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The 'new' bricks-and-mortar store: An evaluation of website quality of online grocery retailers in BRICS countries

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Background: Online grocery retailing holds potentially fruitful outcomes for retailers and consumers. However, both retailers and consumers have been slow to adopt and participate in this form of *grocery* retailing, especially in countries with emerging economies such as those in BRICS (Brazil, Russia, India, China and South Africa) countries.

Objectives: Websites are significant in an e-supply chain, as they replace the conventional bricks-and-mortar store. This article fills a gap in the literature by considering the website as a barrier to online grocery retailing.

Method: The website qualities of nine online grocers from BRICS countries are evaluated through content analysis to determine whether the website is a possible barrier. Two prominent online grocers' websites from the United Kingdom (UK) served as the benchmark.

Results: The findings indicate that the websites of online grocers in BRICS countries comply with the quality criteria and are comparable (in terms of quality) with the websites of leading online grocers from the UK.

Conclusion: In line with the findings, it can be concluded that a website is not a barrier impeding the growth of online grocery retailing in the emerging economies of BRICS countries.

Keywords: website quality, content analysis, developing countries, grocery retailers

Introduction

The last decade has increasingly seen advances in communication and information technologies that have enabled the creation of new service/brand experiences to facilitate much greater communication, control and individualization in how organizations conduct business (O'Cass and Carlson 2012). The internet and the business opportunities it offers has had an impact on the integration of key business processes from the end user (final consumer) to the original suppliers that provide products, services and information which add value for customers and other members in a supply chain (Giménez and Lourenço 2008). For organizations engaged in electronic commerce, the website has emerged as their 'window to the world' or the single most important interface for both consumers and employees to conduct business (Tarafdar and Zhang 2005). Furthermore, the website forms part of the online sales force of an organization and acts as the centre of all online activities (Van Huyssteen, Strydom, and Rudansky-Kloppers 2015). In online retailing, the website supports the traditional bricks-and-mortar store; hence the website serves as the primary contact point between the customer and the retailer in online grocery retailing. It could, therefore, be argued that, just as a traditional bricks-and-mortar store would be designed to stimulate additional product purchases and to create a pleasant retailing experience, the website should have similar (unique) design elements. This article considers what these unique design elements (particularly for online grocery retailers) could be. This article forms part of a larger study that explored barriers to online grocery retailing in South Africa and other emerging BRICS countries. Furthermore, the article focuses specifically on the quality of the website in the 'last mile' of the e-supply chain, with a particular focus on grocery retailing.

In South Africa, despite a growing online retail market, retailers and consumers have been slow to adopt, and participate in, online grocery retailing. The same trend is noticeable in other emerging economies (Euromonitor International 2015a). This is understandable since online retailing is such an unconventional method of selling or purchasing groceries between retailers or distributors and consumers. Therefore, it is obvious that, for online grocery retailing to be successful and grow, the market environment and the economy, in general, must create an enabling environment. The online retailer, for example, needs to have relatively sophisticated businesses processes, and both the retailer and the consumer must be proficient in, and comfortable with, the use of technology (Cook 2014). Also, a relatively sophisticated financial structure is needed to facilitate online payment, in addition to distribution infrastructure to make delivery possible (Payne, Storbacka, and Frow 2008). Owing to the fact that e-commerce is becoming a fast-growing phenomenon in emerging economies, one can assume that the market conditions in emerging economies are sufficiently enabling general online retail. If the market conditions are in place, the *website* (the first point of engagement between the customer and the online retailer) might constitute a possible barrier for consumers to participate in online grocery retailing. Accordingly, this article specifically focuses on determining the quality of the websites of online grocery retailers in different emerging economies. The *main purpose* of this article is to report on explorative research conducted to answer the following primary research question:

- Does the quality of online grocery retailers' websites in emerging economies enhance or inhibit the growth of online grocery retailing?

To answer the primary research question, the following secondary research questions needed to be answered:

1. *Why would (or how could) the website of an online grocery retailer inhibit the growth of online grocery retailing in emerging economies?*
2. *What are the qualities of a website that facilitate online grocery retailing?*
3. *How does the quality of websites of online grocery retailers from the BRICS countries compare with the websites of successful online grocery retailers from a developed country?*

To answer the research questions, a literature review was conducted and primary data were collected. During the literature review phase, the researchers examined and expanded on a previously developed website-analysis instrument by adding elements to the instrument from more recent sources to refine and update the instrument to be used in the primary data collection phase. Primary data was collected through the application of the previously developed website-analysis instrument. The instrument was used to analyze the websites of online grocers in South Africa, Brazil, Russia, India and China. In addition, two prominent online grocery retailers' websites from the UK were analyzed and serve as a benchmark for BRICS countries.

This article is structured as follows. In the next section, the findings from the literature review are discussed. This discussion include factors to consider when designing a grocery retailer's website, as well as a brief discussion on online retail conditions in the respective BRICS countries. Next, the research method and design are outlined, followed by the results and conclusions of the study.

Literature review

Online retailing holds potentially fruitful outcomes for both retailers and consumers. From a retailer's perspective, it offers direct contact with consumers. Through

this, a retailer can build personalized data systems, mapping consumer behaviour and consequently be able to recommend other products consumers might be interested in (Lim, Widdows, and Hooker 2009; Doherty and Ellis-Chadwick 2009; Williams 2009; Chu et al. 2010). Consumers, on the other hand, can observe the entire shopping basket from packaged goods to CDs and even perishable foods (Ferreira 2009), all in the convenience of their own homes. As online retailing evolves, the service will not only offer the added benefit of product and price comparisons but will also reduce some of the limitations of traditional brick-and-mortar retailing, such as travel to and from retailing facilities and restricted retailing hours (Chu et al. 2010).

The website as the first barrier to online grocery retailing

As mentioned previously, this article forms part of a larger study which aimed to consider all the barriers to, and motivators for, online grocery retailing in South Africa. During the larger study, it was recognized that the online grocery retailer's website serves as the first 'touch point' the retailer has with the consumer (Snyman 2014). Therefore, if the website is not user-friendly and inhibits the retailing experience, the consumer will most likely not convert from simple web browsing to active online shopping. Figure 1 illustrates a simple online grocery retail supply chain and some of the possible barriers that may be experienced during each phase of the supply chain.

As indicated in Figure 1, several authors have found a variety of barriers which prevent both grocery retailers and consumers from actively engaging in this mutually beneficial form of trade (McTaggart 2006; Ellis-Chadwick 2008; Williams 2009; Xing et al. 2011; Thirumalai and Sinha 2011; Wang et al. 2011; O'Cass and Carlson 2012). The studies reflected on various factors that might influence the slow adoption rate by both retailers and consumers with respect to online grocery retailing, some of which include website security, ease of

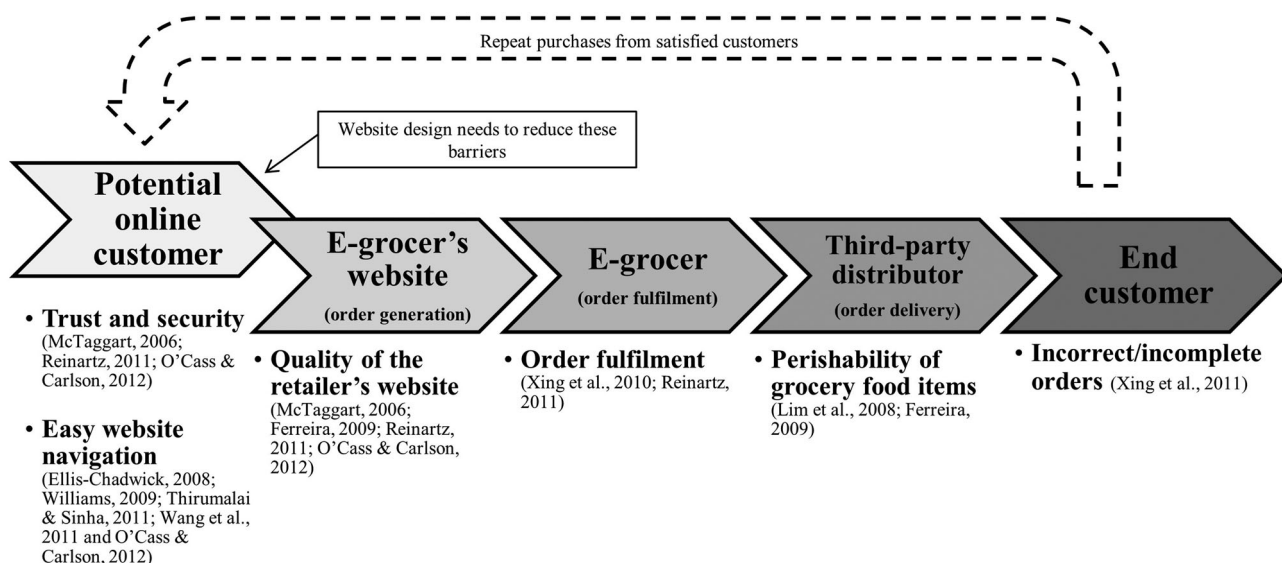


Figure 1: Online grocery purchase process and some barriers experienced during each phase
Source: Compiled by the authors from the results of the larger study

navigation, service delivery, delivery times, and legal and regulatory issues (Ellis-Chadwick 2008; Williams 2009; Thirumalai and Sinha 2011; Wang et al. 2011; O'Cass and Carlson 2012). However, few of these studies specifically considered the role websites play as a barrier to online grocery retailing; nor have they taken an emerging economy perspective on the topic. In the next section a brief history of online retailing is presented, followed by a discussion on the most important quality features retailers should consider when designing a website.

The internet and retailing

The internet has presented traditional retailers with the opportunity of connecting with their consumers on a much deeper level, meaning that retailers can now track consumer preferences through the use of consumer analytics to provide each consumer with personalized service experiences. However, the transition to online retailing has not been as effortless as expected. Lee (2011) argues that the lack of previous knowledge and experience of managing and designing an online platform has led to an increase rather than a decrease in the transaction costs of selling a product. Therefore, it has become crucial to design retail websites in such a way to ensure that both parties reap the maximum benefits while reducing costs (Lim, Widdows, and Hooker 2009).

The history of the internet and e-commerce

Initially, the internet was not developed for commercial use. 'When conceived in 1969, the then ARPAnet was purely the domain of US government research agencies and academic institutions...' (Cockburn and Wilson 1996, 83). It was not until 1991 that businesses were finally allowed to connect to the ARPAnet to form what is known today as the internet. In 1994, the first ever online sale was conducted when the American pizza company, Pizza Hut, sold a pepperoni and mushroom pizza, with extra cheese (Zakon 2014). Since then, many different organizations have adapted their business processes to offer consumers a wider variety of commerce channels or, at least, additional ways for them to obtain information about the organizations, available on their websites.

The aim of this article is to determine whether the *quality of online grocery retailers' websites in emerging economies enhances or inhibits the growth of online grocery retailing*. The following section discusses the functions of a commercial website and indicates what retailers should consider when designing such a website.

The commercial website

Traditional retailers spend vast amounts of money and effort on finding a prime location, developing a competitive advantage and building service offerings in an attempt to satisfy the needs of their in-store consumers. With the birth of online retailing, multichannelled retailers (that offer their products both in traditional retail stores and online) are faced with a new challenge: designing their online presence (the retail website) with the same rigour as designing a physical store (Snyman 2014). The website serves as the virtual shop in online

retailing; hence, the importance and value of a well-designed website cannot be understated. If the website is seen as the first touch point the online retailer has with their online customers, online retailers should put the same effort into the design of their website as traditional retailers would when designing a retail store. Additionally, the website could be a barrier to customers engagement since it serves as the central point for order generation (i.e. customers expressing demand) and for order fulfilment (i.e. supply from retailers) (Crespo and Del Bosque 2010).

In traditional retailing, consumers have a tangible shopping experience, that is, they are able to walk into the store, touch, feel and experience the products while receiving personal, face-to-face advice from sales staff. This experience is absent from online grocery retailing. Several authors, such as Enders and Jelassi (2000), Cowles, Kiecker, and Little (2002) and Chu et al. (2010), argue that the intangibility of online retailing is one of the main barriers to consumers engaging in online grocery retailing, as the consumer loses the advantage to self-select fresh produce. As a result, care should be taken by grocery retailers when designing their online platforms to ensure that the quality of the online retailing experience compares favourably with the in-store experience (Mpinganjira 2015).

Measuring website quality is not necessarily objective in nature. Rather, it is closely related to online customers' subjective perception of a website through interaction with the site. Therefore, findings in this article may provide an indication of the different qualities of online grocery retailers' websites in comparison with others, as well as identify possible shortcomings. The analysis might further indicate whether different websites' qualities inhibit or enhance the growth of online grocery retailing.

Factors to consider when designing a grocery retailer's website

For the purpose of this study, a previously developed website-analysis instrument was used. The instrument originally developed by Rha et al. (2001), and further developed by Lim, Widdows, and Hooker (2009), including constructs by Åberg and Kurdieh (2013), was used to analyze the qualities of the online grocery websites in terms of the three categories and items mentioned above. The instrument evaluated the qualities of the websites from a customer's perspective. Three broad categories were evaluated: product information qualities, customer service qualities and e-business qualities. The *product information qualities* category contains mostly sustainable criteria such as nutritional information, place of origin, contact with suppliers, production processes and organic produce. The *customer service qualities* category mainly contains the items that make it easy for the customer to do online shopping, such as order form submission, additional contact details, communication about the order, cancellation, etc. The *E-business qualities* category includes items such as the ease with which products can be found, additional services such as the provision of recipes, pictures of products, quick searches, and promotions (Rha et al. 2001; Lim, Widdows, and Hooker 2009; Åberg and

Kurdieh 2013). These categories are discussed in more detail below, and the specific items per category are reflected in Table 2.

Product information quality

Selling groceries online poses unique challenges for retailers, such as designing the website in such a way to reduce the perceived effect of intangibility on consumers' willingness to purchase perishable grocery items online. Hence, the website should be designed in such a way to provide customers with full product and nutritional information. Customers should be able to access all the information on a product in the same way they would when walking into a grocery store, picking up a product, and reading the product information on the label. This is particularly true of perishable grocery products, as customers may use the product information as proxies for product quality. It is, therefore, crucial for online grocers to overcome the intangibility of selecting groceries online by providing customers with the same information that they would have received when purchasing a product in a bricks-and-mortar store (Lim, Widdows, and Hooker 2009).

Customer service quality

Wu and Liao (2016) define customer service quality by distinguishing between technical quality (what is done) and functional quality (how it is done). They argue that it is widely accepted that perceived service quality represents the discrepancy between the customer's expectation and his or her perception of the service. In terms of website quality, Lim, Widdows, and Hooker (2009) found that most websites lack an avenue for personal interaction between the organization and its customers. They also note that websites lack features that allow consumers to solve problems themselves – for example by tracking, cancelling or changing orders on the website – which would make the process convenient for them. Furthermore, they found that some online retailers' websites contain additional features that consumers value, such as recipes. They stress the importance of transferring quality and what consumers value in traditional retailing, onto the website.

E-business quality

Lim, Widdows, and Hooker (2009, 842) define e-business quality as 'the ability of a web site to facilitate the online ordering process'. E-business quality can be a major role player in determining consumers' purchase intentions on online grocery websites. Ease of use (or navigation) has proven to be one of the most important determining factors influencing consumer perceptions of website quality. Given the frequent purchase of groceries, a user-friendly website will be an important factor in influencing consumers' experiences of online purchasing of groceries (Turel, Connelly, and Fisk 2013). Online grocery retailers might lose valuable income if consumers perceive their websites as difficult to navigate (Barnard and Wesson 2003; Crespo and Del Bosque 2010). These last-cited authors argue that return visits can be directly linked to the ease with which consumers can use a website.

Usability can be measured in terms of effectiveness, efficiency and satisfaction. Effectiveness is measured according to how easily consumers can complete the task at hand. Efficiency is measured in terms of time, that is, how well the website's design allows a consumer to complete the task at hand in a reasonable amount of time. Satisfaction is best measured by asking the consumer to complete a satisfaction survey to determine which aspects of the website still need attention (Crespo and Del Bosque 2010). Table 1 identifies and briefly describes previous studies where retail websites were analyzed.

Table 1 serves as brief background to previous studies pertaining to this topic. The findings of the identified studies list several factors crucial to the success of commercial websites, some of which include: information availability, navigation/usability, customer service and security/trust. In the next section of the article, the retail landscape of each BRICS country is considered briefly.

Online retail conditions in BRICS countries

In the short summary that follows, conditions in the BRICS countries are outlined, to provide a broad perspective of circumstances regarding online retailing. This discussion serves to provide a general overview of the conditions (which serve as barriers to, or motivators for, online grocery retailing) in these countries.

South Africa

As stated previously, online retailing is becoming a fast-growing phenomenon in trade between retailers and consumers. However, online *grocery* retailing seems to be lagging far behind. In *South Africa*, the internet has become an important part of South Africa's GDP, as internet sales contribute more than 2% to the GDP. Furthermore, 63% of all small businesses in South Africa have a website (World Wide Worx 2012), reinforcing that even the most basic businesses need a website to stay competitive. In South Africa, it is clear that, despite a fairly modern economy, substantial internet connectivity (51.9% of the population, according to the World Economic Forum (WEF) 2016-2017), and the rapidly increasing trend of modern consumers who purchase a wide variety of items online, online grocery retailing is still not a generally accepted as a form of grocery distribution. To put online retailing in perspective, it is reported that internet retail sales form only a small share of total retail sales (Euromonitor International 2015a). However, internet retail sales continued to be the most dynamic channel in South Africa's retail market with Euromonitor International (2017a) reporting a 23% growth between 2016 and 2017. This can be attributed to an improving infrastructure, the high rate of mobile penetration, the availability of more payment options, as well as a growing number of middle-income consumers. Leading retailers across various channels in the South African retail market have adopted a multichannel approach in an effort to supplement bricks-and-mortar sales with online sales. Multi-channel retailing refers to the multi-track sales and distribution channels of a single retailer, i.e. the number of commerce channels a retailer offers their customers (Kourimsky and Van Den Berk 2014).

Table 1: Previous studies where website qualities were analyzed.

Article title	Authors	Year published	Brief description and findings
Web content analysis of e-grocery retailers: a longitudinal study	Lim, Widdows and Hooker	2009	The authors conducted a longitudinal study where websites were content-analyzed in 2003 and again in 2005. Our paper draws on the classification of Lim, Widdows, and Hooker (2009) who divided the websites of e-grocers into three categories: product information, customer service and e-business quality. The authors concluded that websites of e-grocers do not appear to be effective in delivering quality information to consumers. Additionally, results indicated that over the two periods of analysis, e-grocers improved the presentation of product information on their websites. However, no significant difference in the customer service category was reported. In terms of e-business quality, the results showed that retailers focused mainly on improving this category, as the most noticeable changes were reported in this category.
Key website factors in e-business strategy	Hernández, Jiménez and Martín	2009	The website of a pure-player online retailer was content-analyzed using a case study methodology. The purpose of the study was to determine the key aspects to be taken into account when designing a commercial website. The study had two significant findings. Firstly, high levels of navigability put users at ease and increased their perceptions of security when browsing the website, which increased the probability of a transaction being completed. Secondly, the information provided on the website must be accurate, informative, updated and relevant to customers' requirements.
Website attributes that increase consumer purchase intention: A conjoint analysis	Chen, Hsu and Lin	2010	In this two-stage research study, website attributes and features, as well as consumers' online shopping intention, were analyzed, using a sample of 1567 consumers. The findings identified the five most important design features retailers should consider when designing their commercial websites. The five identified features are usability, delivery, security, trust and convenience.
The effects of usability and web design attributes on user preference for e-commerce websites	Lee and Koubek	2010	Several data collection methods were used to determine the main features/attributes consumers value when using e-commerce websites. The findings identified content organization, navigation systems and visual organization as the three main categories influencing consumers' perceptions of a website. The overarching finding from this study suggests that website designers should consider the overall 'feeling' of the website with relation to the characteristics of their specific target consumers.
Consumer trust and distrust: An issue of website design	Ou and Sia	2010	The study conducted an extensive literature review in addition to the online survey completed by 324 consumers. The findings of the study found that high levels of distrust from consumers resulted from low levels of perceived functionality of the websites. Contrarily, high levels of trust were recorded for websites with value-added services. Their findings suggest that technical functionality (response time, accessibility), situational normality (the websites ability to simulate the traditional shopping experience) and information quality are the most important design features which should be considered during the design of an e-commerce website.
The art of appeal in electronic commerce: Understanding the impact of product and website quality on online purchases	Liu, Xiao, Lim and Tan	2017	423 consumers using e-commerce websites completed an online survey aimed at determining consumers' perceptions of e-commerce websites based on product and website appeal. The study's findings suggest that for experienced consumers service quality is more important than website or product quality; whereas while inexperienced consumers rely heavily on product-oriented functionalities when using e-commerce websites.

Only two of the large grocery retail chains in South Africa offer their customers an online grocery service. Consequently, the growth of online grocery retailing is not in line with the growth of the total grocery industry (Euromonitor International 2015a).

Brazil

In Brazil, it is estimated that online grocery sales have only a 1% market penetration, while more mature countries have a 5 to 6% grocery market penetration. 'Brazil's online food retail market is, as in many emerging markets, still in its infancy' (Krizanovic 2015). The WEF indicates that 59.1% of Brazilians have access to the internet (WEF 2016-2017) and Euromonitor International (2015b) reports that many retailers in Brazil adopt multichannel strategies to compete in the market. They aim to offer consumers, and particularly loyal customers, a wider range of services. Nevertheless, Brazilians still prefer to purchase their food personally in supermarkets (Thomas White International 2012). They regard personal shopping as quicker and easier and believe that online grocery retailing is for individuals who do not have time to go to the supermarket. However, a positive trend is noticeable on the part of both consumers and retailers. Euromonitor International (2017b) reports that a surge in smartphone penetration from 7% in 2011 to 43% in 2016 resulted in a major increase in online retailing in Brazil. Initially, only shoppers purchasing large volumes used online retailing. However, this is changing and more diverse and middle-class customers are using online grocery retailing. On the retailers' side, more established retailers and pure players (with only one type of distribution – either online or bricks-and-mortar) are entering the online grocery channel. One retailer offers the service in 16 cities in the country. There is also substantial investment in technology in Brazil in order to improve the use of this channel (Krizanovic 2015).

Russia

According to the WEF (2016-2017), 73.4% of the population in Russia uses the internet. Conventional grocery retailing accounts for more than 50% of the overall retail market in Russia (Market Research Report 2015). Euromonitor International (2015c) reports a slowdown in the Russian economy, which has caused lower growth in retail sales. To stimulate sales, large Russian retailers make use of information technology and have turned their focus to the development of effective multichannel retailing strategies. This trend is expected to continue. Multichannel grocery retailers in Russia are expected to increasingly displace traditional grocers as they continue to expand in mid-sized and small towns (Euromonitor International 2015c). Yet, Gorst (2013) found that online sales in Russia account for only 2% of total retail sales, and are nowhere near those of developed countries such as the United States of America (USA), which reports that 10% of retail sales is generated through online channels.

India

Grocery retailing in India forms a 60 to 70% part of all traditional bricks-and-mortar retail. However, *online* grocery retailing forms only a minuscule part of the total online retail trade. Despite the fact that only 26% of Indians have access to the internet, the Indian population is so large (more than 1.34 billion citizens according to the WEF (2016-2017)) that the number of online grocery stores experimenting with different business and delivery models is mushrooming. Many of these are hyper-local, catering to single cities, sometimes even to certain neighbourhoods of a city. Although online grocery retailing still forms a diminutive part of online retailing in India, Mitter and Bhat (2014) report that the online grocery retail market is growing at 25 to 30% in metros and other large cities in the country. Euromonitor International (2015d) supports these findings and also found stable growth in online retailing in India, indicating that the number of new shoppers switching to internet retailing and the number of existing customers returning to this retail channel are enormous.

China

It is reported that, owing to China's large population (1.37 billion according to Euromonitor International 2016) and particularly high population density in cities, consumers experience overcrowded supermarkets and long checkout lines, which therefore make online grocery retailing a good alternative for them. Therefore, internet retailing has become one of the most popular ways for consumers in China to shop. Euromonitor International (2016) reports that potential demand, rising purchasing power and the growing quest for high-quality imported products amongst Chinese consumers, has caught the attention of many international organizations which continue to seek business opportunities in China. Wanting to compete in the Chinese market, these international organizations are moving away from opening traditional brick-and-mortar stores but rather opting for online stores as their first point of entry. Additionally, Euromonitor International and the WEF (2016-2017) report that increased urbanization, high population density and low labour cost, coupled with Chinese consumers' increased focus on food safety, have seen Chinese consumers searching for better-quality food products online. A trend that is becoming clear in China is that traditional brick-and-mortar retailers are also starting to move online to differentiate themselves from their competitors. There is also a trend of virtual online grocery retailing by means of mobile phones (Mir 2013); however, only 50.3% of Chinese have access to the internet (WEF 2016-2017). Despite this, it is estimated that online grocery retailing stands at 1 to 2% of all grocery retailing in China, but is expected to grow to 20 to 30% in future.

Research method and design

In addition to the literature study, qualitative data was collected in the form of website analyses of the websites of 11 online grocery retailers in BRICS countries.¹ With qualitative methodologies, small, non-probability, purposive samples are mainly employed (Cooper and Schindler

2011). For the purpose of this article, non-probability purposive sampling and, specifically, *judgement sampling*, was selected. Here, the researcher arbitrarily selects sample units which conform to certain criteria (Cooper and Schindler 2011). Since only two South African grocery retailers offer their groceries for purchase online, the researchers could easily access the websites of these two online grocery retailers from South Africa. However, the question of determining which online grocery retailers' websites from the other BRICS countries should form part of the article proved to be quite challenging. Since English is not the primary official national language of any of the other countries making up the BRICS countries, most of the online websites were in the official national language of the specific country (i.e. Brazil – Portuguese; Russia – Russian; India – Hindi; and China – Mandarin). Nevertheless, with a World Wide Web search the researchers could access online grocery websites with a translation function, and, as a result, were able to conduct website analyses of two online grocers in Brazil, two in India, two in China and of one in Russia. Lastly, two well-established, successful online grocery retailers' websites from the UK were accessed and used as a benchmark for the BRICS countries' websites.

Data analysis: Content analysis

Website analyses are categorized as an empirical action in which existing (secondary) data in the form of textual data are used, which are then analyzed using *content analysis*. Considering Table 1, it becomes apparent that content analysis is a widely used methodological application for analyzing websites from across an array of different industries and business-related scholarly applications. Content analysis is considered to be more *qualitative* in nature because of its lack of extensive statistical analysis (Kim and Kuljis 2010). Consequently, it was considered an appropriate data-analysis technique for this qualitative article. There are several applications of content analysis, such as conventional, summative and directed content analysis (Hsieh and Shannon 2005). *Directed content analysis* was used to analyze the websites, as the analysis was based on a previously developed instrument, and further knowledge could be gained through the application of the instrument to a different context (i.e. online grocers' websites in South Africa and other BRICS countries).

Data collection

In order to collect the data for this article, the researcher visited the websites of all 11 online grocery retailers within a period of 24 hours and identified several 'like-for-like' grocery items, for example, a two-litre bottle or carton of full-cream milk, a standard white loaf of bread or standard cheddar cheese. These 'like-for-like' grocery items were used for evaluation of all 11 e-grocery websites to ensure a sound conclusion could be drawn from the results of the website analysis.

Considering each attribute from the website-analysis instrument individually, the researcher visited each of the identified websites and found one of the predetermined 'like-for-like' grocery items. The researcher then visited

the web page of the e-grocer containing, for example, the standard white loaf of bread. Once the researcher located one of the predetermined 'like-for-like' grocery items, the researcher consulted the website-analysis instrument. Taking one of the attributes on the instrument, for example (P1a): 'Can you get a complete list of ingredients for the products?', the researcher searched the web page to determine if ingredients such as wheat, flour, water and yeast commonly found in a standard white loaf of bread were present on the web pages of the respective online grocery retailers' website. If the attribute was present, the researcher ticked (✓) the website-analysis instrument; if the attribute was not present on the website, the researcher left the attribute 'unticked'. However, to reduce researcher error where it was found that an attribute seemed to be missing from the website, the researcher evaluated a second 'like-for-like' grocery item to ensure that the website-analysis attribute was, in fact, missing from the website. The purpose of the website analysis was to find similarities and differences and to identify possible shortcomings in the online grocery retailers' websites.

Methods to ensure trustworthiness of the data

In qualitative research, reliability and validity are described through trustworthiness (Morse et al. 2002). To ensure *objectivity* and *trustworthiness*, a previously developed and tested (validated) instrument for analyzing online grocers' websites was used. This instrument, first developed in 2001 by Rha et al. (2001), was adapted to include constructs from more recent work (Lim, Widdows, and Hooker 2009; Åberg and Kurdieh 2013). Furthermore, the reliability was ensured through member-checking (Creswell and Miller 2000). The researcher approached two other researchers with the request that they also evaluate the websites of the online grocers using the same instrument. They conducted the analysis three days after the researcher conducted the initial website analysis. Their findings were compared with those of the initial analysis. Any inconsistencies were double-checked to ensure that the features were present/missing from the online grocers' websites.

Results

The results of the website analysis were individually recorded and populated in a matrix which was used to compare the analyzed websites with one another. Table 2 represents the matrix.

As previously mentioned, the instrument contained three categories, each with items or criteria for evaluation of the websites. The instrument consisted of a total of 35 items or criteria relating to quality. Of these criteria, only 5 of the 35 were present on every website. In terms of *product information quality*, all the websites contained nutritional information on products (P1), as well as information on organic products (P7). This finding indicates an evolvement from the original findings of Lim, Widdows, and Hooker (2009), which indicated that only 48% of the websites contained nutritional information on products. In the category *e-business quality*, all the websites had a search tool (E1) allowing customers to search for

Table 2: Matrix of website qualities.

		South Africa		UK (benchmark)		Brazil		Russia	India		China		Total
		Wool- worths	Pick n Pay	Tesco	Asda	Pao de Acucar	Globus Gour- met	Alpha-bet of Taste	Big Basket	Local Banya	YHD	JingdongMall	Out of 11 websites
PRODUCT INFORMATION QUALITY													
P1	Does the website contain any nutritional information about the products?	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	11
P1a	• Can you get a complete list of ingredients for the products?	✓	✓		✓	✓	✓	✓	✓		✓	✓	9
P1b	• Can you get a complete list of nutritional facts for the products?			✓	✓	✓	✓	✓	✓		✓	✓	7
P1c	• Can you find nutritional information on all processed foods?	✓		✓	✓	✓		✓	✓				6
P2	Can you ask store nutritionists for more detailed nutritional information?	✓											1
P3	Can you search for products in terms of place of origin?			✓	✓		✓	✓			✓	✓	6
P4	Can you get detailed information about specific farms and farmers?				✓			✓				✓	3
P5	Are there direct links to the different producers' or processors' websites from the grocer's site?				✓							✓	2
P6	Can you get detailed information about the production process (e.g. what kind of seeds have been used, how long the wine has been aged, etc.)?	✓		✓		✓		✓		✓		✓	6
P7	Does the e-grocer sell organic products?	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	11
P7a	• Can you get detailed information about which products are organic?	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	11
P7b	• Can you find out who certifies the organic claim?			✓					✓		✓	✓	4
P7c	• Can you search for organic products only?	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	11
13 Elements of product information quality		8	5	9	9	8	7	10	8	5	8	11	
CUSTOMER SERVICE QUALITY													
C1	Is there a standard form to fill out and send via e-mail?	✓	✓	✓	✓	✓	✓	✓	✓				8
C2	Is there a phone number listed for a service centre?	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		10
C3	Are there different e-mail addresses for customer service and technical support?	✓		✓	✓		✓		✓		✓	✓	7
C4	Does the e-grocery promise to call the customers to resolve problems?		✓					✓	✓				3
C5	Is there a link to frequently asked questions (FAQs)?	✓	✓	✓	✓		✓		✓	✓	✓	✓	9
C6	Can you cancel your order online?	✓	✓	✓	✓	✓			✓	✓	✓	✓	8
C7	Can you phone to cancel your order?	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	10
C8	Do you get a confirmation e-mail once your order has been accepted?	✓	✓	✓	✓		✓		✓	✓	✓		8
8 Elements of customer service quality		7	7	6	7	4	5	4	8	5	5	4	
E-BUSINESS QUALITY													
E1	Is there a search tool to let you locate the product directly?	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	11
E2	Are the products categorized into groups?	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	11
E3	Can you get recipes?	✓	✓	✓		✓	✓	✓		✓			7
E4	Can you get recipes linked from other home pages (outsourced)?						✓						1
E5	Is there a quick search tool (e.g. by keywords) for recipes?	✓	✓	✓		✓		✓					5

E6	Are there pictures on the recipe pages?	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	7
E7	Can you easily print out the recipes?			✓	✓	✓	✓	✓	✓	✓	✓	4
E8	Can you automatically add recipe ingredients to your shopping cart?	✓		✓	✓	✓	✓	✓	✓	✓	✓	3
E9	Does the website provide product pictures?	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	11
E9a	• Two-dimensional – 2D	✓		✓	✓	✓	✓	✓	✓	✓	✓	10
E9b	• Pop-up image (enlargement)	✓		✓	✓	✓	✓	✓	✓	✓	✓	7
E10	Is there any music on the website?											0
E11	Are there promotions on the e-grocer's website?	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10
E12	Is there an option to review (or leave comments) on the website?			✓	✓	✓	✓	✓	✓	✓	✓	8
14 Elements of e-business quality		10	7	11	6	10	11	10	7	9	7	7
Website total out of 35		25	19	26	22	22	23	26	23	19	20	22

specific products. This finding again indicates an evolution from the original study of Lim, Widdows, and Hooker (2009) who found that only 80% of the websites had a search tool. All the websites also categorized their products into groups (E2) to allow customers to find the products they are looking for easily. Lastly, all the websites also illustrated their grocery products using two-dimensional pictures (E9a). The only element relating to quality not found on any one of the 11 online grocers' websites was music (E10).

In terms of *product information qualities*, Jingdong Mall (China) and Alphabet of Taste (Russia) had the most items or criteria present on their websites (26 out of 35). In contrast, Pick n Pay (South Africa (SA)) and Local Banya (India) had the lowest number of product information quality items or criteria on their websites (19 out of 35). Other noteworthy findings from the website analysis were that only Woolworths' website (SA) allowed consumers to ask a nutritionist questions (P2). Furthermore, only three websites, those of Asda (UK), Alphabet of Taste (Russia) and Jingdong Mall (China), contained information on specific suppliers, for example on the specific farm where the produce comes from (P4). Only Asda (UK) and Jingdong Mall (China) provided direct links to different producers'/processors' websites (P5). In addition, only four websites provided information on which authorizing body certifies their organic food (P7b). These are Tesco (UK), Big Basket (India), YHD (China) and Jingdong Mall (China).

Considering the totals of the *product information category*, it can be concluded that most of the online grocery retailers evaluated should improve in this category. Overall, the online grocery retailers scored the lowest in this category (88 product information quality elements out of a possible 143 across all 11 websites, indicating an overall percentage of 61.5 as seen in Table 3). With regard to the individual items in the product information category, it is clear that the items mostly absent from the online grocery retailers' websites are: 'Can you ask a nutritionist for more information?' (P2); 'Are there direct links to the different producers' or processors' (*suppliers of the retailers*) websites' (P5); and 'Can you get detailed information about specific farms and farmers?' (P4). Although these items cannot be regarded as crucial product information items, retailers should keep in mind that online customers have some level of sophistication and that they might value transparency in terms of sustainability.

In the *customer service quality* category, Big Basket (India) met all the customer service quality criteria on its website (8 out of 8). Close behind was Woolworths

(SA), Pick n Pay (SA) and Asda (UK) (7 out of 8). Thus, the conclusion can be drawn that South African online grocers pay attention to customer service elements when designing their online retailing platforms. The UK websites are doing nearly as well in this regard, with the other emerging economies' websites following close behind. Concerning the items or criteria relating to customer service quality lacking from online grocery retailers' websites, only three online grocery retailers promise to call/phone customers to resolve problems (P4). They are Pick n Pay (SA), Alphabet of Taste (Russia) and Big Basket (India). In general, most of the online grocers scored well in this category and the highest overall in respect of the three categories relating to website quality (the score being 62 customer service elements relating to quality out of a possible 88 across all 11 websites, indicating an overall percentage of 70 for the customer service category).

In the *e-business quality* category, Globus Gourment (Brazil) and Tesco (UK) scored the highest (11 out of 14). In contrast, Asda (UK) lagged behind with the least e-business items in respect of quality (6 out of 14). Additional features, such as the automatic adding of recipe ingredients to the shopping cart (E8), were offered by Woolworths (SA), Tesco (UK) and Pao de Acucar (Brazil). E-business quality is important, as it is mainly concerned with the ease of navigation of the website, also identified by several previous authors as crucial in website design when considering Table 1. Overall, the online grocers' websites scored relatively well in terms of the e-business items or criteria regarding quality (scoring 95 e-business quality elements out of a possible 154 across all 11 websites, indicating an overall percentage of 61.6 for this category).

Conclusion

The conclusion can be drawn that a website can indeed *facilitate or inhibit online retailing*, particularly since the website serves as the first, and sometimes only, touch point an online grocery retailer has with their customers. This answers the secondary research question: *Why would (or how could) the website of an online grocery retailer inhibit the growth of online grocery retailing?* In addition, the main *qualities of a website* (product information quality, customer service quality and e-business quality) became clear throughout the literature discussion, which provides insight into the secondary research question: *What are the qualities of a website that may facilitate online grocery retailing?*

Table 3: Summary of overall scores of the website analysis.

	Overall score (calculated by the sum of total scores from all 11 websites)	Total possible score (calculated by the number of items in the category × all 11 websites)	Percentage for each category (calculated from the previous two columns)
Product information quality	88	143	61.5%
Customer service quality	62	88	70%
E-business quality	95	154	61.6%

From the *overall score* of the website analysis, the following conclusions can be made. The website with the most items or criteria relating to quality from the developed country was the website of Tesco (UK) (26 out of 35). The websites from the UK were included in the article to benchmark the online grocery retailers' websites from the BRICS countries with the websites of online grocery retailers from developed countries. The best-designed online grocery websites from the BRICS countries, and, interestingly, scoring the same as the benchmark online grocery retailer, were in rank order: Alphabet of Taste (Russia) (26 out of 35), Woolworths (SA) (25 out of 35), and Globus Gourmet (Brazil) and Big Basket (India) (both with 23 out of 35). The two websites which could be considered the poorest overall from the point of view of quality were those of Pick n Pay (SA) and Local Banya (India) (19 out of 35). The last secondary research question was: *How does the quality of websites of online grocers from the BRICS countries compare with that of the websites of successful online grocery retailers from developed countries?* In order to answer this question, the overall scores of the websites from the BRICS countries were separated from those of the two websites from the developed country (UK). The websites from the developed country (UK) scored 48 out of a possible 70 across all categories in terms of quality, indicating an overall percentage of 68.6. The BRICS countries scored a total of 199 out of a possible 315, indicating an overall percentage of 63. Consequently, it can be concluded that there is no significant difference between the qualities of the websites from the BRICS countries and those which served as a benchmark for these countries. Finally, if it is assumed that the online retailers included in this article are representative of the online grocers in the different countries, the *final conclusion* that can be drawn is that the websites of the online grocery retailers *are not a significant barrier* inhibiting the growth of online grocery retailing in the BRICS countries. However, findings from the website analysis highlighted several features relating to quality that were missing from the retailers' websites, which, if added, could potentially enhance the growth of online retailing. This finding correlates with the findings of Lim, Widdows, and Hooker (2009) who argued that the vast amounts of experience traditional grocery retailers have had with their customers has assisted these retailers in designing tailor-made websites for their online grocery shoppers. The findings of the study could assist late movers in determining which features to prioritize when designing their online grocery retailing websites.

A limitation of any research pertaining to online retailing is the dynamic nature of the online retailing industry. Considering that, this article evaluated the website qualities of online retailers, the authors acknowledge that the website design (i.e. qualities of the websites) might have changed between conducting the website analysis and the publication of this article. Future research could build on these findings, by applying different methodologies to determine website quality, for example asking consumers to rate the website quality. Although the final conclusion indicates that website quality does not

significantly inhibit the growth of online grocery retailing in BRICS countries, additional research should be conducted further along the 'last mile' of the online grocery supply chain in order to investigate how the website should be utilized by retailers to motivate consumers to participate in this service.

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No potential conflict of interest was reported by the authors.

Note

1. At the time of data collection (i.e. when the website analyses were conducted) all 11 websites were fully operational.

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References

- Åberg, A., and N. Kurdieh. 2013. "Impulse Buying Online: A Visual, Comparative Enquiry Into two Mediums of Grocery Retailing." (Master's diss.). Lunds University, Sweden.
- Barnard, L., and J. L. Wesson. 2003. "Usability issues for e-commerce in South Africa: An empirical investigation." Paper presented at the 2003 SAICSIT Conference, Pretoria, South Africa, September 258–269.
- Chen, Y.H., Hsu, I.C. and Lin, C.C., 2010. "Website Attributes that Increase Consumer Purchase Intention: A Conjoint Analysis." *Journal of Business Research* 63 (9): 1007–1014.
- Chu, J., M. Arce-Urriza, J. Cebollada-Calvo, and P. K. Chintagunta. 2010. "An Empirical Analysis of Shopping Behavior Across Online and Offline Channels for Grocery Products: The Moderating Effects of Household and Product Characteristics." *Journal of Interactive Marketing* 24: 251–268. doi:10.1016/j.intmar.2010.07.004.
- Cooper, D. R., and P. S. Schindler. 2011. *Business Research Methods 11th edn*. Singapore: McGraw-Hill.
- Cook, G. J. 2014. "Customer Experience in the Omni-Channel World and the Challenges and Opportunities This Presents." *Journal of Direct, Data and Digital Marketing Practice* 15 (4): 262–266.
- Cockburn, C., and T. D. Wilson. 1996. "Business use of the World-Wide Web." *International Journal of Information Management* 16 (2): 83–102. <http://www.informationr.net/ir/3-4/paper46.html>
- Cowles, D. L., P. Kiecker, and M. W. Little. 2002. "Using key Informant Insights as a Foundation for e-Retailing Theory Development." *Journal of Business Research* 55: 629–636. doi:10.1016/S0148-2963(00)00203-4.
- Crespo, A. H., and I. R. Del Bosque. 2010. "The Influence of the Commercial Features of the Internet on the Adoption of e-commerce by Consumers." *Electronic Commerce Research and Applications* 9: 562–575. doi:10.1016/j.elerap.2010.04.006.
- Creswell, J. W., and D. L. Miller. 2000. "Determining Validity in Qualitative Inquiry." *Theory Into Practice* 39 (3): 124–130. http://www.jstor.org/stable/1477543?seq=1#page_scan_tab_contents
- Doherty, N. F., and F. Ellis-Chadwick. 2009. "Exploring the Drivers, Scope and Perceived Success of e-Commerce Strategies in the UK Retail Sector." *European Journal of Marketing* 43 (9): 1246–1262. doi:10.1108/03090560910976474.

- Ellis-Chadwick, F. 2008. "Online Retailing: Open at all Hours?" *International Journal of Business Environment* 2 (2): 188–200. doi:10.1504/IJBE.2008.019511.
- Enders, A., and T. Jelassi. 2000. "The Converging Business Models of Internet and Bricks-and-Mortar Retailers." *European Management Journal* 18 (5): 542–550. doi:10.1016/S0263-2373(00)00043-8.
- Euromonitor International. 2015a. *Retailing in South Africa*. May 2015. Accessed 17 August 2015. <http://www.euromonitor.com/retailing-in-south-africa/report>
- Euromonitor International. 2015b. *Retailing in Brazil*. July 2015. Accessed 17 August 2015. <http://www.euromonitor.com/retailing-in-brazil>
- Euromonitor International. 2015c. *Retailing in Russia*. July 2015. Accessed 17 August 2015. <http://www.euromonitor.com/retailing-in-russia>
- Euromonitor International. 2015d. *Retailing in India*. May 2015. Accessed 17 August 2015. <http://www.euromonitor.com/retailing-in-india>
- Euromonitor International. 2016. *Retailing in China*. December 2016. Accessed 28 June 2017. <http://www.euromonitor.com/retailing-in-china>
- Euromonitor International. 2017a. *Retailing in South Africa*. April 2017. Accessed 28 June 2017. <http://www.euromonitor.com/retailing-in-south-africa/report>
- Euromonitor International. 2017b. *Retailing in Brazil*. January 2017. Accessed 28 June 2017. <http://www.euromonitor.com/retailing-in-brazil>
- Ferreira, M. P. 2009. "(R)evolution of e-grocery industry: Strategic implications." Paper presented at GestãoFaculdade de Economia e Gestão, Universidade Católica Portuguesa (Porto), March. doi:10.2139/ssrn.1364117.
- Giménez, C., and H. R. Lourenço. 2008. "E-SCM: Internet's Impact on Supply Chain Processes." *The International Journal of Logistics Management* 19 (3): 309–343. doi:10.1108/09574090810919189.
- Gorst, I. 2013. "Russia online retail 'to hit €25bn'." *Beyondbricks* 31 January 2013.
- Hernández, B., J. Jiménez, and M. J. Martín. 2009. "Key Website Factors in e-Business Strategy." *International Journal of Information Management* 29: 362–371. doi:10.1016/j.ijinfomgt.2008.12.006.
- Hsieh, H., and S. E. Shannon. 2005. "Three Approaches to Qualitative Content Analysis." *Qualitative Health Research* 15 (9): 1277–1288. doi:10.1177/1049732305276687.
- Kim, I., and J. Kuljis. 2010. "Applying Content Analysis to Web-Based Content." *Journal of Computing and Information Technology* 18: 369–375. doi:10.2498/cit.1001924.
- Krizanovic, P. 2015. "Emerging Market e-commerce: Retail Optimism over Brazil's Online Grocery Channel." *Just-food home*. Accessed 7 July 2015. http://www.justfood.com/management-briefing/retail-optimism-over-brazils-online-grocery-channel_id128912.aspx
- Kourimsky, H., and M. Van Den Berk. 2014. "The Impact of Omni-Channel Commerce on Supply Chain." White Paper: Intelligence NTT Data Business Solutions. Accessed 23 February 2017..
- Lee, M. 2011. "An Application of Game Theory to Shape e-Tailing Strategies." *International Journal of Electronic Marketing and Retailing* 4 (1): 49–61. doi:10.1504/IJEMR.2011.039896.
- Lee, S., and R. J. Koubek. 2010. "The Effects of Usability and web Design Attributes on User Preference for e-commerce web Sites." *Computers in Industry* 61 (4): 329–341.
- Lim, H., R. Widdows, and N. H. Hooker. 2009. "Web Content Analysis of e-Grocery Retailers: a Longitudinal Study." *International Journal of Retail & Distribution Management* 37 (10): 839–851. doi:10.1108/09590550910988020.
- Liu, F., B. Xiao, E. T. K. Lim, and C. Tan. 2017. "The Art of Appeal in Electronic Commerce: Understanding the Impact of Product and Website Quality on Online Purchases." *Internet Research*, (forthcoming): doi.org/10.1108/IntR-09-2016-0280.
- Market Research Report. 2015. *Grocery retail in Russia 2015*. Accessed 78 August 2015. <http://fsdxc.www.marketresearchreports.com/pmr/td/grocery-retail-russia-2015>
- McTaggart, J. 2006. "E-grocery's Reality Check." *Progressive Grocer* 85 (11): 24–28.
- Mir, I. 2013. "China's Online Supermarket Shopping Spree." *China Business Review* 13 September 2013. Accessed 10 April 2015. <http://www.chinabusinessreview.com/chinas-online-supermarket-shopping-sprees>
- Mitter, F., and S. Bhat. 2014. "Online Grocery Stores Mushroom Across India". *Forbes India*. Accessed 10 April 2010. <http://frobeindia.com/article/online-grocery-stores-mushroom-across-india/38677/1>
- Morse, J. M., M. Barrett, M. Mayan, K. Olson, and J. Spiers. 2002. "Verification Strategies for Establishing Reliability and Validity in Qualitative Research." *International Journal of Qualitative Methods* 1 (2): 13–22.
- Mpinganjira, M. 2015. "Using Online Service-Scape to Appeal to Customers: A Focus on Hedonic Shoppers." *The Retail and Marketing Review* 11 (1): 61–75.
- O'Cass, A., and J. Carlson. 2012. "An e-Retailing Assessment of Perceived Website-Service Innovativeness: Implications for Website Quality Evaluations, Trust, Loyalty and Word of Mouth." *Australasian Marketing Journal (AMJ)* 20: 28–36. doi:10.1016/j.ausmj.2011.10.012.
- Ou, C. X., and C. L. Sia. 2010. "Consumer Trust and Distrust: An Issue of Website Design." *International Journal of Human-Computer Studies* 68 (12): 913–934.
- Payne, A. F., K. Storbacka, and P. Frow. 2008. "Managing the co-Creation of Value." *Journal of the Academy of Marketing Science* 36: 83–96.
- Reinartz, W., B. Dellaert, M. Krafft, V. Kumar, and R. Varadarajan. 2011. "Retailing Innovations in a Globalizing Retail Market Environment." *Journal of Retailing* 87 (1): S53–S66. doi:10.1016/j.jretai.2011.04.009.
- Rha, J., J. Heilig, S. Ernst, R. Widdows, C. Haugyvedt, and N. H. Hooker. 2001. "Product and Firm Quality Signalling in e-Business Interstices for Smaller Businesses." *Journal of Business and Entrepreneurship* 22: 57–70.
- Snyman, A. N. 2014. "Barriers and Motivators to Online Grocery Shopping in South Africa: a Supply Chain Perspective." (Masters diss.). University of South Africa, Pretoria.
- Tarafdar, M., and J. Zhang. 2005. "Analysing the Influence of Website Design Parameters on Website Usability." *Information Resources Management Journal* 4 (18): 68–80. doi:irmj.2005100104.
- Thirumalai, S., and K. K. Sinha. 2011. "Customization of the Online Purchase Process in Electronic Retailing and Customer Satisfaction: An Online Field Study." *Journal of Operations Management* 29: 477–487. doi:10.1016/j.jom.2010.11.009.
- Thomas White International. 2012. *BRICS Spotlight Report. Retail Sector in Brazil: Riding the Wave of Middle-Class Growth and Consumer Credit Boom*. Accessed 5 January 2016. <http://www.thomaswhite.com/pdf/bric-spotlight-report-brazil-retail-report-march-2012.pdf>
- Turel, O., C. E. Connolly, and G. M. Fisk. 2013. "Service with an e-Smile: Employee Authenticity and Customer use of web-Based Support Services." *Information & Management* 50 (2/3): 98–104. doi:10.1016/j.im.2013.02.004.
- Van Huyssteen, N., J. W. Strydom, and S. Rudansky-Kloppers. 2015. "Online Marketing Communication Tools Used by Guest Houses in Pretoria, South Africa." *African Journal of Science, Technology, Innovation and Development* 7 (4): 313–322. doi:10.1080/20421338.2015.1082371.
- Wang, Y., S. Wu, H. Lin, and Y. Wang. 2011. "The Relationship of Service Failure Severity, Service Recovery Justice and Perceived Switching Costs with Customer Loyalty in the Context of e-Tailing." *International Journal of Information Management* 31: 350–359. doi:10.1016/j.ijinfomgt.2010.09.001.

- WEF (World Economic Forum). 2016-2017. *Global Competitiveness Report 2016–2017*. Geneva: WEF.
- Williams, D. E. 2009. "The Evolution of e-Tailing." *The International Review of Retail, Distribution and Consumer Research* 19 (3): 219–249. doi:10.1080/09593960903233657.
- Wu, P. H., and J. Liao. 2016. "Service-Oriented Organizational Citizenship Behavior, Perceived Service Quality and Customer Satisfaction in Hospitality Industry." *Journal of Applied Sciences* 16: 18–24. doi:10.3923/jas.2016.18.24.
- World Wide Worx. 2012. "Internet Access in South Africa 2012." World Wide Worx, 6 December. Accessed 12 July 2017.
- Xing, Y., D. B. Grant, A. C. McKinnon, and J. Fernie. 2011. "The Interface Between Retailers and Logistics Service Providers in the Online Market." *European Journal of Marketing* 45 (3): 334–357. doi:10.1108/03090561111107221.
- Zakon, R. H. 2014. "Hobbes' Internet timeline." 30 January. Accessed 15 January 2016. Available at <http://www.zakon.org/robert/internet/timeline/>