (72%,  $n=216$ ) were unmarried. Over one third of the respondents had post-school qualifications (e.g., degree) (38%,  $n=115$ ), followed by those with Grade 12 (37%,  $n=110$ ) and those holding a post-school qualification (e.g., diploma/certificate) (23%,  $n=68$ ). As regards monthly income, most of the respondents earned between R5 000 and R7 500 (62%,  $n=186$ ), with only 9 per cent ( $n=27$ ) earning above R20 000.

### Factor analysis

An exploratory principal factor analysis with axis factoring and quartimin (oblique) rotation, in SAS JMP version 15, was conducted on all the perceived risk factors with the purpose of determining how well they would group together to a factor. EFA with axis factoring was considered appropriate for the correlation patterns between the questions used to determine the respondents’ perceptions of online shopping risks in South Africa. The total variance of these factors was 78.48 percent.

According to Stevens (in Field & Miles, 2010:557), a factor loading of 0.36 can be accepted for a sample of 200. For this study, items loading 0.40 or greater were considered for further analysis, since the population size was 300. Factor 1, “perceived financial risk”, loaded nine items. The factor had a mean score (M) of 3.53 and a standard deviation (SD) of 1.00. The next factor, “perceived convenience risk”, loaded eight items and had an M score of 3.32 and an SD of 1.02. The third factor, “perceived product risk”, loaded six items, with an M score of 3.70, the highest of all the factors, showing product to be the most important factor for consumers when shopping online. The SD for this factor was 1.05, which is also higher than for other factors, showing that the respondents had varied perceptions regarding the importance of this when shopping online. Loaded onto the fourth factor, “perceived social risk”, were four items, an M score of 2.82 and an SD of 1.12. The SD for this factor was higher than for all the other factors, which indicates a difference of opinion among the respondents regarding its importance in online shopping, as indicated by Field and Miles (2010:37). The last factor,



“perceived security risk”, loaded four items with an M score of 2.63 and an SD of 1.00. According to Field and Miles (2010:37), an SD closer to 1 indicates variations in the responses.

**Model testing**

The model was tested using the lavaan version 0.6–1 (Rosseel, 2012) in R version 3.5.2 R Core Team (2018). To produce the test statistics, a maximum likelihood estimation with robust standard errors (maximum likelihood mean (MLM)), was used. The MLM chi-square test statistic is also referred to as the Satorra-Bentler chi-square with robust standard errors. The latent factors were standardised, allowing for free estimation of all factor loadings – the R version 3.5.2 with the lavaan library.

Hair, Black, Babin, Anderson, and Tatham (2006) state that the goodness-of-fit index (GFI), comparative fit index (CFI), Tucker-Lewis index (TLI), incremental fit index (IFI), relative fit index (RFI), and normed fit index (NFI) must all be greater than or equal to 0.9 to demonstrate model fit; however, a value greater than 0.8 may be marginally accepted. As is evident in Table 2, there was a good model fit with the following indices: a chi-square = 1200.786, degree of freedom = 686;  $p = 0.000$ , the relative chi-square = 1.45, RMSEA of 0.051 90% CI (0.043, 0.059), SRMSR = 0.059, CFI = 0.976 (robust) and TLI of 0.973 (robust). The 90 per cent confidence interval for the RMSEA statistics ranged from 0.043 to 0.059, meaning that it was possible that the population RMSEA statistic might be as low as 0.043 or as high as 0.059. The RMSEA of 0.051 was attained, as supported by Steiger (2007), signifying the model fit. According to Hu and Bentler (1999), a cut-off value close to 0.08 for SRMR signifies a good fit between the model and the data under observation. An SRMSR of 0.059 was attained in the study. The structural model is shown with standardised coefficients of the five perceived risk factors (financial, convenience, product, social and security risk) that were tested to determine whether they influenced consumers’ attitudes towards online shopping (see Table 1).

Table 1. Model fit indices

Model fit index	Chi-square (X <sup>2</sup> /DF)	GFI (goodness-of-fit)	CFI (comparative fit index)	TLI (Tucker-Lewis index)	IFI (incremental fit index)	RFI (relative fit index)	NFI (norm fit index)	RMSEA root (mean square error of approximation)
Value indicator	1.45	0.80	0.976	0.973	0.976	0.920	0.927	0.051 CI 90%

**Hypothesis testing results**

The statistical analysis involved a regression analysis being performed as part of the structural section of the SEM model. The purpose of the first regression was to determine the influence of perceived financial risk (PFR), perceived convenience risk (PCR), perceived product risk (PPR), perceived social risk (PSR) and perceived security risk (PSecR) on attitude towards online shopping. To test the statistical significance in the SEM model, the z-values with Wald tests were used.

The perceived convenience risk (PCR) factors had a more marked effect on attitude towards online shopping, with a beta coefficient of 0.379 ( $z = 3.241$ ). This was followed by perceived financial risk (PFR), with a negative beta coefficient of -0.228 ( $z = -2.262$ ). The perceived security risk (PSecR) had a negative and weak effect on attitude towards online shopping, with a beta coefficient of -0.239 and a z value of -2.005, which shows that the hypothesis was not significant (see Table 2). Perceived product risk (PPR),  $p = 0.251$  and perceived social risk (PSR),  $p = 0.634$  had no effect on attitude towards online shopping.

None of the risks influenced consumer intention to shop online, as indicated by p-values above 0.005: perceived financial risk (PFR)  $p = 0.024$ , perceived convenience risk (PCR)  $p = 0.001$ , perceived product risk (PPR)  $p = 0.251$ , perceived social risk (PSR)  $p = 0.634$ , and perceived security risk (PSecR),  $p = 0.045$ . Consumer attitude towards online shopping significantly influences intention to shop online ( $p = 0.000$ ,  $\beta = 0.832$ ).

Table 2. Regression model – risk factors and attitude

Intention	Beta coefficient	Std error	z-value	p-value	Std coefficient	Decision
PFR → Att.	-0.228	0.101	-2.262	<b>0.024</b>	-0.228	<b>Supported</b>
PCR → Att.	0.379	0.117	3.241	<b>0.001</b>	0.379	<b>Supported</b>
PPR → Att.	0.126	0.110	1.147	0.251	0.126	Rejected
PSR → Att.	-0.040	0.083	-0.476	0.634	-0.040	Rejected
PSecR → Att.	-0.239	0.119	-2.005	<b>0.045</b>	-0.239	<b>Supported</b>
Att. → Int.	0.832	0.037	22.526	<b>0.000</b>	0.866	<b>Supported</b>
PFR → Int.	0.016	0.046	0.357	0.721	0.016	Rejected
PCR → Int.	0.049	0.068	0.718	0.473	0.046	Rejected
PPR → Int.	0.031	0.056	0.546	0.585	0.027	Rejected
PSR → Int.	-0.059	0.047	-1.267	0.205	-0.059	Rejected
PSecR → Int.	0.049	0.065	0.756	0.449	0.034	Rejected

Table 3 below presents the mediation results showing the indirect effect of perceived risks on consumers’ intention to shop online.

Table 3. Regression model: indirect effect

Intention	Beta coefficient	Std error	z-value	p-value	Std coefficient	Decision
PFC → Att. → Int.	-0.190	0.085	-2.243	<b>0.025</b>	-0.181	<b>Supported</b>
PCR → Att. → Int.	0.316	0.105	3.006	<b>0.003</b>	0.299	<b>Supported</b>
PPR → Att. → Int.	0.105	0.096	1.103	0.270	0.094	Rejected
PSR → Att. → Int.	-0.031	0.072	-0.439	-0.661	-0.031	Rejected
PSecR → Att. → Int.	0.199	0.105	1.906	<b>0.057</b>	0.140	<b>Supported</b>

It was revealed that attitude mediated a significant path relationship ( $\beta = -0.190, p = 0.025$ ) between PFR and intention to shop online, supporting the hypothesis.

It was revealed that attitude mediated a significant path relationship ( $\beta = -0.316, p = 0.003$ ) between PCR and intention to shop online, supporting the hypothesis.

The hypothesis is rejected since it was revealed that attitude did not mediate a significant path relationship between PPR and intention to shop online ( $\beta = -0.105, p = 0.270$ ).

The hypothesis is rejected since it was revealed that attitude did not mediate a significant path relationship between PSR and intention to shop online ( $\beta = -0.031, p = 0.661$ ).

It was revealed that attitude mediated a significant path relationship ( $\beta = -0.199, p = 0.057$ ) between PSecR and intention to shop online, supporting the hypothesis.

#### 4. Discussion

**Perceived finance risk** was found to have a statistically significant and negative impact on consumers' perceived attitude toward online shopping but had no effect on online shopping intention. Attitude was found to mediate a significant path relationship between perceived financial risk and intention to shop online, implying that reducing this risk influences consumer intention to shop online. It is worth noting that this influence was negative. These findings are supported by



existing studies that report that perceived finance negatively affected consumers' attitudes towards online shopping (Ariffin et al, 2014; Hong, Zulkiffli & Hamsani, 2019; Nawi et al, 2019), while Dai, Forsythe & Kwon (2014) found a marginal effect of perceived finance risk on consumer online shopping intention. Other studies' findings differed in that they reported the effect of perceived risk on intention to shop online (Tanadi et al, 2015). Tran and Nguyen, (2022) found attitude to mediate the effect of perceived risk on purchase intention, which supports the findings.

**Perceived convenience risk** had a statistically significant and negative influence on consumers' perceived attitudes towards online shopping, but no effect on intention to shop online. Since the influence was negative, it could mean that consumers were positively affected by convenience when shopping online. It was discovered that attitude mediated a significant path relationship between the intention to shop online and perceived convenience risk. Ariffin et al (2014) found that perceived convenience risk had a positive influence on consumers' attitudes towards online shopping, which supports the findings of our study, while Tanadi et al (2015) reported that perceived risk influenced intention to shop online, contradicting the findings of our study. Nawi et al (2019) reported different findings, namely that perceived convenience risk had no influence on attitudes towards online shopping. A study by Bhatti et al (2018) found perceived convenience risk to have a greater effect on attitude towards online shopping, and that attitude moderated the relationship between perceived finance risk and online shopping intention.

**Perceived product risk** had no statistically significant influence on consumers' perceived attitude towards online shopping, and also did not have an effect on intention to shop online. Moreover, the effect of perceived product risk on consumer intention to shop online was not mediated by attitude. By contrast, Makhitha and Ngobeni (2021), Hong et al (2019) and Ariffin et al (2014) confirmed product risk as having an influence on online shopping behaviour. Other studies supported the findings reported on here, namely that perceived product risk has no significant influence on attitude towards online shopping (Tariq et al, 2016). Dai et al (2014) reported consumer perceptions of perceived product risk as negatively influencing consumers' online shopping intentions. Supporting the results of this study, Bhatti et al (2018) concluded that the effect of perceived product risk on intention to shop online is mediated by attitude, which shows that without the mediator, perceived product risk does not influence online shopping intention.

**Perceived social risk** had no statistically significant influence on consumers' attitude towards online shopping, and also no effect on intention to shop online. This is supported by Nawi et al (2019), who found perceived social risk to have an influence on consumers' attitude towards online shopping. Moreover, attitude had no mediating effect between PSR and intention to shop online. These findings are different from those of Siu and Ismai (2022), who found social influences to influence the relationship between perceived risk and online purchase intention. Community interaction was found to mediate the relationship between perceived risk and repurchase intention, playing a partially mediating role between consumers' perceived risk value and repurchase intention (Zang, Qian & Song, 2022).

**Perceived security risk** had a statistically significant influence on consumers' attitude towards online shopping, but no effect on consumer intention to shop online. The findings of Mapande and Appiah (2018) support the findings reported on here, as do those of Keisidou, Sarigiannidis and Maditinos (2011) and Dai and Chen (2015). However, Dai et al (2014) also concluded that perceived privacy risk does not influence consumer intention to shop online. Attitude was found to mediate a significant path relationship between perceived security risk and intention to shop online.

## 5. Implications

The study has both theoretical and practical implications.

**Theoretical implications:** The study contributes to existing research by examining the effect of attitude on risk factors in online shopping for clothing in South Africa. Although existing studies have determined the effect of perceived risk on consumer attitude in online shopping, none of them focused on online shopping for clothing in South Africa. Therefore, the study contributes to existing knowledge from a South African perspective, and particularly that regarding online apparel shopping. The investigation also determined the effect of perceived risk factors on consumer intention to shop online. The study moreover adds to the existing body of knowledge in that no study thus far has determined the effect of perceived risk factors on both attitude and intention to shop online.

The study investigated the mediation by attitude of the relationship between perceived risk factors and consumers' intention to shop online, and in doing so filled a knowledge gap in the developing nations context; previous studies conducted in this field were carried out in the context of developed countries. As was stated previously, perceived risk factors differ depending on region, as do consumer attitude and intention to shop online.

**Practical implications:** The findings of the study have several implications for online retailers who are targeting emerging-market consumers. Responding to the perceived convenience risk factors that have the biggest impact on online shopping behaviour would be beneficial for these retailers. Online clothes sellers should control the quality of their websites to reduce risk. This can be achieved by making sure that product images load quickly, are clear, and easy to use.

Images should accurately depict the products and not deceive consumers about their quality. Additionally, e-retailers must guarantee that their products are easily accessible, delivered on schedule, and that customers can easily lodge complaints or return items if needed.

Online retailers should make sure that transactions are secure, and that consumer personal information is safely protected against fraudulent activities in response to the perceived financial and security risks influencing consumers' attitude towards online shopping. Retailers could accept a variety of consumer-friendly payment methods, like PayPal or payment on delivery. Retailers should also make sure that customers receive the products for which they have paid. Online retailers ought to allow consumers to leave reviews of both the business and its products so that prospective consumers can use the data to assess the business's reliability. It should be possible for customers to cancel their orders and get a refund.

## **6. Limitations**

There were some limitations to the study, which could potentially form the basis of future research. First, concerning the interpretation of the findings, a convenience sample comprising adult consumers restricts the generalisability of findings to other customer segments. Therefore, future research could focus on samples that are more representative of the entire consumer population. Second, this study centred on one particular product type, namely clothing; however, perceived risk factors may differ as they relate to different types of products. Future studies could therefore explore perceived risk factors in online shopping for other products. The study also involved emerging-market consumers; risk factors might differ across different market segments.

## **7. Conclusion**

The study's findings shed light on the intricate relationship between perceived risk factors and emerging-market consumers' attitude towards online shopping for clothes in an emerging market. It was revealed that attitude influenced intention, while perceived financial, convenience, and security risks play a significant role in shaping attitudes among consumers in this emerging market. Surprisingly, the research discovered that while perceived risks influence attitudes, they do not directly impact consumers' intention to shop online. This suggests that other factors should be considered, and future research could explore additional variables that might affect emerging-market consumers' attitude towards online shopping behaviour. In terms of the mediation effect, it was found that attitude mediated the association between intention and risk factors related to finances, convenience, and security. This deeper understanding can guide marketers in developing focused strategies to effectively address these perceived risks and promote positive attitudes towards online shopping.

The study targeted consumers in Gauteng townships, with data collected primarily in Soweto. Thus, the findings of this study ought to be interpreted with caution, as they do not reflect consumer perceptions in other South African provinces or suburban areas. However, the study reveals new avenues for future scholars to explore. One suggested area of focus is a thorough investigation into the moderating factors that may influence the relationship between perceived risks, attitudes, and actual online shopping behaviour. Furthermore, given the rapidly changing landscape of e-commerce and technology, future research could investigate the impact of technological advancements on reducing perceived risks and improving the overall online shopping experience for emerging-market consumers. Future scholars can build on these findings by understanding the complex relationship of perceived risks, attitudes, and intentions to advance our understanding of consumer decision-making processes in the ever-changing digital landscape.

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## **Authors contributions**

KM Ngobeni wrote the literature section of the article and KM Makhitha designed the questionnaire, arranged for data collection, guided KM Ngobeni in the writing of the article, and completed the empirical section of the article. KM Makhitha assisted in writing some sections of the literature review, the results and the findings. KM Makhitha also arranged the statistical analyses.

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The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

**Data sharing statement**

No additional data are available.

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