Factors driving online apparel shopping in South Africa

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ABSTRACT

This article seeks to examine factors that affect consumer attitudes and intentions towards online apparel shopping in South Africa. This is achieved by testing Monsuwé et al.'s (2004) expanded version of the well-known Technology Acceptance Model, which adds consumer, situational, product, trust and past experience contextual factors. The purpose of this article is to better understand this model as it applies to several less-studied contextual factors such as enjoyment, interaction and past buying experiences within a developing market context and focusing on the complex apparel sector. Results of the structural equation models highlight the particular importance of enjoyment and interaction in online apparel shopping, and find vast differences based on differentiation by past buying experience. With the exception of prior experience, consumer, situational, product and trust contextual factors do not moderate the main relationships. These findings contribute to our understanding of online apparel shopping in the South African context, notably informing important managerial possibilities surrounding website design, product offering, market research and other issues.

Keywords: Online shopping, apparel, Technology Acceptance Model, developing countries, South Africa, consumer psychology

E-commerce has become a powerful global retail mode over the past decade. For instance, AT Kearney (2015) estimate global 2015 e-commerce revenues to be $994 billion and forecasts growth to exceed 1,500 billion by 2018, although 2014 figures are also estimated as high as $1,943 billion (E-Commerce Foundation, 2015). ATKearney (2015) add that much growth is predicted to come from developing markets.

Growth in online shopping parallels that of general connectivity, technology and societal trends (Friedrich, Peterson and Koster, 2011). Technology such as the growing functionality of website portals and lifestyle changes such as the increasing use of smart phones have made it easier and more convenient to shop online (Turban et al., 2015). However, many challenges remain. E-commerce must attract and retain a rapidly changing consumer base, in a rapidly expanding technology sector. Extensive knowledge of

this shifting consumer base and its adoption of online shopping specifically within developing economies remains incomplete (as seen in the limited coverage available in reports such as ATKearney, 2015 and E-Commerce Foundation, 2105). Research has also yet to study all product areas equally well, notably apparel, the focus of this article.

Given the aforementioned challenges, the study adds insight on online shopping motives and contexts, specifically in the apparel sector and the developing world context, with South Africa as a test case. The following sections discuss theory underlying online shopping, the specific model tested in this article, and the dual contexts of the apparel sector and the developing world.

Consumer psychology of online shopping

This article focuses predominantly on consumer psychology underlying the adoption of online apparel shopping in South Africa. Specifically, this research seeks to explore the attitudes and intentions of consumers towards online apparel shopping utilising the well known Technology Acceptance Model (TAM, Davis, Bagozzi and Warshaw 1989) enhanced by a focus on contextual elements around the model (Monsuwé et al., 2004). The importance of contextual elements in explaining online shopping has been a frequent theme in the academic literature, including security risks, customer traits, hedonic and utilitarian motives, multichannel retailing, and website characteristics (e.g. Bosnjak et al. 2007; Chen and Teng 2013; Childers et al. 2001; Gefen et al. 2003; Kang & Johnson, 2013; Lee 2002; Teo 2002). The following sections discuss the TAM model in more detail followed by the addition of the contextual elements.

The Technology Acceptance Model and online shopping

The Technology Acceptance Model (TAM) has been core to research in technological adoption (Davis, Bagozzi and Warshaw 1989). The initial model identified two outcomes, namely attitude towards the technology and intention to purchase/use the technology, and two major predictors, namely perceived usefulness and ease of use (Kim and Lennon 2008). Perceived usefulness encompasses beliefs that using the technology will enhance performance, and ease of use is a belief that using the technology will be more or less effortless (Davis et al. 1989). TAM has proved to be an important theory in the study of new technology adoption, including extensive use in online shopping studies (Gefen 2003; Gefen et al. 2003; Kim 2012; Kim and Lennon 2008; Lee 2002; Pang and Ji 2008; Shih 2004; Soopramanien and Robertson 2007).

Davis, Bagozzi and Warshaw (1992) later added an enjoyment predictor, referring to the extent to which one believes that shopping will provide reinforcement in its own right, going beyond performance consequences (Childers, Carr, Peck and Carson 2001). Enjoyment therefore reflects the hedonic aspects of buying, a recent focus in online shopping research (Hirst and Omar 2007; Kulviwat et al. 2007; Park et al., 2012; Song et al. 2007; Swinyard and Smith 2003).

Online shopping cannot easily provide immediate tangibility as can a traditional retail store, however, various other mechanisms may underlie enjoyment factors in web-based environments such as telepresence (the feeling of being present within an online store), fantasy and socialising (Dennis et al. 2010; Song et al. 2007). Early evidence does seem to indicate that enjoyment of the experience has a direct effect on consumers' attitudes towards online shopping and is subsequently a determinant of its adoption by consumers (Bruner and Kumar 2005; Childers et al. 2001; Hirst and Omar 2007; Park et al., 2012). Therefore, some shoppers may have predominantly utilitarian needs (requirement to purchase a specific product being at the fore of their motivation) whereas other shoppers may be more interested in the experience and feel elements that are associated with enjoyment; this may allow for market segmentation.

TAM models such as the Monsuwé et al (2004) framework proposed that enjoyment would only affect attitudes towards buying. However, Song et al (2007) suggested that shopping enjoyment directly contributed to willingness to purchase

FIGURE 1:
Monsuwé et al. (2004 conceptual model)
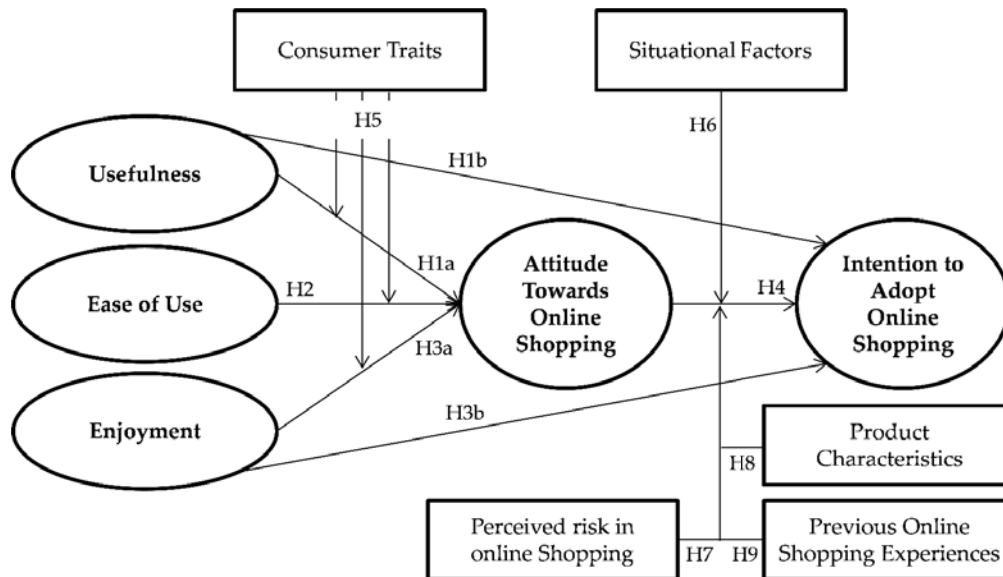
Notes: *** = p < .01, ** = p < .05, * = p < .10.

from the online retailer, due to activation of hedonic pleasure-based responses. Therefore the article includes the enjoyment link in the hypothesis as a slight addition to the classic TAM hypothesis:

H_1:   The perceived usefulness of online apparel shopping channels has a positive association with (a) attitudes towards online apparel purchases and (b) intention to shop for apparel online.

H_2:   Ease of use of online apparel shopping channels, has a positive direct association with attitudes towards online apparel purchases.

H_3:   The consumer's enjoyment of online apparel shopping channels has a positive association with (a) attitudes towards online apparel purchases and (b) intent to shop for apparel online.

H_4:   The consumer's attitude towards online apparel shopping channels significantly and positively associates with intention to shop for apparel online (i.e. attitudes partially mediate TAM variables and intent).

Figure 1 shows these paths in a conceptual framework.

Adding context to the core TAM model

The core TAM model is hardly novel. However, gaps remain in the literature. Importantly, as discussed below, studies have rarely analysed the wide variety of contextual elements that encourage or discourage internet shopping together in one model, which is achieved here.

Contextual factors may arise in products (e.g. relative product availability between online and local stores), situational factors (such as distance to brick-and-mortar stores and time pressures), and the consumer (such as trust in the process or prior purchasing behaviour). These have usually been studied in relative isolation (e.g. Bosnjak et al. 2007; Chen and Teng 2013; Childers et al. 2001; Kang & Johnson, 2013; Gefen et al. 2003; Lee 2002; Teo 2002). Perhaps the most integrated model incorporating these contextual factors with TAM is that of Monsuwé, Dellaert and de Ruyter (2004) which can be seen later in the paper in Figure 2. However, despite being possibly the most comprehensive contextual-based theory, this model has enjoyed little empirical attention. The empirical study reported later tests the majority of the model with a few alterations. First, the original model did not propose a direct enjoyment to intention link as argued earlier, whereas this

article does test this. Second, the original model is too big to test in its entirety via the survey method used in this article and discussed later.

The following sections briefly examine each contextual variable. The following sections summarise the contextual variables and reasoning but for brevity cannot explicate full theoretical or empirical backing, see Monsuwé et al. (2004) for these.

Consumer traits

Monsuwé et al. (2004) suggest that consumer traits which moderate TAM model include features of the buyer directly related to purchasing as well as demographics. Personal traits include expertise (skill of shopping online), self-efficacy (self-belief and comfort in the online shopping process), experience (level of past exposure to online shopping) and need for interaction (the individual's preference for interpersonal interaction when buying). Higher expertise and efficacy may reinforce TAM to attitude links, as those with greater expertise may be more able to shop online, and higher efficacy may induce confidence. Need for interaction is expected to weaken the relationship, since the internet is generally lower in personal interaction versus that of a brick and mortar store (Maity & Dass, 2014) The following hypotheses arise:

H_5:   Consumers who (a) have higher expertise, and (b) less need for interaction will have stronger relationships between TAM predictors and attitudes.

This study omitted demographics due to space and model complexity.

Situational factors

Situational factors include factors restricting ability to shop in traditional stores (e.g. time pressure or geographical distance to physical stores), those favouring online (e.g. need for special items only available online), and factors favouring relative attractiveness of brick-and-mortar alternatives such as preference to shop at a local brick and mortar store (Chocarro, Cortiñas

& Villanueva, 2013; Kim, 2005; Monsuwé et al. 2004). Such factors can be expected to moderate the essential TAM relationships because factors that favour online shopping are likely to strengthen attitudinal and intention to purchase online. Although Kim (2007) finds little empirical evidence for situation factors this article nonetheless tests all, therefore:

H_6:   Situational characteristics act as moderators such that (a) strong time pressure, (b) lack of mobility, (c) large geographical distance, (d) need for special items, and (e) low attractiveness of alternatives lead to stronger relationships between attitudes and intention to shop online.

Trust and security risk in online shopping

Trust has long been seen as critical to online shopping (Bhatnagar and Ghose 2004; Chau et al. 2007; Gefen et al. 2003; Gregg and Walczak 2010; Ha and Stoel 2009; Kim 2012; Lee and Turban 2001; Lee 2002; Suh and Han 2002).

In the model, higher trust strengthens attitude - intention relationships (Monsuwé et al. 2004). The empirical study focuses on security risk as online trust is built through factors such as encryption mechanisms built into the website. Bhatnagar and Ghose (2004) highlight perceived security risks around elements such as misuse of personal data and payment risks, which deter online shopping. Therefore:

H_7:   Perceived security risk acts as a moderator such that the weaker the consumer's perceived security risk when shopping online the stronger relationships between attitudes and intention to shop for apparel online.

Product characteristics

Research has indicated that the nature and type of the product may affect online purchases (Brown et al. 2003), particularly because certain products are perceived to be easier or less risky to purchase (Monsuwé et al. 2004). Higher-risk products are possibly those that consumers feel are of a sensitive

nature or those that they want to try or consult someone on before buying (Chocarro, Cortiñas & Villanueva, 2013). Park and Stoel (2005) provide additional insight as they discuss the importance of a product's brand. They indicate that the high brand familiarity lowered consumers' perceived risks and had a direct effect on their intention to purchase products online. In the case of apparel, well-known brands for example, those of large apparel retailers, may be purchased more as these are more likely to be better known, trusted and more standardized.

H$_8$:   Strong brand equity will lead to stronger relationships between attitudes and intention to shop for apparel online.

Positivity of past experience

Past purchase experience may have a role to play in the purchase decision (Chen and Teng 2013; Darley et al. 2010; Hernández et al. 2009; Kim 2012; Liao et al. 2006; Omar and Hirst, 2006). Individuals assess past experience, forming and reinforcing attitudes and habits which affect the intention to repurchase products online. Therefore:

H$_9$:   Conducive past experiences moderate such that more positive past online shopping leads to stronger relationships between attitudes and intention to shop for apparel online.

Figure 1 also shows general paths for these various moderation hypotheses. The Monsuwé et al., (2004) model has hardly been tried in the field, aside from a limited test by Hirst and Omar (2007) on female apparel shoppers. Accordingly, this article tests a version of the model on a sample of consumers in the specific area of apparel and the developing market context of South Africa. Before proceeding to methodology, the next sections briefly discuss these two contexts further.

Context of the study

There are two key contexts to take into account, namely the developing world context, specifically South Africa in this study, and the apparel sector.

The developing and South African context

Emerging markets such as South Africa have many features that might be expected to affect online models such as far lower levels of prior internet penetration and connectivity than developed economies (ATKearney 2015; Mastercard 2012). This means that fewer consumers may have shopped online at all, least of all for apparel, and niche products such as apparel are only now becoming available. As internet penetration increases, a new large audience of consumers is emerging which will affect the global economy and its retail industry (Shen 2012; Internet World Stats 2012; Zhou 2007). This is evident in South Africa's Internet penetration growth. In 2009 there were only 5 million Internet users (World Wide Worx 2010) but by 2015 this figure increased to 24.9 million. The growth in Internet access has primarily been fueled by high mobile penetration, with 61% of users accessing the Internet via their mobile devices (We are Social 2015). Despite this growth in 2014 online retail sales only accounted for 0.8% (R6-billion) of total retail sales in South Africa (World Wide Worx 2014) with 23% of the population indicating they had purchased something online in the last month (We are Social 2015).

Developing world barriers also exist. Kshetri (2007) identifies factors ranging from economic (variable credit card penetration, electrical supply, teledensity, purchasing power, financial systems, economies of scale, ICT), to the sociological (inadequate protection for users, preference for personal interaction, precedence of established relationships, lack of laws), and cognitive (general lack of language skills and websites available in local languages, awareness of ecommerce benefits, confidence in service providers, service provider ICT skills, and high degrees of risk aversion). Delivery and returns systems are generally less reliable (ATKearney 2015; Kshetri 2007).

The specific context of this study is South Africa, which is a good exemplar of a developing country. South Africa is set to play an important part in the increasing share of the developing world economy, having joined the formal BRICS (Brazil, Russia, India, China and South Africa)

partnership in 2010 and already being a part of the high-growth Sub-Saharan African zone (The Economist 2011). South Africa acts as a services gateway to Sub-Saharan Africa, providing improved access to one billion consumers on the African continent.

Only a few academic studies have explored African online shopping (Barnard and Wesson 2004; Cloete et al. 2002; Moodley 2002 and 2003). There has been very little African focus on the social characteristics and motivators associated with internet use (Nielsen 2010). Thus this study will contribute to this area.

The apparel sector

Apparel in particular has not yet enjoyed digital channel success to the same extent as other products like music or books, although data suggests high growth potential (Fits.Me 2013; Mastercard 2012). Some possible obstacles to selling apparel online are the relative lack of standardization in the products themselves, and consumer need for interaction in trying apparel, both with products and sellers. The sizing of goods, examination of workmanship such as stitching, comparison shopping, and the like are all part of everyday apparel choices. Therefore, apparel may in fact be a particularly apposite case for contextual research. However, an interaction argument may also be fallacious. Long before the internet, clothing was sold by catalogue, a far less interactive medium. Making delivery and returns easy, or apparel choice part of the delivery process, may not only mitigate any problem but even favour online shopping (e.g. Fits.Me 2013). In addition, apparel is an area where branding is perhaps even more important, probably more so than in the traditional but standardized online worlds of music and books. Therefore apparel presents a specific online shipping context with unique characteristics and challenges.

The following sections discuss the research methodology underlying the study.

Research methodology

The research uses an online self-report structured survey design, analysed primarily via structural equation latent variable path analysis.

Population and sample

The population consists of South Africans who have access to the internet. The methodological approach employed a non-probability method to target a sample of potential internet shoppers. The initial wave of contacts comprised emails to large organizations across South Africa using a business directory, as well as blog-based advertising by several high profile online publishers through their Facebook and Twitter accounts. The message encouraged respondents to forward the online survey link to fellow South Africans with net access over the age of 18, in order to gain access to a larger sample size. Due to this method an exact sampling frame cannot be quantified. This sampling method is deemed appropriate as it was used to gain access to a large sample of individuals. Some 1,800 respondents attempted the survey, with 1360 completing.

Results of the sample demographic analysis are as follows: respondent age has an inter-quartile range of 18 to 32, 59% are female, 22% of the respondents have university degrees, 69% are white, 58% are male.

Research instrument

The research instrument is an online survey, pilot tested using 15 respondents. Unless stated otherwise, all responses are measured across Likert responses, but using a slider between the range of 1 to 100, with 1 being strongly disagree and a 100 being strongly agree, allowing for responses to be closer to continuous data.

Ease and usefulness of online apparel shopping: For both these constructs Tong's (2010) shortened measures adapted from Davis et al. for the apparel sector are used (Davis et al. 1989). Ease retained three items (α = .73), a sample item is "I think online shopping is simple and easy to understand", usefulness also used three items (α = .73), a sample item is "Online shopping enables me to be a more effective shopper".

Enjoyment of online apparel shopping: A modified version of Dabholkar and Bagozzi's

TABLE 1:
Correlations and Descriptive Statistics

	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14
TAM																
1. Ease of Use	74.33	17.62	(.73)													
2. Usefulness	67.70	18.61	.54***	(.73)												
3. Enjoyment	54.81	19.50	.36***	.47***	(.76)											
4. Attitude General	70.71	20.00	.69***	.68***	.49***	(.84)										
5. Attitude Clothes	49.84	25.23	.29***	.30***	.47***	.35***	(.88)									
6. Intent to Shop (Adoption)	46.75	25.69	.26***	.27***	.42***	.29***	.89***	(.86)								
Exogenous Factors / Moderators																
7. Past Shopping Experiences	3.91	.78	.30***	.36***	.21***	.52***	.11***	.09***	(.70)							
8. Need for interaction	3.81	.82	-.19***	-.19***	-.18***	-.29***	-.35***	-.33***	-.14***	(.69)						
9. Security risk	2.73	.76	.26***	.20***	.20***	.26***	.11***	.07**	.22***	-.10***	(.85)					
10. Brand importance	2.75	.79	.14***	.11***	.13***	.08***	.06**	.05*	.08***	.02	.59***	(.81)				
Situational Characteristics																
11. Travel Distance	2.07	1.03	-.02	.05*	.10***	.00	.11***	.10***	.05*	-.05*	-.02	-.01				
12. Limited Time	3.47	1.15	.06**	.16***	.01	.14***	.04	.03	.10***	-.10***	-.05*	-.02	.18***			
13. Lack of Mobility	1.29	.73	-.09***	-.03	.06**	-.12***	.11***	.12***	-.05*	.01	.01	.02	.17***	.03		
14. Product availability	2.67	1.45	.25***	.20***	.24***	.25***	.48***	.52***	.07**	-.29***	-.03	-.07***	.13***	.06**	.09***	
15. Prefer Online Shopping	2.36	1.10	.24***	.33***	.28***	.40***	.40***	.39***	.23***	-.41***	.12***	.04	.12***	.18***	.10***	.39***

Notes: *** = p < .01, ** = p < .05, * = p < .10.

(2002) four item scale is used, a sample is "Online shopping is a pleasurable experience".

Attitude towards online shopping: The survey included a modified six-item version of the attitude measure used in Kulviwat, Bruner II, Kumar, Nasco and Clark (2007). A sample item is "I generally have a positive attitude towards shopping online", α = .84.

Intention to shop online for apparel: The survey included a modified three-item version of that from Kulviwat et al. (2007), measured here using a five-point scale from not like me at all to just like me (α = .86). A sample item is "Shopping online for clothing, jewellery and accessories is something that I would do often".

Need for interaction when shopping is measured using four items identified by Dabholkar and Bagozzi (2002), on a five-point scale from not like me at all to just like me (α = .69). A sample item is "I like human interaction when shopping".

Conducive situational factors: Five factors hypothesized to be conducive to online shopping were included, including strong time pressure, lack of mobility, large geographical distance, need for special items and attractiveness of alternatives, measured through a five-item scale modified from Kim (2005) measured here on a five-point scale from not like me at all to just like me. A sample item is "I normally have to travel large distances to buy clothes". Each factor measures one situational issue and each is analysed separately, all five factors under situational factors are not seen as one factor, as there is no reason to believe a respondent high on one may experience other issues.

Perceived security risk: An adapted version of Omar and Hirst's (2006) four items is used to assess perceived risk, measured here on a five point Likert scale from strongly disagree to strongly agree (α = .85). A sample item is "Retailers offer secure payment options."

Brand equity: The authors created a four-item scale on a five point scale from very unimportant to very important to measure importance of brand when shopping online (α = .81). Sample items assess importance of "established clothing brands" and "established retailer brands" when shopping online.

Past experiences: For positivity of past online shopping experience the questionnaire included a two-item scale. A sample item is "I have had positive past experiences shopping online". For extent of past experience consumers were asked to indicate which of various types of online purchasing they have engaged in before, as well as relative frequency.

Testing factor structure of variables

The previous section reported Cronbach alphas of constructs, which are further reported in Table

TABLE 2:
Model Fit Comparisons

	Commonly accepted cut-offs (Kline, 2015)	Core TAM & Contextual Variable	Core TAM & Contextual Variables Categorized by Purchase Experience
x^2	Non-significance[a]	1121.72 (312) †	1767 (936) †
SRMSR	.08	.04	.04
RMSEA	.08	.05 (.05 - .05)	.05 (.05 - .05)
CFI	.90	.94	.94
NNFI	.90	.92	.92
AIC	Lower score is best	1367.72	2679.36
CAIC	Lower score is best	2106.43	5423.75
SBC	Lower score is best	1983.43	4967.75

Note: Degrees of freedom are given brackets after the chi-square statistic, † = p < .01, The RMSEA confidence interval in brackets after RMSEA point value. a With large samples, a significant Chi-square is not taken as poor fit due to high power sensitivity.

1. All alphas exceed the commonly accepted cut off of .70 (Nunnally, 1978) except for need for interaction which is close at .69 or above and is evaluated further in the factor analysis. In addition, an initial confirmatory factor analysis was conducted. The overall fit of the factor structure appeared acceptable with $\chi^2 = 318.09(54)$, SRMSR = .04, RMSEA = .06 (90% CI .06 - .07), CFI = .97, NNFI = .96, which is taken as initial evidence of factor fit. Accordingly, analysis of various structural models is undertaken.

Results

Table 1 below gives correlations. TAM factors of ease of use, usefulness and enjoyment have moderate to strong correlations with attitude towards online apparel shopping (r= .69, .68 and .49 respectively) and moderate correlations with intent to purchase (r = .26, .27 and .42). Of the contextual variables, there are several moderate to strong associations. Past experience with online shopping is correlated .52 with attitude towards

FIGURE 2:
Substantive SEM Paths – Standardized Coefficients (Model 2)
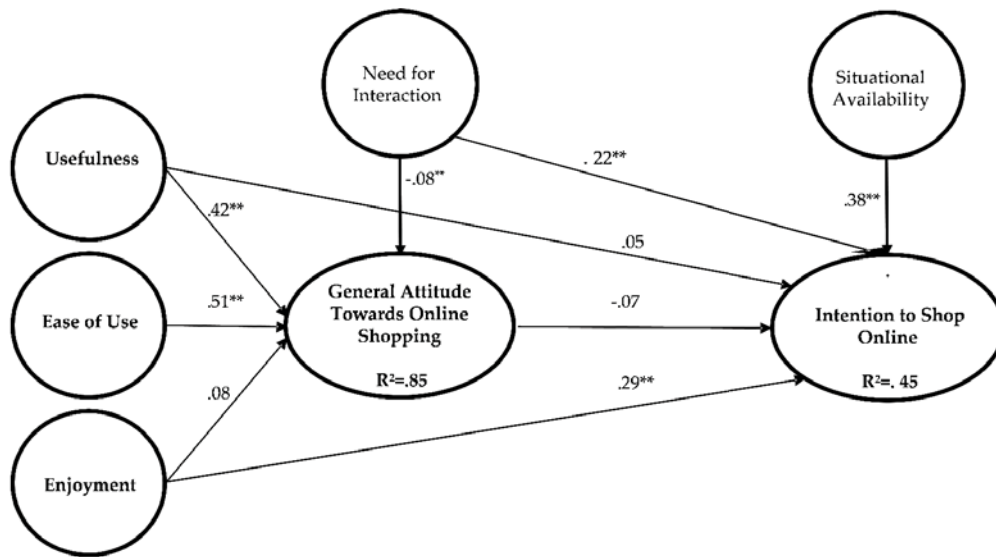
Notes: Only core and paths with at least one substantive effect retained. *** = p < .01, ** = p < .05, * = p < .10.

TABLE 3:
Substantive path effects for the SEM models

Association	Overall Sample	Split based on Past Experience
Usefullness → Attitude	Moderate (β = .42)	Moderate for Previous (β = .47) and Other (β = .42) groups Neglible for Never group
Usefullness → Intent	Small (β = .05)	Moderate positive for Never group (β = .29), moderate negative for Previous group (β = -.32), negligible for Other group
Ease → Attitude	Large (β = .51)	High for all (β = .65, .54 & .53 for Never, Previous & Other)
Enjoyment → Attitude	Small (β = .08)	Moderate positive for Never group (β = .35), small for others
Enjoyment → Intent	Moderate (β = .29)	Moderate positive for all groups (β = .39, .29 & .28 for Never, Previous & Other)
Attitude → Intent	Small (β = .-.07)	Moderate positive for Previous group (β = .42), small for others
Need for interaction → Attitude	Small (β = .08)	Moderate negative for Never group (β = -.27), small for other groups
Need for interaction → Intent	Modest (β = .22)	Moderate negative for Never group (β = -.38), modest negative for Other group (β = -.21), negligible for Previous group
Availability → Intent	Moderate (β = .38)	Moderate positive for Other group (β = .37), modest positive for Never group (β = .26), small for Previous group
Availability → Intent	Moderate (β = .38)	Moderate positive for Other group (β = .37), modest positive for Never group (β = .26), small for Previous group

shopping online for apparel, and availability of product and preference for online shopping largely has significant correlations with most of the other TAM and contextual variables. Need for interaction is positively correlated with outcomes (.33 with intentions to shop online for apparel, .35 with attitude towards shopping online for apparel). Security risk and brand importance when shopping online for apparel do not generally have high correlations with outcomes (security is correlated .11 and .07 with attitudes and intentions towards shopping online for apparel respectively, these correlations are .06 and .05 respectively for brand importance).

The following section reports the structural path models.

Core TAM model and contextual variables

The first model is the adapted Monsuwé et al. (2004) model which is expressed in Figure 1, tested on the overall sample. Monsuwé et al. (2004) presented the contextual variables in this model as moderators, which this study took as a first approach through the formal hypotheses. However, interactions with all major paths in the core TAM model yielded no large statistically significant moderation effects. Given the existence of many high correlations, the study instead tests direct effects from contextual variables to the TAM variables.

The core TAM, attitude and intent variable

paths are maintained throughout with good fit. Secondly, all context variables were initially fit to have direct paths on both attitude and intent. However, not all these paths fit well and non significant Wald modification indices suggest removing many paths, which is done for clarity. This leads to the structural equation model seen in Figure 2, with acceptable fit statistics as seen in the first column of Table 2 of $\chi^2 = 1121.72$ (312), SRMSR = .04, RMSEA = .05 (90% CI = .05 - .05), CFI = .94, NNFI = .92.

Table 3 gives a summary of the substantive path results for this model, and the following sections discusses these results in more detail.

The R^2 for .85 for attitude to shop online is high, whereas that of intent to shop online has R^2 =.45. This is good explanatory power considering the behavioural nature of the variables.

### Categorization by purchase experience

A useful addition to the model involves a SEM means analysis of the prior model, categorized into groups. The groups are defined by broad prior experience assessed via the variable measuring prior experience in a categorical manner, namely never purchased online (the 'Never' group), previously purchased apparel online (the 'Previously Purchased' group), and previously purchased other items online but not apparel ('Other'). This model is analysed using a multi-

TABLE 4:

Fit Comparison between Overall, Never, Clothes and Other

	Fit Comparison Among Groups			
	Overall	Never	Previously Purchased	Other
N	1117	63	199	855
Baseline Model Chi-Square	14062.79 (1218)	1231.41 (406)	2538.86 (406)	10292.52 (406)
Fit Function	1.59	6.18	2.41	1.06
Percent Contribution to Chi-Square	100	22	27	51
Root Mean Square Residual (RMSR)	11.49	28.30	9.92	9.55
Standardized RMSR (SRMSR)	.04	.07	.05	.04
Goodness of Fit Index (GFI)	.98	.92	.97	.98
Bentler-Bonett NFI	.87	.69	.81	.91

Notes: cut-offs for these fit statistics are described in Table 2.

FIGURE 3:
Relationships Categorized by Purchasing Experience (Model 3)
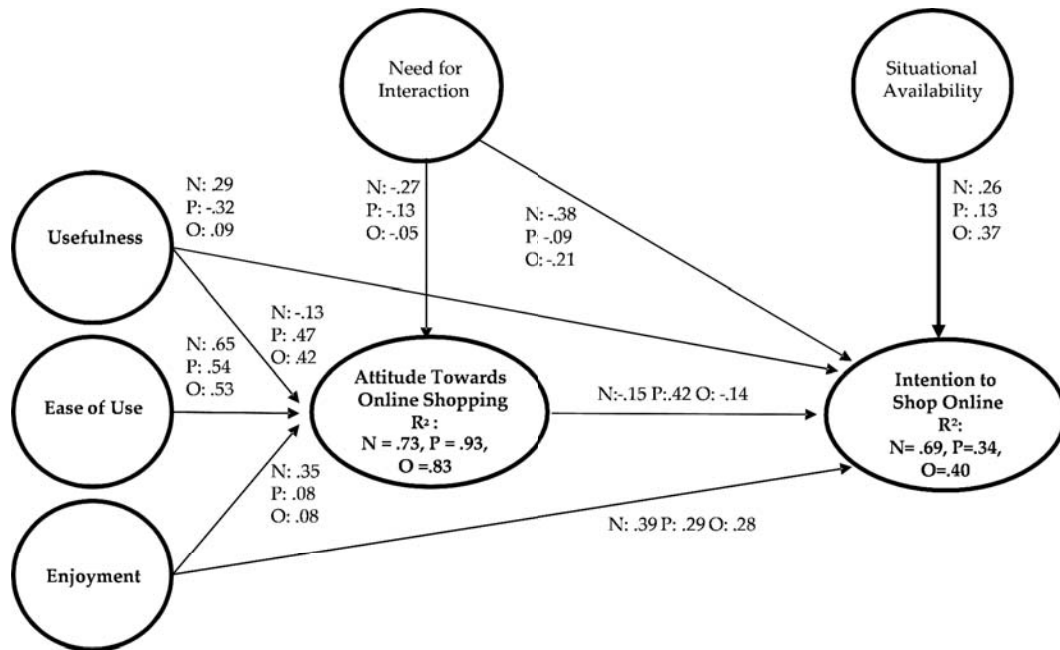
Notes: *Only core and paths with at least one substantive effect retained.*
N = Never purchased, P = Previously purchased, O = Purchased other items online

group SEM approach with inclusion of a means structure.

Table 4 shows the global fit of this categorized model. The SRMSR (.04), RMSEA point statistic (.05) and confidence interval (.05 - .05) are all at acceptable levels. The CFI (.94) and NNFI (.92) are also acceptable. The information criteria have increased somewhat in comparison to the model for the entire-sample model, however, this can be expected given the reduction in power by splitting groups. Table 4 also presents the fit of each of the three sub-models. The model categorization by purchasing experience model is depicted in Figure 3 below.

Space does not permit including the decomposition tables of all total, direct and indirect paths here as extrapolated from the figures, but they are available on request. The final column of Table 3 summarises each of the major paths by sub-group.

The complete explanatory effects of the models on the variance of attitude are R^2 = .93 for the Previous group, .83 for the Other group, and .73 for the Never group. The explanatory effect of the model on the variance of intent as an endogenous variable are R^2 = .34 for the Previous group, .40

for the Other group, and .69 for the Never group. Since there are several mediated paths to intent, interesting total effects may exist. The only example of these is that the directly negative β= .33 path from usefulness to intent is ameliorated by a positive overall indirect impact leading to a total effect of only β = -.19.

Discussion

The purpose of the research is to provide insight into what motivates internet-enabled South African and similar consumers to adopt online shopping, specifically for apparel. The research findings suggest that the drivers proposed by Monsuwé et al (2004) do have associations with attitudes and intentions to shop online for apparel, however with direct effects rather than moderation effects.

The TAM model (2004) does a reasonably good and sometimes excellent job of explaining variation in the attitudinal and intentional components of online shopping adoption in the specific sector of apparel. These models produce R^2 statistics between .73 and .93 for attitude and .34 and .69 for intent.   Previous more general uses of TAM explained between 17% and 33% of

variance in behavioural intent (Chau and Hu 2001; Davis et al. 1989). As discussed in the following sections, many of the hypotheses were supported, leading to some interesting possibilities. In addition, some unique insights are found based on previous purchasing patterns.

The core TAM variables

With regard to core TAM variables, several interesting findings require discussion.

Usefulness and ease of use

Usefulness and ease of use are directly associated with attitude across the entire sample, supporting H_1 and H_2 and according with past research (Gefen 2003; Kim and Lennon 2008; Shih 2004). However, overall, both are weakly associated with intent to purchase in this research. This may occur because consumers have become well educated with regard to ease of use, and although poor functionality may damage attitude, consumers have enough choice to continue intending to purchase somewhere online if so inclined. In other words, ease and usefulness may essentially have become hygiene factors of internet shopping.

As discussed, these effects differ dramatically by past experience. The "Never" group (with no prior online purchasing history) is far more focused on ease of use than usefulness. A straightforward explanation here could be that first-time buyers would simply prefer easy to use interfaces and options rather than many features and wider range, until they have built confidence in the channel.

The "Other" and "Previous" groups both have moderate positive effects for usefulness and ease on attitudes. This is unsurprising and backs up prior TAM theory as already discussed in the literature (Gefen 2003; Kim and Lennon 2008; Shih 2004) and does not need expansion here. The effects are slightly stronger for the "Previous" group than the "Other", suggesting perhaps that more experience gives greater effect to judgments.

Figure 3 shows more complex effects of usefulness on intent for the Previous group, with a negative, moderate effect but a positive indirect effect through attitude. Possibly, experienced purchasers value useful features consciously but subconsciously devalue these as competition for more enjoyable features.

The effect of enjoyment

In juxtaposition with usefulness and ease, enjoyment is weakly associated with attitude but it directly and positively loads on intent (similar to Song et al. 2007). This provides support for H_{3b}. In fact, enjoyment is the only core TAM variable with a substantial and significant total effect on intent in the whole sample model.

The original Monsuwé et al. (2004) model does not capture a direct enjoyment-intent effect, but other researchers have proposed such a path (Babin, 1994; Davis et al. 1989; Childers et al. 2001; Valvi and Fragkos 2012). In the past, utilitarian motivations behind the adoption of e-commerce have been the primary focus of many academic researchers and indeed many retail websites (Davis et al. 1989; Gefen 2003; Kim and Lennon 2008; Yoon and Kim 2007), in contrast to the long standing view in conventional retail settings that a pure hedonic urge is critical (Kulviwat, 2007; Tauber, 1972). Our research may encourage online retailers to integrate a greater level of enjoyment into the online shopping process, rather than focusing strongly on the utilitarian aspects of the site. Examples could be virtual product experiences and more stimulating retail site designs involving fantasy, and the like such as gaming (Siong et al. 2007). Social aspects of shopping have been of recent interest, such as impulse buying, pleasure, discovering new outlets, shopping as a topic of casual conversation and a focal point for planned and unplanned activities with other people (Dennis et al. 2009).

The importance of enjoyment has perhaps increased over time alongside the insertion of the more personalized social media approaches. Online lifestyles have become more dynamic and engaging, empowering consumers to share information in real time, which may justify retail engagement of social media approaches.

Having stated this broader view, the total effects of enjoyment on intent seems to operate less strongly for the "Other" group who have

purchased only non-apparel items online before (total β = .26 versus approximately β = .35 for the others). In addition, the "Previous" group mostly has associationswith intent only, whereas the "Never" group has strong effects for enjoyment on both intent and attitude.

These effects beg explanation. The broader point remains that inasmuch as enjoyment may activate purely hedonic impulse-buying processes these may bypass traditional consumption based on cognitive attitudinal-type processes, explaining a stronger effect on intent. This may be especially so for previous purchasers of online apparel who, having already experienced enjoyment, may be more attuned to it and subconsciously primed (Al-maghrabi and Dennis 2009; Childers et al. 2001). On the other hand, those who have never purchased online before may have less personal prejudice regarding the experience and direct visceral experience, therefore possibly experiencing activation via imagination.

The weaker intent effect for the "Other" group may have varied explanations. Such groups may have formed prior prejudices against online shopping in general or apparel shopping in particular, requiring stronger levels of perceived enjoyment to activate intent. This group is consistently the weakest of the paths for almost all variables, especially those of TAM, perhaps suggesting a harder 'sell' for apparel shopping based on their other past online experiences. The "Other" group may perhaps be those who consciously limit themselves to non-apparel shopping, perhaps preferring the perceptually safer Amazons of the online world. One note is that this group has the strongest path only for the Situational Availability variable, therefore potentially defining a group that buys very selectively online.

Links between attitude and intent

While some evidence is found to support effects of ease, usefulness and enjoyment, little in this study supports the link between attitudes and intent, the only exception being a moderate effect for the subgroup of users who had previously shopped online for apparel. Perhaps this group represents early adopters who are more experienced and pioneering, and who are therefore more capable of forming set attitudes and having confidence to act on them. In the case of apparel, attitudes may indeed be effective at driving purchase but only post-experience; the retailer must first convince the shopper to try the channel. If apparel retailers are able to leverage this and couple it with the power of impulse purchase and enjoyment, they may have an effective strategy to increase sales. The fact then that attitudes do not drive purchase intent amongst non-shoppers and shoppers who are not purchasing apparel indicates that retailers should perhaps rather focus on enjoyment for such groups.

The contextual variables

Need for interaction

Need for interaction includes customers' need to fit and experience apparel prior to purchase as well as human interaction. Overall, need for interaction has a statistically significant albeit not overly strong direct effect ($\beta = -.22$, $p < 0.05$) on intent. Human interaction has always been part of the retail shopping process and this research would indicate that it perhaps retains a place in the online environment.

Trends indicate that online apparel retailers are increasingly finding ways to achieve a higher level of interaction with the consumer through real-time human engagement and virtual product experiences. Swinyard and Smith (2003) found similar results as they indicate that the inability to experience the product may lead to reluctance to purchase online. Song et al.'s (2007) research found 34% of a consumer's intent to purchase can be explained by two key variables, namely shopping enjoyment and a virtual product experience termed telepresence.

Online retailers could consider increased human interaction where consumers who prefer such can experience it, for instance through a live chat window. Relatively new social media approaches might again help here, allowing substantial amounts of direct inter-consumer interaction and feedback in excess of that usually found in brick-and-mortar stores. Online retailers

could also consider forming specific targeting strategies for those consumers who do not enjoy human interaction when shopping. In addition, this research may support the use of product experience strategies such as free delivery-and-return promises or online simulations (Shih 2004). It is also noted that online simulations probably stimulate enjoyment as well, therefore doubly affecting intent.

Once again, paths differ by prior experience, being consistently strongest for the Never group and weakest for the Previous group. Perhaps here the Previous group, having experienced the channel, is aware that interaction can be satisfied or indeed substituted for in online apparel shopping, whereas the Never group cannot yet imagine the possibilities of social media and telepresence in online shopping (Song et al. 2007). This may suggest that online retailers should spend advertising dollars not only on product pricing and the like but also on promoting the interactive elements of their sites.

Situational availability

This research suggests that situational apparel availability may have a direct effect on intent to purchase, in other words if such apparel is physically not available in nearby brick-and-mortar stores then online shopping is more likely. Online retailers should perhaps consider driving a portion of purchase intent by identifying and selling unique products which are not available in even their own brick-and-mortar retail stores. However, this effect is weakest for the current purchasers of online apparel, who perhaps buy a wider selection online and are less concerned about niche purchases.

Situational product availability has the biggest impact on those who had bought online previously but not for apparel. These customers may agree that it is specific and niche products they might need or desire rather than general products. This may lead to different management strategies as discussed in the managerial recommendations.

Weak contextual effects

Most context factors had neither moderating nor substantive direct effects. This is noteworthy in itself. Perhaps most surprising is that for security risk (a dimension of trust), which historically has been a core feature of online shopping theory (Gefen 2003; Lee and Turban 2001). However, in contradiction to H_7, security issues have no real effect here. This may indicate a fundamental mind shift for the sample when shopping online, specifically that many no longer view online transactions as risky. Hence, security-related trust within the online purchasing process may no longer be the key motivating factor discouraging online users from adopting online shopping and specifically apparel purchases. This is in line with Micaela Flores-Araoz who state that internet shopping is on the rise due to the strides that online retailers have made in terms of credit card security and payment options, via mechanisms such as PayPal or encryption and credit card validation technologies (Micaela 2011). Also, because many apparel channels are linked to brick-and-mortar stores, trust may be enhanced.

In addition, except for availability, most situational factors (such as distance, time, and the like) do not seem to affect online apparel shopping intent. This may simply point to the fact that South Africa is very developed in terms of large malls and the like, cutting down on these issues as general shopping factors for consumers. Retailers should rather focus on core factors of their sites and on consumer profiling.

Product features (e.g. brand equity, merchandise quality, retailer reputation, and stock availability) have little effect. This may indicate that there exists a wide spread of customer segments wanting different things and that company-specific elements such as reputation are not yet firmly entrenched in the eyes of customers – indeed, in South Africa it is largely smaller retailers currently selling online. Also, product characteristics may affect consumer satisfaction and retention more, outcomes unfortunately not measured here.

Managerial recommendations

This article identifies consumer attitudes, enjoyment and the need for interaction and need for special items as key factors driving South

Africans to shop online for apparel. Online business models for apparel should take these factors into account in aspects such as site design, market research, product choice, advertising, and branding.

First, with regard to site design, this research generally suggests a relative shift away from a focus on certain elements (usefulness, ease, and trust especially) to an incorporation of enjoyment and interaction factors, given the latter's direct effects on intent to purchase. Interaction, including personal and product interactions, could well be antecedents of enjoyment, and could include online simulations, interactive and social elements, flash promotional events, well considered multi-media, or the like. This is not to say that usefulness, ease and trust are unimportant. These are probably hygiene factors, and the former two drive attitudes which may well drive other important outcomes other than intent. However, a measured increase in enjoyment and interaction seems merited.

Also with regard to site design, this research strongly suggests a differentiated site design based on prior customer experience, which proved to be a key moderating variable (Geissler 2001). If companies can ascertain prior customer experience they can leverage such findings to deliver a targeted site design for various groups. This would be halfway between a 'one-size-fits-all' site design and the Amazon-type, highly individual data mining approach that delivers highly customized personal sites (based on regular purchases) but that at this stage in apparel seems unlikely (although individual layers can always be added as well).

Customer experience can be ascertained through various means. Known prior purchasers can be identified through traffic data. Websites can ask unknown customers to state briefly their prior experience levels on log-in, or incentivize registration. Having ascertained prior experience, the company can deliver differentiated site design and market research priorities, which the findings here may suggest should be as follows:

- *Never bought anything online*: This group is the most driven by enjoyment, especially that which bypasses cognitive attitudinal intermediation, although attitudes are also enhanced by ease and enjoyment. A consideration is a lack of general linkage between attitudes and intent. This group is the most strongly affected by need for interaction and reasonably strongly affected by situational availability. The company's strategy here could be to stimulate quick first-time buy-in that does not require incremental attitude formation. To achieve this they could use a highly interactive interface presenting more internet-unique goods and place inter-consumer social interaction and maximized product experience features such as simulation at the fore. Other enjoyment-based features and hedonic strategies such as flash specials may also work well. Web-unique goods may convince the customer to the try the site once, perhaps winning a repeat buyer. Interaction features help maintain social elements of buying – in fact may enhance them compared to physical shopping – and ameliorate any questions or issues buyers may have. Other enjoyment-based features could initiate impulse buying as suggested by these results. However, ease of use is a high priority in attitude formation, so interaction and enjoyment features should not be too complex but instead maintain relative simplicity, perhaps not offering too many features but rather exploring specific experiences. The first priority of market research should be constant exploration of cutting edge enjoyment stimulation, such as finding out the latest trends, games, and the like. Follow-up research on first-time buyers could explore attitude formation and how to strengthen the link with actual purchase.

- *Previous purchasers of apparel online*: This group depends far more on attitude and less on direct impacts on intention to purchase than other groups. In comparison to other groups, ease of use has greater potential for intent, usefulness may drive better attitudes, enjoyment is still important but driven somewhat more through attitudes, need for interaction is fairly weak, and situational availability is unimportant. A consideration is a negative direct effect of usefulness on intent,

which may be as a result of past tensions between functionality and other aspects. These are experienced buyers who know that they can successfully buy apparel online, and probably need convincing more about which channel to buy from. Sites designed for known repeat apparel buyers should perhaps focus more on functionality – both usefulness and ease – and portray a far wider range of goods than for first-timers, including those also available in the brick-and-mortar stores. Enjoyment is still a factor and should still be employed, but it is enjoyment of a different timbre to the first-timers. Because attitude formation is more important to the total effect of enjoyment on intent for the "Previous" group, more cerebral arousal should be sought: simulations that allow comparison shopping or games with far more product information may be examples. The usability of the site can seemingly undermine intent when it does not act in attitude formation, so site design should be carefully aligned with market research on what features customers approve of and actually think helps them to shop. Market research should also explore links between attitudes and other outcomes such as retention.

- *Previous purchasers of non-apparel goods online:* This group is a rather middling one. Ease and usability both influence attitudes, but attitudes do not drive intent. The effect of enjoyment is the weakest of the groups, need for interaction still operates but not quite as strongly. Perhaps the feature that stands out the most is the highest situational availability path, which may suggest that when retailers know a consumer has done other types of online shopping than retail their targeted promotional material to such consumers should emphasize the apparel uniquely available online. Market research could also concentrate on high profitability goods not available elsewhere, perhaps imports, and site design should promote such goods in an easy to access and use way, perhaps eliminating some of the enjoyment features (such as pop-up offers for simulations or games) in favour of simpler adverts and rapid access to payment

portals.

Most situational factors such as time pressure had no effect in the current research. The lack of time and a busy lifestyle may not remain key advertising messages for online retail. Instead, online retailers may emphasize the pleasures of lingering online, experiencing especially those interactive features that stimulate enjoyment as discussed earlier.

Limitations and recommendations for research

Several key limitations exist, as well as possibilities for improved future research.

First, the Monsuwé et al. model adapted and tested here is limited to attitudinal and intent to purchase outcomes (Monsuwé et al. 2004). Future studies could test alternative outcomes, such as actual purchase (both qualitative and quantitative measures), customer satisfaction and retention, brand and customer equity, and the like.

The model is not by any means confirmed by this research. The critical attitude to intent link was mostly non-operational, with the exception of the previous apparel purchase group, only the prior experience variable appeared to have a moderation effect, and few of the contextual variables expected to influence the model did so. Replication is sorely required to test this.

A limitation is a rather simplistic view of enjoyment and no real understanding of the types of online mechanisms that may trigger it. Further research is required to develop a better understanding of the antecedents and processes of hedonic motivations, such as cases outlining how online retailers have utilized enjoyment to drive purchase. A similar limitation and research agenda goes for need for interaction, and a point made earlier in the paper is that research is required into whether the same mechanisms (such as product simulation and interactive social media) do not both satisfy need for interaction and stimulate enjoyment.

Currently, the sector is still in its infancy and it is dominated by smaller retailers who do not have the R&D budgets required to develop a thorough understanding of the online retail environment. However, tremendous growth in the

sector and the resulting commercial potential may attract SA's larger retailers to open online stores and invest in R&D so that the online shopping environment is better understood. New entrants will fundamentally alter the competitive landscape and improve the quality of goods and services sold online. It will also create requirements for further research as the sector moves from its infancy into a growth cycle. Hence, the online environment is a rich area for future research.

The current sample is South African and white collar, with attendant threats to generalizability, even though it may be argued that broader emerging market generalizability is feasible and internet-enabled people of this nature may have many similarities worldwide. Further cross-cultural comparisons will deepen the field.

Due to relatively low current adoption rates of online shopping, the sample size of apparel shoppers is much smaller than the group who had at least purchased something online. This presented limitations on power and stability of statistics. As more online users shop online for apparel researchers will be better able to gain new perspectives on their key motivations.

The research is also open to common method bias. While single-factor tests at least rule out a mono-factor model and research design ameliorated the issue somewhat through multiple answer scales, more complex adjustments such as MTMM or laying a single factor beneath all indicators (Podsakoff et al. 2003) were not feasible here given the large number of variables already present. Future similar studies would likely still face this problem. The best route for amelioration would be multi-source or longitudinal data. Also, systematic bias may have originated in the online questionnaire given the non-probability, snowball sampling method.

Conclusion

Online retailers have a long way to go in emerging markets such as South Africa (Business Day 2010). However, online shopping is likely to become a profitable sales channel for many as technologies and access improve (World Wide Worx 2010) and understanding the consumer's motivations will be at the core of successful efforts. This research aims to provide online retailers with some insight into motivations and opportunities, and is potentially significant to all online retailers, specifically apparel.

Although recent research has extensively explored online purchasing, it has been fragmented on individual factors such as trust, risk, customer traits, motivations, and website characteristics. The large Monsuwé et al. framework was the first of its kind, but has hardly been tested. This article presents a unique, comprehensive and insightful test of this model in a new context, with some startling findings.

While confirming aspects of the typical TAM model, the current research highlights the direct enjoyment factor and by implication possibly hedonic motivations in online apparel shopping. This research highlights a crucial and quite new moderation role based on prior experience, which suggests possibilities for targeted marketing strategies such as site design, branding, product choice, research, and advertising. Although some limited and early research exists in the prior purchasing area (e.g. Goldsmith and Goldsmith 2002; Lee and Johnson 2002) this research presents many unique relationships. The findings in the current study possibly help shed light on website design balance between the more functional versus the more interactive and fun. The importance of need for interaction is confirmed, and potentially identifies where stores should go for broader and conventional product choice versus targeted niche products not available elsewhere. This article presents a new piece of evidence that may cast doubt on the previously pervasive trust aspect, arguing that perhaps security issues have become satisfied and retailers can place relative focus elsewhere (without sacrificing ongoing security).

The future of online retailing is secure. Research such as this will hopefully help researchers to gain greater perspective on this fast-moving and difficult retail arena.

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