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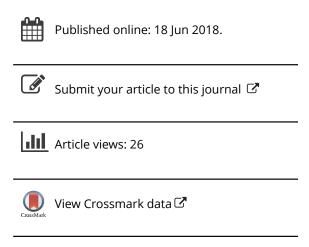
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# Fostering Purchase Intentions Toward Online Retailer Websites in an Emerging Market: An S-O-R Perspective

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#### **ABSTRACT**

The study proposes a model for fostering customers' purchase intentions from online retailer websites in an emerging market context through the application of the S-O-R framework. The research design is descriptive and cross-sectional. Through the purposive sampling technique, interviewer-administered questionnaires were fielded to respondents who completed a fictional buying task online. The results confirm the validity of the S-O-R framework to better understand how purchase intentions can be fostered through effective website design. The findings also prove the importance of visual appeal and perceived usability in affecting consumers' purchase intentions via website trust and flow, as well as the importance of flow in affecting website trust and consumers' purchase intentions. The study contributes to an understanding of S-O-R framework application in an online context in an emerging market and provides online retailers with a model to cultivate purchases from their websites through compelling online experiences and effective website design.

#### **KEYWORDS**

Emerging market; flow; perceived usability; purchase intentions; S-O-R framework; visual appeal; website trust;

#### Introduction

E-commerce has changed the retail landscape for consumers and retailers. Consumers are offered better shopping convenience and customized offerings, whereas retailers are awarded opportunities for greater consumer reach and interaction. Furthermore, e-commerce growth has been more prevalent in emerging markets than in developed countries because of increased penetration of information and communication technology, changing consumer lifestyles, and a rising number of Internet-savvy consumers (Effective Measure 2017; Narang and Trevidi 2016, 50). South Africa offers lucrative growth opportunities for retailers since e-commerce revenue was estimated to reach USD 3 131 million in 2017, with a projected growth rate of 13.7% per annum (Euromonitor 2017; MarketLine 2016; Statistica 2017). Considering this, online retailers' focus has shifted

from encouraging South African consumers to adopt e-commerce channels to motivating their purchases through these channels. Panel discussions among retailers, academics, and other e-commerce industry players at the Third Annual eCommerce MoneyAfrica Confex in 2017 centered on how e-commerce websites in emerging markets should be designed to offer compelling online experiences that will drive online (Fastmoving 2017).

Flow has been identified as an important construct in the understanding and development of compelling online experiences (Ding et al. 2010). When consumers experience flow, they absorb themselves in an activity to the extent that their current actions transition flawlessly into one another and time becomes distorted (Csikszentmihalyi 1975, 36; Novak, Hoffman, and Yung 2000). Since flow is positively associated with desired outcomes in e-commerce, such as website trust and repurchase intentions, scholars have investigated possible antecedents thereof (Hausman and Siekpe 2009). The effects of online servicescape factors on flow have been examined, as these can be controlled through effective website design (Gao and Bai 2014, 653; Hausman and Siekpe 2009, 1; Ong et al. 2012, 277). Although studies of flow in e-commerce are promising, these are underdeveloped due to a lack of consensus on possible antecedents (Bilgihan et al. 2014, 51; Esteban-Millat et al. 2014, 371). Moreover, the antecedents of flow and its role in the fostering of purchase intentions in emerging markets have received limited attention and warrant further investigation.

Despite calls for empirical evidence of e-commerce development in emerging markets, research in this area remains scant (Akhlaq and Ahmed 2015, 635; Kshetri 2007). While technological imperative models, such as the Technology Acceptance Model (TAM), provide insight into the acceptance of e-commerce in emerging markets, they are restricted to the initial adoption of such technology and offer limited understanding into the creation of flow through effective website design and resultant purchase inten-Thong and Tam 2006). This study argues that the aforementioned process (website design, flow, and purchase intentions) is sequential in nature and will be better understood by applying the stimulus-organism-response (S-O-R) framework. This model is considered more comprehensive in explaining the cognitive and affective states elicited from consumers and the subsequent behavior from their interaction with a shopping environment (Buxbaum 2016, 8; Mehrabian and Russell 1974; Vieira 2013, 1421). However, to date no studies have used the S-O-R framework to empirically test the creation of flow through website design and subsequent purchase intentions from online retailer websites in emerging markets. In addition, emerging markets have unique characteristics, such as market heterogeneity, a chronic shortage of resources, unbranded

competition, and inadequate infrastructure (Sheth 2011, 166; Wang, He, and Barnes 2017, 458). Subsequently, emerging markets differ radically from industrialized countries, which necessitates the rethinking of existing marketing perspectives and practices that were developed in industrialized countries (Sheth 2011, 166).

The objective of this study is to address the above-mentioned lacunas by proposing a model for fostering purchase intentions from online retailer websites in an emerging market through the application of the S-O-R The study makes number of contributions framework. a e-commerce scholars and practitioners. First, the applicability of the S-O-R framework is tested in explaining the development of purchase intentions from online retailer websites in an emerging market. To achieve this, the embeddedness of constructs into components of the S-O-R framework to propose a valid and reliable parsimonious conceptual model is argued. These constructs include visual appeal and perceived usability (stimulus component), flow and website trust (organism component), and purchase intentions (response component). Second, because visual appeal and perceived usability can be controlled through effective website design (Bilgihan et al. 2014, 51; Casaló, Flavián, and Guinalíu 2010, 249; Esteban-Millat et al. 2014, 371), its influence on flow and website trust is investigated—key constructs that are positively associated with online purchases (Bilgihan et al. 2014, 51; Flavián, Guinalíu, and Gurrea 2006, 501). Third, to examine the sequential nature of this study's model embedded into the S-O-R framework, various indirect effects are tested via mediation analyses. Fourth, the robustness of the parsimonious model is assessed by comparing it across two different online retailers: Amazon, an international e-commerce pioneer, and Takealot, a South African online retailer with a similar business model to that of Amazon. The comparison is warranted because firm-specific capabilities have been shown to affect organizational performance in emerging markets (Hermelo and Vassolo 2012, 263). Last, the parsimonious model is tested to see whether it will yield different results across two confounding variables that affect consumers' online decision making, namely gender and prior online experience (Al-Qeisi et al. 2014, 2282; Lian and Yen 2014, 133; Yoon and Occeňa 2015). As a result, the study not only contributes theoretically to scholars' understanding of S-O-R framework application in emerging markets but also provides online retailers in emerging markets with a model to enable them to foster purchases from their websites through compelling online experiences and effective website design.

The next sections provide an overview of the study's theoretical framework and hypotheses development. Thereafter, the research method and results are presented and discussed. The paper concludes with the study's contributions and limitations and offers directions for future research.

#### Theoretical framework

#### The S-O-R and online servicescape frameworks

The S-O-R framework comprises three components: a stimulus, an organism, and a response (Mehrabian and Russell 1974). Sequential in nature, these components explain how perceived stimuli in an environment (stimulus) evoke cognitive or affective states in an individual (organism), which in turn elicits a behavioral response from that individual (response; Donovan and Rositer 1982; Mehrabian and Russell 1974). The prominent emergence of e-commerce has further marked the extension of the S-O-R framework into online research settings to improve the understanding of consumers' reaction to, and subsequent behavior in, online store environments (Eroglu, Machleit, and Davis 2001, 177; Kim and Lennon 2013, 33; Koo and Ju 2010, 377; Mosteller, Donthu, and Eroglu 2014, 2486).

The stimuli component of the S-O-R framework is normally associated with different physical cues in a store's environment. Store environments are described using Bitner's (1992, 65–67) servicescape framework, and since it proves useful in delineating store environments and the e-commerce platform replaces the physical store where customer-retailer interactions occur, it has been widely adopted to study online shopping environments—often referred to as the cyberscape, e-servicescape, or online servicescape (Harris and Goode 2010, 231; Hopkins et al. 2009, 28; Williams and Dargel 2004, 310). The online servicescape involves the online environmental cues or stimuli (related to website features and design) present during the online shopping experience (Harris and Goode 2010, 231; Hopkins et al. 2009, 28).

Although the online servicescape comprises several dimensions and sub-dimensions (Harris and Goode 2010, 232), this study focuses only on visual appeal and perceived usability for numerous reasons. First, both visual appeal and perceived usability play a dominant role in online customers' evaluation of websites and subsequent decision making (Cai and Xu 2011, 163; Casaló, Flavián, and Guinalíu 2010, 249; Cyr, Head, and Ivanov 2006, 951; Flavián, Guinalíu, and R. Gurrea 2006). A website's visual appeal is important in creating customers' first impressions of an online retailer (Lindgaard et al. 2011). These first impressions entice customers to browse the website and make inferences on the online retailers' trustworthiness via halo effects, thus influencing customers' purchase intentions (Bonnardel, Piolat, and Le Bigot 2011, 69; Jiang et al. 2016, 229; Lindgaard et al. 2011; Skulmowski et al. 2016, 386). Likewise, perceived usability denotes

customers' judgement of efficient and effective design, thus allowing consumers to browse a retailer's website and reinforce their first impressions thereof (Flavián, Guinalíu, and R. Gurrea 2006, 2; Harris and Goode 2010, 241). The second reason for concentrating on visual appeal and perceived usability relates to the manageability of these constructs through effective user interface design. Although a website's trustworthiness can be enhanced through affiliation with accredited third parties-for example, PayPal, PayFast, and iPay—or by obtaining a secure sockets layer certificate to encrypt shared consumer data, these do not address the complex issue of user interface design, which can be difficult to get right in the eyes of consumers (Fastmoving 2017). Therefore, this paper aims to provide a parsimonious model to explain how purchase intentions can be fostered from online retailers' websites in an emerging market.

The organism component in the S-O-R framework focuses on the conversion of perceived environmental stimuli into meaningful information, resulting in a changed cognitive or emotional state (Loureiro and Ribeiro 2011; Mehrabian and Russell 1974). Cognitive states represent consumers' mental processes involving the gaining, processing, and retrieval of information, whereas affective states refer to emotions (positive and negative) felt during interaction with environmental stimuli (Eroglu, Machleit, and Davis 2001, 181; Islam and Rahman 2017). Since cognition includes consumers' understanding, attitudes, and beliefs (Eroglu, Machleit, and Davis 2001, 181), and trust is traditionally conceptualized as consumers' positive beliefs about an organization and its products and services (Ganesan 1994), it can be argued that website trust is representative of consumers' cognitive state. Similarly, because flow refers to a holistic experience felt by consumers when immersed in a particular activity, such as browsing a website (Csikszentmihalyi 1975 Gao and Bai 2014, 654), it can be said that flow is indicative of cognitive and affective states.

Last, the response component in the S-O-R framework refers to the external reaction elicited from consumers in the form of approach or avoidance behavior (Donovan and Rositer 1982; Vieira 2013, 1420). Whereas approach behavior denotes a favorable reaction, avoidance behavior is the opposite response (Bitner 1992; Eroglu, Machleit, and Davis 2001; Mehrabian and Russell 1974). Therefore, it can be argued that purchase intentions reflect approach behavior and subsequently form the response component in the S-O-R framework.

# Model development

This section presents a review of literature that supports the hypotheses formulated for the study as depicted in figure 1.

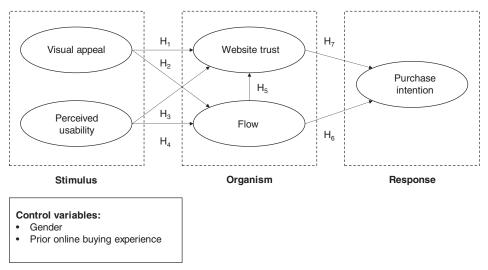


Figure 1. Conceptual model.

#### Hypotheses development

Visual appeal refers to a website's appearance in terms of the use of color, imagery, shapes, and font type and whether consumers find it attractive (Cai and Xu 2011, 161; Cyr, Head, and Ivanov 2006, 951). People tend to get judged on their appearance as it is the first thing observed upon meeting someone (Vaughan and Hogg 2014, 538). Similarly, because a website's appearance is often the first stimuli consumers encounter when visiting a website, it is crucial in forming first impressions and influences a customer's decision to continue browsing or not (Bonnardel, Piolat, and Le Bigot 2011, 69; Cai and Xu 2011, 161). Moreover, positive associations exist between the perceived attractiveness of a person and the favorable traits, such as honesty and trustworthiness, others judge that person to have (Langlois et al. 2000). Likewise, such spillover effects exist in a website's perceived visual appeal and the assessments consumers make of its trustworthiness. Lindgaard et al. (2011, 3) explain that visually appealing websites tend to present information in an attractive manner, which improves consumers' processing and perceived credibility thereof. Therefore, websites that are regarded as visually appealing enhance consumers' perception of effectiveness, reliability, and trustworthiness (Bilgihan et al. 2014, 67). From this, the following hypothesis is considered:

H<sub>1</sub>: Visual appeal directly and positively influences online consumers' website trust.

Flow is often expressed as consumers' cognitive and affective judgements of their online experiences, and it has also been described as a holistic experience that individuals feel when they act with total involvement and become deeply immersed in an activity (Csikszentmihalyi 1975; Gao and

Bai 2014, 654). In e-commerce, this refers to website browsing where consumers experience sensory stimuli-including color, graphics, layout, and design—that should allow for a flawless transition from one web page to another, which in turn supports the creation of the online experience (Rose et al. 2012, 312). Stimuli that are alluring (visually appealing) may entice consumers to continue browsing a website, facilitating greater consumer involvement and creating a memorable online experience (Gao and Bai 2014; Rose et al. 2012, 312). Hence:

H<sub>2</sub>: Visual appeal directly and positively influences the state of flow experienced by consumers on online retailers' websites.

Perceived usability relates to the level of effort required by consumers to use or navigate a particular website (Casaló, Flavián, and Guinalíu 2010, 249; Seckler et al. 2015, 41). A website's navigation is affected by its structural design-for example, menus, buttons, banners, prompts, and links that serve as navigational aids—which facilitates the consumer's browsing (Seckler et al. 2015, 41). Consumers tend to hold favorable perceptions of a website's usability when its structural design is efficient and effective, simplifies browsing, and enables the completion of online shopping goals in a timely manner (Flavián, Guinalíu, and Gurrea 2006, 2; Harris and Goode 2010, 241). When the structural design of a website facilitates the completion of online shopping goals without error, it evokes a sense of confidence in consumers regarding the website's competence (Casaló, Flavián, and Guinalíu 2010, 252; Flavián, Guinalíu, and Gurrea 2006, 4). Such confidence is elicited because good structural design allows for greater understanding of content and navigational tasks, which reduces consumers' perceived online risk (Casaló, Flavián, and Guinalíu 2010, 252). Given that website trust refers to the overall positive impressions consumers have of an online retailer's website, accompanied by a willingness to accept greater levels online risks associated with e-commerce (Bart et al. 2005, 1; Lu, Fan, and Zhou 2016, 228), it can be argued that:

H<sub>3</sub>: Perceived usability directly and positively influences online consumers' website trust.

Increased perceived utilitarian functionality of websites generates improved opportunities for flow creation in online environments. Such opportunities arise from the seamless navigation that perceived usability allows for across different web pages, which may facilitate greater interactivity between consumers and online environments (Gao and Bai 2014, 657; Skadberg and Kimmel 2004, 410). Greater interactivity may induce a state of telepresence during which the consumer becomes immersed in website browsing to the extent that their attention is completely focused and the lines between the real and virtual environment become blurred (Gao and Bai 2014, 657; Novak, Hoffman, and Yung 2000, 26). Hence:

H<sub>4</sub>: Perceived usability directly and positively influences the state of flow experienced by consumers on online retailers' websites.

The ability of flow to influence website trust rests on site stickiness and heuristics resulting from the affect-cognition link. Concerning site stickiness, it is argued that flow results when consumers spend more time browsing a website (site stickiness). When consumers reach a state of flow they tend to experience a surge of positive feelings, such as pleasure and joy (Csikszentmihalyi 1975; Novak, Hoffman, and Yung 2000, 24; Rose et al. 2012, 310). To continue experiencing these positive feelings, consumers spend more time browsing the website (Bilgihan 2016, 106). The longer consumers browse, the more familiar they become with the online retailer and the goods and services on offer, which in turn inculcates trust (Gulati and Sytch 2008, 165). Involving heuristics as a result of the affect-cognition link, consumers normally form an impression of a website's trustworthiness based on the flow experienced (Rose et al. 2012, 312). In other words, the affect-cognition link posits a connection between consumers' affective states and their judgements on their environment (Dunn and Schweitzer 2005, 737; Vaughan and Hogg 2014, 657). Positive affective states elicit more favorable consumer judgements of a situation or an environment. Therefore, the more positive feelings consumers experience during a state of flow, the more likely they are to make favorable judgements about a website's trustworthiness (Bilgihan 2016, 106; Bilgihan et al. 2014, 60). Hence, the following is hypothesized:

H<sub>5</sub>: Flow experienced directly and positively influences online consumers' website trust.

Building on the affect-cognition link, purchase intentions can be regarded as an extension of a pleasurable flow experience (Hausman and Siekpe 2009, 8). When consumers experience a state of flow, it may induce favorable affective states, resulting in behavioral repertoires like purchase intentions (Bilgihan et al. 2014, 60; Novak, Hoffman, and Yung 2000; Ozkara, Ozmen, and Kim 2017, 124). Since consumers' experience increased concentration during flow, their comprehension of online retail information—such as order placement and payment—and goods and services on offer may improve. A better understanding of presented information results in greater consumer confidence in an online environment and so more likelihood of purchasing from an online retailer's website (Ozkara, Ozmen, and Kim 2017, 125). Therefore:

H<sub>6</sub>: Flow experienced directly and positively influences online consumers' purchase intentions.

Purchase intentions reflect consumers' inclination to buy products from an e-commerce platform (Lu, Fan, and Zhou 2016, 229). According to the theory of planned behavior, consumers' behavioral intentions influence

their actual behavior, particularly when they make rational decisions based on presented information (Ajzen 1991; Corbitt, Thanasankit, and Yi 2003, 206; Pavlou and Fygenson 2006, 115). In e-commerce, purchase decisions are normally based on website trust, since it emulates a cognitive assessment of a website's credibility and competence in facilitating online transactions (Eroglu, Machleit, and Davis 2001, 181; Harris and Goode 2010, 242; Kim and Peterson 2017, 52). Therefore, website trust reduces the perceived risk associated with the faceless and intangible nature of e-commerce and increases consumers' purchase intentions (Corbitt, Thanasankit, and Yi 2003, 206; Flavián and Guinalíu 2006, 501). Unsurprisingly, website trust is a precursor in the formation of purchase intentions in e-commerce (Kim and Peterson 2017, 52; Ponte, Carvajal-Trujillo, and Escobar-Rodríguez 2015, 286). Thus, the following is hypothesized:

H<sub>7</sub>: Website trust directly and positively influences online consumers' purchase intentions.

As highlighted previously, this study focuses on fostering purchase intentions from online retailer websites in an emerging market by applying the S-O-R framework. In addition, the organism component in the S-O-R framework focuses on an individual's cognitive and affective states as a result of their interaction with environmental stimuli, which in turn affects their response (Loureiro and Ribeiro 2011; Mehrabian and Russell 1974). Consequently, the organism component mediates the relationship between the stimuli and response components in the S-O-R framework (Vieira 2013). From the conceptual model presented in figure 1, two constructs form the organism component: website trust and flow. Numerous studies have confirmed the mediating role of these variables in determining consumers' purchase intentions from online retailer websites (Ha et al. 2016, 213; Hong and Cha 2013, 927; Hsu et al. 2017, 250; Lwin, Wirtz, and Stanaland 2016, 919; Pelet, Ettis, and Cowart 2017, 115). Hence, the following is hypothesized:

H8<sub>a</sub>: Visual appeal has a significant positive indirect effect on consumers' purchase intentions as mediated by website trust.

H8<sub>b</sub>: Visual appeal has a significant positive indirect effect on consumers' purchase intentions as mediated by flow experienced.

H8c: Perceived usability has a significant positive indirect effect on consumers' purchase intentions as mediated by website trust.

H8<sub>d</sub>: Perceived usability has a significant positive indirect effect on consumers' purchase intentions as mediated by flow experienced.

The robustness of the model depicted in figure 1 is tested by comparing two online retailers: Amazon and Takealot. Amazon is a multinational enterprise that operates across numerous continents and offers a wide range of merchandise. Operational since 2001, Amazon not only holds first-mover advantage in the international e-commerce space but also has ample experience in operations across international markets (MarketLine 2017). Takealot is a leading South African online retailer that officially launched in 2011 (Takealot 2017). Takealot's competitive advantage is supported by a wide selection across different product categories and the fact that it owns its logistics network, allowing for extensive coverage of the South African market (Euromonitor 2017; MarketLine 2016; Takealot 2017). Since Amazon and Takealot draw their competitive advantages from different resources and capabilities, consumers will differ in their evaluation of these two online retailers. Therefore, the following is hypothesized:

H<sub>9</sub>: The relationships between the constructs as depicted in the conceptual model do not exhibit equivalent regression weights across the different online retailer types.

#### Control variables: gender and prior online buying experience

Two control variables—namely gender and prior online buying experience—are considered. Gender is a key demographic variable that affects website design evaluation and e-commerce adoption (Lu and Rastrick 2014, 55; Pascual-Miguel, Agudo-Peregrina, and Chaparro-Peláez Venkatesh, Morris, and Ackerman 2000). Prior online buying experience affects consumers' evaluation of websites since consumers have greater selfefficacy in an e-commerce environment (Al-Qeisi et al. 2014, 2284; Hernández, Jiménez, and Martín 2011).

#### Method

#### Research design

The study followed a descriptive research design that was cross-sectional in nature. Data were collected from the target population. Saunders, Lewis, and Thornhill (2016, 200) contend that a cross-sectional design allows for the measurement of multiple variables simultaneously and that such a design is suitable for an array of research studies.

#### Target population, sampling, and data collection

The target population of the study included people aged 18 to 29 who had access to the Internet via a personal computer, laptop, tablet, or any other handheld device. This age cohort was selected as it represents people who exhibit the highest level of Internet usage in South Africa in 2017 (Effective Measure 2017). This cohort is of interest to the researchers as the study

focuses on the perceptions of people who use the Internet and shop online. Due to the lack of a sampling frame, purposive sampling—a non-probability sampling technique—was used to select respondents. The Protection of Personal Information Act of 2013 (Republic of South Africa, 2013) limits access to information, making it cumbersome for researchers to obtain client lists from online retailers that could possibly have been used as a sampling frame for the study.

Paper-based interviewer-administered surveys were used to collect data from respondents. This survey method was considered appropriate due to the relative complexity of the survey, as respondents first had to execute a fictional online buying task before the questionnaire could be completed. Trained fieldworkers selected respondents and administered questionnaires to them. Furthermore, fieldworkers were required to randomly administer the scale items to limit response bias. The research project received ethical clearance, and minimal risk to respondents was confirmed. In total, 165 questionnaires suitable for analysis were col-Of these, 85 respondents performed the fictional online buying task on Amazon, while 80 respondents completed the task on Takealot.

### Questionnaire design

A closed-ended structured questionnaire was designed. The questionnaire had a preamble introducing prospective respondents to the study and explaining their rights. Screening questions were included to ensure that qualifying respondents took part in the study. The first section of the questionnaire determined respondents' demographic profile, the second section determined their online Internet usage habits, and the third section determined respondents' perceptions in a scenario, called a vignette study (Atzmüller and Steiner 2010, 128). In the vignette presented to the respondents, they were instructed to pretend that they wanted to buy a new smartphone as a birthday gift for a close friend from one of South Africa's two largest online retailers, Amazon or Takealot (Effective Measure 2017). The smartphone category was selected because it represents one of the largest e-commerce market segments in South Africa (Statistica 2017). Exhibit 1 presents the imaginary online buying task from the questionnaire.

After finishing the imaginary online buying task, respondents were asked to complete scaled items measuring the study's constructs. The researchers used a 7-point unlabeled Likert-type scale—where 1 represents strongly disagree and 7 represents strongly agree—to measure the study's constructs.

Table 1. Scale items used to measure study's constructs.

Construct and its	ems	Source
Usability (USE)		Adapted from Harris and
USE1	This website is user-friendly.	Goode (2010, 241–242)
USE2	This website has a good keyword	
	search facility.	
USE3	This website has useful navigational aids.	
USE4	It's easy to navigate through this website.	
Visual appeal (Vi	A)	
VA1	This website is visually attractive.	
VA2	This website uses visually appealing graphics.	
VA3	This display of products is attractive.	
VA4	I like the way this website looks.	
Flow (FLOW)		Adapted from Gao and Bai
FLOW1	When using this website, my attention was	(2014) and Novak, Hoffman,
	completely focused on the activity.	and Yung (2000)
FLOW2	When using this website, I felt a lot	
	of pleasure.	
FLOW3	When using this website, my concentration on	
	the navigation experience was so intense	
	that I paid little attention to my	
	surroundings.	
FLOW4	When using this website, my sense of time	
	became distorted.	
Website trust (W	/T)	Adapted from Flavián,
WT1	I have confidence in the promises that this	Guinalíu, and Gurrea (2006, 10)
	website makes.	
WT2	This website has the necessary abilities needed	
	to fulfill its promises.	
WT3	This website has the necessary resources to	
	successfully carry out its activities.	
Purchase intention	on (PI)	Adapted from Gao and
PI1	I am willing to buy products from	Bai (2014)
	this website.	
PI2	The likelihood of me purchasing products	
	from this website is high.	
PI3	The probability that I would consider buying	
	through this website is high.	
PI4	I intend to purchase through the website in	
	the future.	
PI5	I consider the website my first choice when	
	buying products from online retailers.	

Table 1 illustrates the scale items measuring the study's constructs as well as the sources from which these scale items were adapted.

# Data analysis

The software programs SPSS 24 and Amos 24 were used for data analysis. A confirmatory factor analysis (CFA) was conducted to assess the psychometric properties of the following:

- 1. The overall model
- 2. The model considering the responses from those who executed the fictional online gift-buying task on the Amazon website (Amazon model)
- 3. The responses from those who executed the fictional online gift-buying task on the Takealot website (Takealot model)

Table 2. Sample profile and online patronage habits.

	Overa	Overall sample		Amazon sample		Takealot sample	
Response categories	N 165	% 100.0	N 85	% 51.5	N 80	% 48.5	
Gender							
Male	48	29.1	34	40.0	14	17.5	
Female	117	70.9	51	60.0	66	82.5	
Age							
18–24	124	75.2	59	69.4	65	81.3	
25–29	41	24.8	26	30.6	15	18.8	
Highest level of education							
High school not completed	3	1.8	1	1.2	2	2.6	
High School completed	71	43.0	25	29.4	46	57.5	
Diploma completed	4	2.4	6	7	1	1.3	
Degree completed	81	49.0	50	58.8	28	35.0	
Postgraduate degree completed	6	3.6	3	3.5	3	3.8	
How often Internet is accessed							
Every day	139	84.2	69	81.2	70	87.5	
Not every day, but more than once a week	20	12.1	12	14.1	8	10.0	
Once a week	3	1.8	3	3.5	1	1.3	
Less than once a week, but more than once a month	1	.6	1	1.2	1	1.3	
Once a month	2	1.2	69	81.2	70	87.5	
Device from which Internet is accessed most often							
Personal computer	46	27.9	18	21.2	28	35.0	
Laptop	69	41.8	38	44.7	31	38.8	
Mobile device (such as a smartphone)	39	23.6	20	23.5	19	23.8	
Tablet	10	6.1	9	10.6	2	2.5	
Prior online purchase experience							
Yes	66	40.0	45	52.9	21	26.3	
No	99	60.0	40	47.1	59	73.8	

Thereafter, three structural models (the overall, Amazon, and Takealot models) were empirically assessed by considering the fit indices of their respective full latent models. The hypotheses formulated for the study (H<sub>1</sub>-H<sub>7</sub>) guided the model specification phase of the structural model. To assess the sequential nature of the structural models embedded in the S-O-R framework (H<sub>8a</sub>-H<sub>8d</sub>), mediation analyses according to the bootstrapping resampling procedures were conducted using the PROCESS macro for SPSS (Hayes 2013, 419). Statistical significance of the indirect effects was based on the 95% bias-corrected interval of each total, direct, and indirect effect (Zhao, Lynch, and Chen 2010, 202). A multi-group analysis was further performed to test H<sub>9</sub> and the Z score approach (critical ratios) was used to determine whether significant differences exist in the hypothesized relationships between the study's constructs across the models (Gaskin 2011; Wang et al. 2014, 236). Prior to conducting a comparison of the structural paths across the different models, configurable and metric invariances were also considered (Hair, Hult et al. 2014, 249). Gender and prior online buying experience were included as control variables in the models.

#### Results

# Sample profile and online patronage habits

Table 2 provides an overview of the sample profile and online patronage habits of respondents in the overall sample as well as for the Amazon and Takealot sample, respectively.

From table 2, it can be determined that respondents who answered based on Amazon's website (Amazon sample) and those who answered on Takealot's website (Takealot sample) represent 51.5% and 48.5% of the overall sample, respectively. The majority of respondents were female in both the Amazon (60%) and Takealot (82.5%) samples. In terms of age, the majority of respondents in the Amazon (69.4%) and Takealot (81.3%) sample were aged between 18 and 24 years. Regarding the highest level of education, most of the respondents in the Amazon sample had completed a degree (58.8%), whereas the majority of respondents in the Takealot sample had completed High School (57.5%). Respondents in the Amazon sample (81.2%) and Takealot sample (87.5%) accessed the Internet every day, largely using a laptop to do so. Last, most of the respondents in the Amazon sample (52.9%) had purchased from an online retailer's website previously, whereas the majority of respondents in the Takealot sample (73.8%) had never purchased online before.

# Construct reliability and validity

CFAs were used to assess the psychometric properties of the measurement models. For convergent validity, various model fit indices, the standardized item loadings (SW), the construct reliability (CR), and average variance extracted (AVE) for each construct were examined (Hair, Black et al. 2014, 618). Table 3 shows the fit indices for the measurement models.

From table 3, it can be seen that the measurement models display acceptable fit across various incremental and absolute fit statistics (Hair, Black et al. 2014, 578). Table 4 depicts the SW, CR, and AVE for each of the constructs included in the measurement models.

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Fit indice	S	Overall model	Amazon model	Takealot model
Chi-squar	e (χ²)	299.969	230.083	251.142
р		.000	.000	.000
df		160	160	160
$\chi^2/df$	<3	1.875	1.438	1.570
CFI	>0.9	0.956	0.949	0.949
NFI	>0.9	0.956	0.949	0.949
TLI	>0.9	0.948	0.938	0.939
RMSEA	< 0.08	0.073	0.072	0.085

Table 3. Confirmatory factor analysis fit statistics.

df: degrees of freedom; CFI: Comparative Fit Index; NFI: Normed Fit Index; TLI: Tucker Lewis Index; RMSEA: Root Mean Square Error of Approximation.

Table 4.	Construct	reliability	and	convera	ent '	validity	of the	measurement	models.

		Ovei	rall mode	el	Ama	zon mode	el	Take	alot mod	el
Constructs	Items	Estimate <sup>a</sup>	CR	AVE	Estimate <sup>a</sup>	CR	AVE	Estimate <sup>a</sup>	CR	AVE
USE	USE1	0.865	0.945	0.811	0.820	0.920	0.742	0.884	0.948	0.821
	USE2	0.917			0.806			0.960		
	USE3	0.923			0.895			0.921		
	USE4	0.895			0.920			0.856		
VA	VA1	0.941	0.945	0.810	0.949	0.926	0.758	0.931	0.952	0.833
	VA2	0.917			0.916			0.913		
	VA3	0.895			0.822			0.934		
	VA4	0.844			0.785			0.872		
FLOW	FLOW1	0.680	0.870	0.628	0.538	0.839	0.573	0.816	0.909	0.715
	FLOW2	0.873			0.893			0.868		
	FLOW3	0.802			0.717			0.882		
	FLOW4	0.803			0.832			0.813		
WT	WT1	0.772	0.902	0.754	0.628	0.854	0.667	0.809	0.910	0.773
	WT2	0.916			0.893			0.901		
	WT3	0.910			0.899			0.923		
PI	PI1	0.829	0.940	0.759	0.803	0.935	0.744	0.850	0.947	0.780
	PI2	0.908			0.942			0.878		
	PI3	0.943			0.962			0.931		
	PI4	0.879			0.871			0.889		
	PI5	0.789			0.711			0.867		

CR: Composite reliability; AVE: Average Variance Extracted; USE: Usability; VA: Visual appeal; FLOW: Flow; WT: Website trust; PI: Purchase intention.

*Note.* <sup>a</sup>All loadings statistically significant at p < .001.

Table 5. Assessment of discriminant validity in overall model.

	WT	VA	USE	FLOW	PI
WT	0.754				
VA	0.271	0.810			
USE	0.498	0.430	0.811		
FLOW	0.368	0.332	0.232	0.628	
PI	0.407	0.397	0.284	0.520	0.759

Note. Average variance extracted on the diagonal and squared correlations below the diagonal.

WT: Website trust; VA: Visual appeal; USE: Usability; FLOW: Flow; PI: Purchase intention.

Table 6. Assessment of discriminant validity in Amazon model.

	WT	VA	USE	FLOW	PI
WT	0.667				
VA	0.070	0.758			
USE	0.171	0.279	0.742		
FLOW	0.166	0.194	0.100	0.573	
PI	0.237	0.364	0.189	0.469	0.744

Note. Average variance extracted on the diagonal and squared correlations below the diagonal.

WT: Website trust; VA: Visual appeal; USE: Usability; FLOW: Flow; Pl: Purchase intention.

The results from table 4 indicate that all the estimates are statistically significant at p < .001 and above the recommended value of 0.5 (Hair, Black, et al. 2014, 618). Furthermore, the results indicate CR values greater than 0.7 and AVE values greater than 0.5 for all constructs. It can be concluded that sufficient evidence exists for construct reliability and convergent validity for the overall, Amazon, and Takealot models (Hair, Black et al. 2014, 618, 619).

**Table 7.** Assessment of discriminant validity Takealot model.

	FLOW	VA	USE	PI	WT
FLOW	0.773				
VA	0.366	0.833			
USE	0.637	0.484	0.821		
PI	0.632	0.489	0.392	0.715	
WT	0.623	0.441	0.394	0.701	0.780

Note. Average variance extracted on the diagonal and squared correlations below the diagonal.

FLOW: Flow; VA: Visual appeal; USE: Usability; PI: Purchase intention; WT: Website trust.

**Table 8.** Fit statistics for the structural models.

Fit indices		Overall model	Amazon model	Takealot model		
Chi-square (χ²)		308.213	245.014	251.159		
р		0.000	0.000	0.000		
df		162	162	162		
$\chi^2/df$	<3	1.903	1.512	1.550		
CFI	>0.9	0.954	0.940	0.950		
IFI	>0.9	0.946	0.928	0.941		
TLI	>0.9	0.954	0.938	0.950		
RMSEA	< 0.08	0.074	0.078	0.083		

df: degrees of freedom; CFI: Comparative Fit Index; IFI: Incremental Fit Index; TLI: Tucker Lewis Index; RMSEA: Root Mean Square Error of Approximation.

Table 9. Structural paths.

				Overall m	nodel	Amazon r	nodel	Takealot model	
	Structural paths			β	р	β	р	β	р
H <sub>1</sub>	Visual appeal	$\rightarrow$	Website trust	-0.073	.420	-0.056	.687	0.194	.084
$H_2$	Visual appeal	$\longrightarrow$	Flow	0.494**	.001	0.423*	.004	0.510**	.001
$H_3$	Perceived usability	$\rightarrow$	Website trust	0.573**	.001	0.340*	.015	0.577**	.001
$H_4$	Perceived usability	$\longrightarrow$	Flow	0.173	.074	0.122	.349	0.273*	.033
$H_5$	Flow	$\rightarrow$	Website trust	0.370**	.001	0.321*	.029	0.568**	.001
$H_6$	Flow	$\rightarrow$	Purchase intention	0.705**	.003	0.608*	.019	0.840**	.001
$H_7$	Website trust	$\rightarrow$	Purchase intention	0.211**	.001	0.242**	.001	0.123	.251

<sup>\*</sup>Statistically significant at p < .05.

Discriminant validity was then assessed in accordance with the criterion proposed by Fornell and Larcker (1981). The results for the overall, Amazon, and Takealot models are shown in tables 5, 6, and 7, respectively.

From the results, it can be seen that the AVE for each construct exceeds the squared correlations between each pair of constructs in the overall, Amazon, and Takealot models, respectively. Discriminant validity is thus confirmed (Fornell and Larcker 1981; Hair, Black et al. 2014, 620).

#### Structural model estimation: Testing $H_1$ to $H_7$

To test the hypotheses as depicted in figure 1, structural models were estimated for the overall, Amazon, and Takealot samples and path analyses were conducted. Table 8 shows the fit indices that were calculated for all three structural models.

<sup>\*\*</sup>Statistically significant at p < .001.



The results in table 8 demonstrate sufficient evidence of model fit for all three structural models. Next, structural weights  $(\beta)$  were calculated for all structural paths in the overall, Amazon, and Takealot models, which are depicted in table 9.

From table 9, it is evident that only two paths in the overall model are not statistically significant: visual appeal to website trust ( $\beta = -0.073$ ; p = .420) and perceived usability to flow ( $\beta = 0.173$ ; p = .074). Similarly, the Amazon model also reveals statistically insignificant results for visual appeal to website trust ( $\beta = -0.056$ ; p = .687) and perceived usability to flow  $(\beta = 0.122; p = .349)$ . For the Takealot model, statistically insignificant results are revealed for two paths: visual appeal to website trust ( $\beta = 0.194$ ; p = .084) and website trust to purchase intention ( $\beta = 0.123$ ; p = .251). Finally, it appears that two structural paths differ in the Takealot model from those in the Amazon and overall models, namely perceived usability to flow (statistically significant  $\beta = 0.273$ ; p = .033) and website trust to purchase intention (statistically insignificant  $\beta = 0.123$ ; p = .251). Based on these results, hypotheses 2, 3, 5, and 6 are supported across all three models, hypothesis 4 is only supported in the Takealot model, and hypothesis 7 is supported in the overall and Amazon models.

# Mediation analysis: Testing $H8_{a-d}$

In this study, 10,000 bootstrapping samples were generated from the original data set for the overall (N=165), Amazon (n=85), and Takealot (n = 80) models by random sampling (Shrout and Bolger 2002; Zhao et al. 2010). Table 10 shows the bootstrapping direct, indirect, and total effects calculated at a 95% bias-corrected interval of each indirect effect.

The results in table 10 for the overall model show that the total effect of visual appeal on purchase intention is positive (B = 0.600) and statistically significant (95% bias-corrected interval = 0.475-0.725). Furthermore, the indirect effects exerted by website trust (B = 0.214; 95% bias-corrected interval = 0.132-0.325) and flow (B = 0.327; 95% bias-corrected interval = 0.236-0.438) on purchase intentions are statistically significant, suggesting a mediated effect. However, because the direct effect for both website trust (B = 0.386; 95% bias-corrected interval 0.259-0.513) and flow (B = 0.273;95% bias-corrected interval = 0.164-0.382) are statistically significant, it can be concluded that website trust and flow partially mediate the influence of visual appeal on purchase intentions. Likewise, the total effect of perceived usability on purchase intentions is positive (B = 0.566) and statistically significant (95% bias-corrected interval = 0.413-0.718), and the indirect effects of website trust (B = 0.389; 95% bias-corrected interval = 0.253-0.545) and flow (B = 0.343; 95% bias-corrected interval = 0.243-0.456) are statistically significant. However, when examining the direct effects, it can be

Table 10. Bootstrapping direct and indirect effects at 95% confidence intervals (CIs).

	11 3			
Variables	Direct effect [LLCI; HLCI] <sup>b</sup>	Indirect effect [LLCI; HLCI] <sup>b</sup>	Total effect [LLCI; HLCI] <sup>b</sup>	Result
$\overline{X \gg M \gg Y^a}$				
Overall model				
$VA \gg WT \gg PI$	0.386 [0.259–0.513]**	0.214 [0.132–0.325]**	0.600 [0.475-0.725]**	Complementary mediation
$VA \gg FLOW \gg PI$	0.273 [0.164–0.382]**	0.327 [0.236–0.438]**	0.600 [0.475-0.725]**	Complementary mediation
$USE \gg WT \gg PI$	0.177 [-0.006-0.359]	0.389 [0.253-0.545]**	0.566 [0.413-0.718]**	Indirect only mediation
USE ≫ FLOW ≫ PI		0.343 [0.243–0.456]**	0.566 [0.413-0.718]**	Complementary mediation
Amazon model				
VA ≫ WT ≫ PI	0.527 [0.334–0.720]**	0.123 [0.017–0.279]**	0.654 [0.445-0.863]**	Complementary mediation
$VA \gg FLOW \gg PI$	0.433 [0.253-0.613]**	0.221 [0.097–0.387]**	0.654 [0.445-0.863]**	Complementary mediation
$USE \gg WT \gg PI$	0.3647 [0.083-0.646]**	0.247 [0.095–0.477]**	0.611 [0.331–0.891]**	Complementary mediation
$USE \gg FLOW \gg PI$	0.383 [0.156-0.610]**	0.228 [0.058-0.441]**	0.611 [0.331–0.891]**	Complementary mediation
Takealot model				
VA ≫ WT ≫ PI	0.285 [0.126-0.445]**	0.290 [0.148-0.498]**	0.576 [0.408-0.743]**	Complementary mediation
$VA \gg FLOW \gg PI$	0.112 [-0.191-0.244]	0.463 [0.323-0.620]**	0.576 [0.408-0.743]**	Indirect only mediation
USE ≫ WT ≫ PI	0.069 [-0.168-0.305]	0.523 [0.334-0.753]**	0.592 [0.397-0.786]**	Indirect only mediation
USE ≫ FLOW ≫ PI		0.466 [0.341–0.621]**	0.592 [0.397–0.786]**	Indirect only mediation

Note. <sup>a</sup>X: exogenous variable; M: mediating variable; Y: endogenous variable.

determined that website trust fully mediates the influence of perceived usability on website trust (B = 0.177; 95% bias-corrected interval = -0.006flow 0.359), whereas (B = 0.223;95% bias-corrected to interval = 0.102-0.344) partially mediates its influence.

In the Amazon model, complementary mediation is evident in all paths specified because the total effects of visual appeal and perceived usability on purchase intentions are positive and statistically significant. In addition, the direct and indirect effects are positive and statistically significant at the 95% bias-corrected interval. In the Takealot model, three of the specified paths suggest that full mediation occurs. Specifically, flow fully mediates the influence of visual appeal on purchase intentions (the direct effect is statistically insignificant at B = 0.112; 95% bias-corrected interval = -0.191 to 0.244), website trust fully mediates the influence of perceived usability on purchase intentions (the direct effect is statistically insignificant at B = 0.069; 95% bias-corrected interval = -0.168 to 0.305), and flow fully mediates the influence of perceived usability on purchase intentions (the direct effect is statistically insignificant at B = 0.126; 95% bias-corrected interval = -0.012 to 0.2630). Moreover, flow partially mediates the relationship between perceived usability on purchase intentions (direct and indirect effects are both positive and statistically significant). Based on these results, hypotheses  $8_{a-d}$  are supported.

bLLCI: lower level confidence interval; HLCI: higher level confidence interval.

VA: Visual appeal; WT: Website trust: FLOW: Flow; USE: Usability; PI: Purchase intention.

<sup>\*</sup>Statistically significant at p < .05.

<sup>\*\*</sup>Statistically significant at p < .001.

Table 11. Results from multi-group analysis.

				Mult	i-group a	nalysis		
				Amaz mod		Take mo		
	Structural paths				р	β	р	Z score
H <sub>1</sub>	Visual appeal	$\rightarrow$	Flow	0.423	.004	0.510	.001	0.974
$H_2$	Perceived usability	$\rightarrow$	Flow	0.122	.349	0.273	.033	0.902
$H_3$	Visual appeal	$\rightarrow$	Website trust	-0.056	.687	0.194	.084	-0.958
$H_4$	Perceived usability	$\rightarrow$	Website trust	0.340	.015	0.577	.001	1.973*
$H_5$	Flow	$\rightarrow$	Website trust	0.321	.029	0.568	.001	2.664**
$H_6$	Flow	$\rightarrow$	Purchase intention	0.608	.019	0.84	.001	-0.065
H <sub>7</sub>	Website trust	$\rightarrow$	Purchase intention	0.242	.001	0.123	.251	2.350**

<sup>\*</sup>Statistically significant at p < .05.

#### Multi-group analysis: Testing H<sub>9</sub>

To compare the structural weights  $(\beta)$  in the Amazon and Takealot models to test hypothesis 9, measurement invariance had to be assessed by ascertaining configurable and metric invariance (Hair, Hult et al. 2014, 249). Concerning configurable invariance, an unconstrained CFA model displayed satisfactory fit statistics  $(\chi^2/df = 1.504$ , degrees of freedom (df) = 320, root mean square error of approximation (RMSEA) = 0.056, comparative fit index (CFI) = 0.948, Tucker Lewis Index (TLI) = 0.939, Incremental Fit Index (IFI) = 0.949), suggesting that the Amazon and Takealot models are equivalent in their factor structure (Gaskin 2011). Regarding metric invariance, the variance for the latent variables was constrained to one, and the measurement weights (factor loadings) were constrained to be equal across the Amazon and Takealot models (Gaskin 2011; Hair, Hult et al. 2014, 249). A Chi-square difference test revealed that the constrained and unconstrained structural model were not statistically significantly different from one another ( $\Delta \chi^2/df = 23.998$ ;  $\Delta df = 20$ ; p > .05), thus confirming metric invariance. The structural paths between the Amazon and Takealot models were subsequently compared by calculating critical ratios or Z scores (Gaskin 2011; Lleras 2005, 25). Z scores are statistically significant at the following absolute values: 1.96 is statistically significant at p < .05 and 2.58 is statistically significant at p < .001 (Field 2013, 33). Table 11 depicts the results from the multi-group analysis.

In table 11, it can be determined that the Amazon and Takealot models differ statistically on three paths: between perceived usability and website trust (Z score = 1.973), between flow and website trust (Z score = 2.664), and between website trust and purchase intention (Z score = 2.350). Specifically, perceived usability exerts a stronger influence on website trust for Takealot buyers  $(\beta = 0.577)$  than for Amazon buyers  $(\beta = 0.340)$ , while flow has a stronger influence on website trust for Takealot buyers ( $\beta = 0.568$ ) than Amazon buyers ( $\beta = 0.321$ ). Last, website trust exerts a positive influence on purchase intentions for Amazon buyers ( $\beta = 0.242$ ), whereas the path is statistically insignificant for Takealot buyers (p = .251). Subsequently, H9 is supported.

<sup>\*\*</sup>Statistically significant at p < .001.

Table 12. Summary of hypothesis testing.

Hypothesis	Result
Visual appeal directly and positively influences online consumers' website trust. (H <sub>1</sub> )	Not supported
Visual appeal directly and positively influences the state of flow experienced by consumers on online retailers' websites. (H <sub>2</sub> )	Supported
Perceived usability directly and positively influences online consumers' website trust. (H <sub>3</sub> )	Supported
Perceived usability directly and positively influences the state of flow experienced by consumers on online retailers' websites. ( $H_4$ )	Not supported
Flow experienced directly and positively influences online consumers' website trust. (H <sub>5</sub> )	Supported
Flow experienced directly and positively influences online consumers' purchase intentions. (H <sub>6</sub> )	Supported
Website trust directly and positively influences online consumers' purchase intentions. (H <sub>7</sub> )	Supported
Visual appeal has a significant positive indirect effect on consumers' purchase intentions as mediated by website trust. ( $H_{8a}$ )	Supported
Visual appeal has a significant positive indirect effect on consumers' purchase intentions as mediated by flow experienced. (H <sub>8b</sub> )	Supported
Perceived usability has a significant positive indirect effect on consumers' purchase intentions as mediated by website trust. (H <sub>8r</sub> .)	Supported
Perceived usability has a significant positive indirect effect on consumers' purchase intentions as mediated by flow experienced. ( $H_{8d}$ )	Supported
The relationships between the constructs as depicted in the conceptual model do not exhibit equivalent regression weights across the different online retailer types. (H <sub>9</sub> )	Supported

### Results of hypothesis testing

Table 12 summarizes the results from the hypothesis testing.

#### Discussion, implications, and conclusion

The purpose of this study was to test a model for fostering purchase intentions of customers from online retailer websites in an emerging market through the application of the S-O-R framework. Overall, the results confirm the validity of the S-O-R framework as a fruitful means to better understand how purchase intentions can be fostered from emerging market consumers through effective website design. Contradictory to previous findings (Bilgihan et al. 2014, 67), results show that visual appeal does not directly and positively influence online website trust. However, it does directly and positively influence flow across all three models, thus aligning with previous empirical results (Gao and Bai 2014; Rose et al. 2012, 312). These findings present the notion that the role of a website's visuals is more prominent in its creation of the flow that emerging market consumers experience from online retailer websites than trust. To improve visual appeal, careful consideration should be given when designing the user interface (the look and feel) of an online retailer's website. This includes the selection of elements such as aesthetically pleasing graphics and fonts as well as how information is displayed and how products are arranged for browsing.

Results further indicated that perceived usability directly and positively influences website trust, as purported by previous studies (Bart et al. 2005, 1; Lu, Fan, and Zhou 2016, 228). Considering the importance of website

trust, online retailers should review the design of their websites to optimize the browsing experience, as this study found perceived usability (not visual appeal) to influence website trust in this emerging market context. More specifically, online retailers should devote substantial resources to ensure that their websites are perceived as useful. Perceived usability can be improved by ensuring that website navigation is seamless, easy, and logical and that navigational aids work properly. The direct and positive influence that perceived usability exerts on flow can only be supported for the Takealot model. These findings are interesting since they suggest that online retailers should chiefly focus on a website's visual appeal to influence flow and on its perceived usability to impact website trust. Both visual appeal and perceived usability should culminate to keep the attention and concentration of consumers across the seamless transition from one visually appealing web page to the next.

Flow directly and positively influences website trust and purchase intention across all three models, which is aligned with previous findings (Bilgihan 2016, 106; Bilgihan et al. 2014, 60; Ozkara, Ozmen, and Kim 2017, 125). The direct and positive influence of website trust on purchase intention (Kim and Peterson 2017, 52; Ponte, Carvajal-Trujillo, and Escobar-Rodríguez 2015, 286) could only be confirmed for the overall and Amazon models and not for the Takealot model. Therefore, the study highlights the importance of flow in fostering website trust and purchase intention in this context. The holistic experience, both cognitive and affective, felt by consumers when immersed in browsing a website (Csikszentmihalyi 1975; Gao and Bai 2014, 654) is critical for the online retailer in designing the website in this emerging market context.

The study also determined whether the organism components (namely website trust and flow) fulfill a mediating role in determining consumers' purchase intentions from online retailer websites (Ha et al. 2016, 213; Hsu et al. 2017, 250; Lwin, Wirtz, and Stanaland 2016, 919; Pelet, Ettis, and Cowart 2017, 115). Results indicate that visual appeal and perceived usability affect consumers' purchase intentions indirectly, albeit differently. Consequently, it can be confirmed that the organism component in the S-O-R framework focuses on an individual's cognitive and affective states as a result of his/her interaction with environmental stimuli, which in turn affects the response (Loureiro and Ribeiro 2011; Mehrabian Russell 1974).

The hypotheses that the relationships between the constructs as depicted in the conceptual model do not exhibit equivalent regression weights across the different online retailer types can be supported. These results are plausible given that Amazon has been competing in the online environment for much longer than Takealot and has established a reputation of

trustworthiness (Marketline 2017). Considering halo effects, consumers' perceptions of the Amazon website's trustworthiness will subsequently be more favorable, leading to an increase in purchase intentions. However, Takealot still requires time to establish a favorable reputation, which could explain why the source of its trust is rooted in its perceived usability and the flow consumers experience during website usage. Therefore, it can be argued that there are different sources of competitive advantages for Amazon and Takealot.

In conclusion, the results of the study confirm the validity of the S-O-R framework as a theoretical base for understanding how purchase intentions can be fostered from online retailer websites in emerging markets. Such understanding is rooted in the sequential nature of the S-O-R framework, which is confirmed by the results from mediation analyses. It was determined that visual appeal and perceived usability (stimuli) influence customers' purchase intentions (response) via flow and website trust (organism's cognitive and emotional states). This sequential nature is consistent when controlling for gender and prior online buying experience, as well as across the comparison of the study's two online retailers, Amazon and Takealot.

#### Limitations and directions for future research

Although good arguments were presented in this study, it only focused on visual appeal and perceived usability, whereas future studies could explore other constructs of the online servicescape—such as perceived security, customization, interactivity, and relevance of information-to foster purchase intentions from consumers in emerging markets. Moreover, no distinction was made among the different types of devices that consumers use to access online retailers' websites. Given the emergence of omnichannel retailing (Verhoef, Kannan, and Inman 2015, 6), it is worth exploring flow experienced across different consumer touchpoints and the resultant shopping behavior. Future studies could also investigate possible moderating effects of other variables, including self-efficacy, brand familiarity, and previous encounters with online retailers. In addition, the vignette focused on a specific buying situation for a particular product category. Subsequent studies could adapt vignettes across different purchase situations and product categories to reflect various levels of consumer involvement (Sanchez-Franco 2009, 247). Last, the comparison results of this study is limited to only one emerging market (South Africa) and two online retailers (Amazon and Takealot). Future studies comparing results across different countries and different types of online retailers could also offer valuable insight.



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### **Appendix**

# Exhibit 1: The imaginary online buying task.

Please access the Internet via your PC, laptop, tablet, or any other device. Pretend that you want to buy a new smartphone as a birthday gift for a close friend from (interviewer check online retailer website rotation). Because you are not sure which smartphone to buy, you decide to spend a few minutes browsing the website. After you have selected the smartphone, add the selected option to your shopping basket, check out, and head to the payment/shipping detail page(s), but do not complete the transaction.