ONLINE RETAILING IN SOUTH AFRICA: AN OVERVIEW

Sha'ista Goga[1], Anthea Paelo and Julius Nyamwena[2]

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Abstract

Online platforms and e-commerce have revolutionized retail, expanding the opportunities for companies and businesses to reach a wider range of customers, personalize preferences, lower prices and enhance consumer experiences. Online stores provide routes to market for smaller businesses and could potentially result in lower transaction costs. In South Africa, e-commerce has grown rapidly but at 1-2%, accounts for a small proportion of total retail spend, and lags behind other developed markets. The growth of e-commerce in South Africa is reported to have been hindered historically by the high prices and poor quality of internet services, and the reliability and cost of delivery mechanisms. However, e-commerce is growing rapidly from a small base and, as data costs come down, logistics improve and trial increases it can be expected to grow even faster. It is therefore important that South Africa considers the implications of e-commerce for its own industrial strategy and growth plans. This paper aims to provide an overview of online retailing South Africa. It outlines the patterns and trends in online retailing in South Africa as well as segments in the value chain including payments and logistics systems. It also identifies some of the opportunities and challenges in the sector and provides policy recommendations for future industrial policy.

This paper forms part of a series of studies on the challenges of industrialisation undertaken by the Industrial Development Think Tank (IDTT). Established in 2017, the IDTT is supported by the Department of Trade and Industry (the dti) and is housed in the Centre for Competition, Regulation and Economic Development (CCRED) in partnership with the SARChI Chair in Industrial Development at the University of Johannesburg.

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[1] Sha'ista Goga is an economist at Acacia Economics and a research fellow at CCRED, shaista@acaciaeconomics.co.za

[2] Julius Nyamwena and Anthea Paelo are researchers at CCRED, juliusn@uj.ac.za; antheap@uj.ac.za

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1. Background to the study

1.1 Context

Technological advances are changing the way in which economies operate around the world. In retail there is increased reliance on digital platforms and the data that they provide for a range of purposes including advertising, demand management and as a new mechanism for reaching consumers and new markets. These changes have an extensive effect on how businesses operate and as a result on various industries and value chains within the South African market.

Online retail is one component of wider digital transformation (or digitalization) of the economy. While it presently still represents a small proportion of all retail sales, internationally these sales are increasingly significantly in some product categories (such as books, electronic goods and clothing) and online sales are growing rapidly overall. E-commerce can be efficiency-enhancing and has the potential for consumer benefits in the form of lower prices and greater choice. It can be a route to market for smaller firms, lowering their transactions costs and increasing their exposure to many more customers. In some countries e-commerce is also being used to extend retail services to the rural population. In addition, e-commerce can have beneficial disruptive benefits on existing industries spurring greater innovation and efficiency in the general retail sector.

However, the growth in e-commerce also raises a number of challenges. Where trade is cross-border there are implications for the collection of tax, and international trade. Features of digital markets that reward scale can lead to the emergence of dominant platforms that may be prone to abuse and require competition and regulatory intervention to prevent the exertion of market power and control over routes to markets and consumers. In addition, the introduction of digital technology and trade can have a disruptive impact on existing industries (Jeet-Singh, nd and Banga, 2018). Access to international online retailers provides direct access to imports for consumers (which from international trends may increasingly originate in countries with lower costs of production such as China). This could have repercussions on the manufacturers and wholesalers. The e-commerce business model could potentially displace bricks and mortar retail with employment in sales teams and stores reduced, though this could potentially be compensated for by increases in employment in delivery and logistics. It could also have disruptive impacts on adjacent industries from shopfitting to payments. It is thus necessary to consider the rise of e-commerce and to understand the potential threats and opportunities that are likely to arise as a result.

Internationally there have been differences in how regulation of digital platforms and related sectors such as e-commerce are being approached by regulators. In the EC, regulation of digital platforms has thus far predominantly been undertaken through competition law. There have been various high-profile competition cases relating to abuse of dominance in digital markets. This includes various cases against Google for abuse of dominance, notably using its dominance in search to promote its shopping services and using restrictions on Android

devices to cement its dominance in search on mobile devices.[3] They have also considered questions over the role of technology in facilitating collusion (such as through algorithmic collusion) (OECD, 2017), and the impact of vertical restraints in online sales which has led to various investigations of online booking platforms (Ezrachi, 2015).

Other countries have taken different approaches. For example, China has developed local technology companies by preventing international entry through what is popularly termed the "the Great Firewall of China". India has developed e-commerce regulations that ban e-commerce companies form selling products from companies in which they have an equity interest and from entering into exclusive agreements with sellers.[4]

While e-commerce in South Africa has grown rapidly as internet speeds, mobile penetration and the ability to shop over mobile devices has risen, it is still in its infancy. In a 2017 survey only 15% of respondents stated that they used the internet for finance and shopping (Goldstuck, 2017). Furthermore, e-commerce accounts for a small proportion of total retail spend with estimates of the proportion of e-commerce at 1-2% of retail in South Africa (Prinsloo, 2016). This lags substantially behind other countries in which the role of e-commerce has risen extensively accounting for up to 20% in the most sophisticated markets (Budree, 2017).

The growth of e-commerce in South Africa is reported to have been hindered historically by the high prices and poor quality of internet services, and the reliability and cost of delivery mechanisms (particularly the Post Office). However, e-commerce is growing rapidly from a small base and, as data costs come down, logistics improve and trial increases it can be expected to grow even faster. It is therefore important that South Africa considers the implications of e-commerce for its own industrial strategy and growth plans. This is to ensure that policy and regulatory frameworks are developed in a manner that develops frameworks to enhance

This paper was written as part of a study on e-Commerce engaged in on behalf of the Department of Trade and Industry under the auspices of the Industrial Development Think Tank. It forms one of three papers on e-Commerce:

- In this paper we introduce the key issues and outline the competitive landscape in e-commerce in South Africa, describing the different e-commerce models that have emerged and different components of the value chain, including payment systems and logistics. We outline key challenges and emerging trends that have been identified in South Africa.

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[3] European Commission, Press Release, Antitrust: Commission fines Google E4.34 billion for illgal practices regatding Android mobile devices to strengthen dominance of Googles search engine, Brussels, 18 July 2018, available at http://europa.eu/rapid/press-release_IP-18-4581_en.htm

[4] Government of India, Press Information Bureau, Policy for Regulation of E-Commerce, available at http://pib.nic.in/newsite/PrintRelease.aspx?relid=186306

- In the next paper we consider the impact of e-commerce on traditional retail in South Africa and consider how retailers are responding to disruptions in the sector.
- In the final paper we assess the regulatory framework for e-commerce in South Africa and how it has shaped the trajectory for developments in the industry. This includes an overview of some of the key regulatory interventions that have been considered internationally, as well discussing in more detail some specific regulatory issues such as taxation and trade.

1.2 Methodology

E-commerce has a range of definitions. At its widest it encompasses the sale or purchase of goods or services over computer-mediated networks. A narrower definition is the sale or purchase of goods or services using internet (OECD 2002). This has over time grown to encompass a broad range of industries that may include services such online educational courses, financial services and the sale of digitised products such as online games, video and music. In this study we use an even narrower definition of e-commerce and focus specifically on online retail which is the sale of physical products over the internet. This includes orders that are made over the internet where the payment is offline but does not include orders made over other systems such as conventional email. Furthermore, we have excluded travel, which comprises a large category of online sales, but has slightly different dynamics.

The study used a combination of qualitative and quantitative data. Primary data was collected from stakeholders in the value chain on the basis of a semi-structured questionnaire in face-to-face, telephonic and Skype interviews. Seventeen interviews were carried out comprising interviewees with expertise and experience in online sales, logistics and online payments in South Africa. A further five interviews were carried out with e-commerce suppliers and manufacturers in Hong Kong and China. Data was also collated from online sources including company websites and the annual reports of listed companies. Secondary data was collated from a range of sources including Statistics South Africa, and commercial data sources from Similarweb and Euromonitor. This was triangulated with a review of academic literature, and news articles.

This paper is focused on assessing the different e-commerce models that have emerged in South Africa and the different participants that compete, as well as identifying new trends, challenges and opportunities. As noted previously this forms part of a three paper series..

2. Background to e-Commerce in South Africa

2.1 e-Commerce trends in South Africa

a) Volumes

E-commerce in South Africa has grown exponentially over the last decade as shown below. It crosses a range of products from fresh food to consumer electronics and clothing. While there are different estimates for the size of the market based on what is included in the definition, both Visa and Euromonitor estimate that the market for online retail in South Africa reached

approximately R10bn in 2017 (Smith, 2018, Euromonitor, 2018). However, with the size of general retail trade estimated to be R 1 trillion in 2017, this still only amounts to 1% of the total retail market (Statistics South Africa, 2017). With mature markets exhibiting a higher percentage online sales, such as the UK with 18% of sales online (Office of National Statistics, 2018), this suggests that South Africa currently lags behind other countries

It can be noted that if a broader definition of e-commerce is taken (including travel, downloadable entertainment and education) estimates rise to R37bn (Smith, 2017).

Figure 1: Internet retail sales value (R billions) from 2003-2017
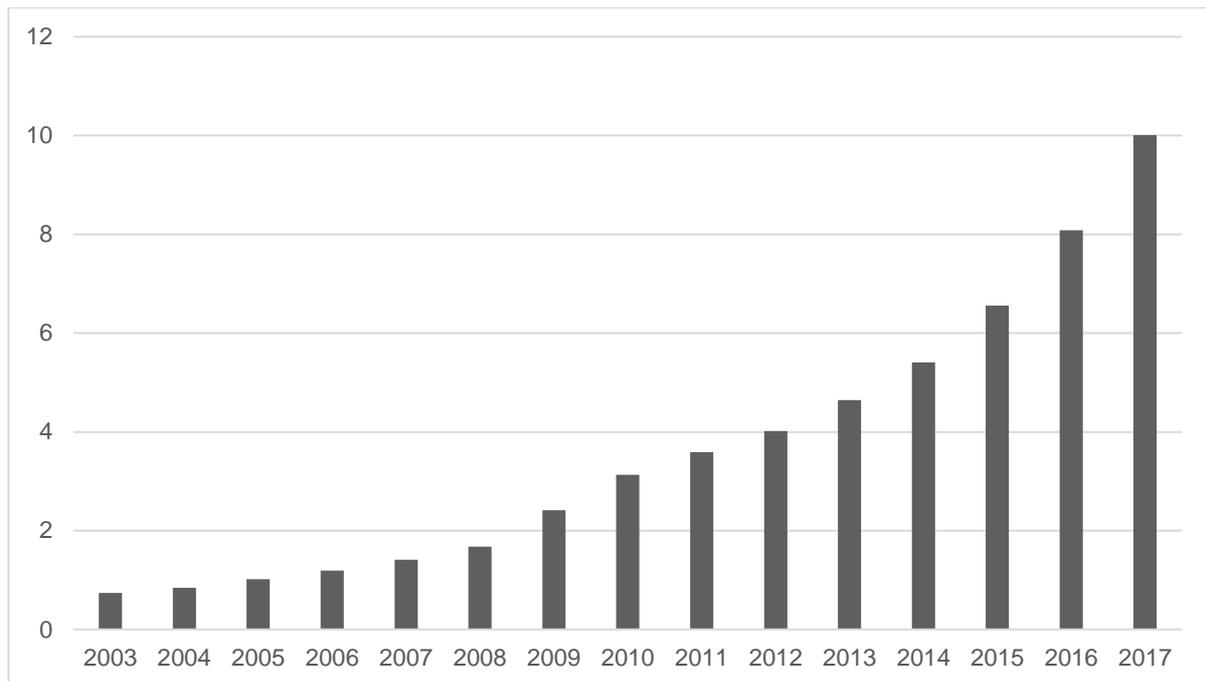
Source: Euromonitor (2018)

Online retail however has been growing at a pace that far surpasses traditional retail. Stakeholders interviewed estimated the growth of online retail in South Africa to be between 20-35%. While there are no statistics for international e-commerce into South Africa, the South African Post Office noted that the growth of online commerce saw volumes processed at Johannesburg International Mail Centre, the mail port of entry for parcels coming into South Africa by air, increase by over 20% from the previous year. (SAPO, 2017)

b) *Customers*

South Africa is still a nascent e-commerce market with low penetration. Surveys show that e-commerce buyers in South Africa are predominantly higher income earners who work full time, with 35% earning above R 30 000 per month (Effective Measure, 2017). The e-commerce target market in South Africa is fairly narrow at present. Interviewees noted that the typical e-commerce consumer was wealthy with one noting that a large proportion of their e-commerce consumers are people who have "*higher income levels but are time-poor*". Even within this income bracket penetration is fairly low. Reasons behind this are discussed later but include

trust in payment mechanisms, and high delivery costs. While companies have mooted means of introducing e-commerce to lower income markets, at this stage due to high delivery costs and the low penetration of higher income groups a focus on this area is fairly limited.

c) Products

South African consumers use online channels for a range of digital and downloadable services (such as music or ebooks), travel and events tickets (Smith, 2017, Effective Measure 2017). However, in terms of physical products a wide range of product categories (often referred to as verticals) are sold online in South Africa. This includes the main retail categories such as fresh food, non-perishable food, home, fashion, computers and tech, electronics, toys, movies and music, alcohol, flowers, cars etc. At present the fastest growing categories among consumers include consumer electronics, media, fashion and apparel. Interviewees have also noted the increase in online sales in bulkier products for

Figure 2: Internet retailing by category: value growth 2015/16 (%)
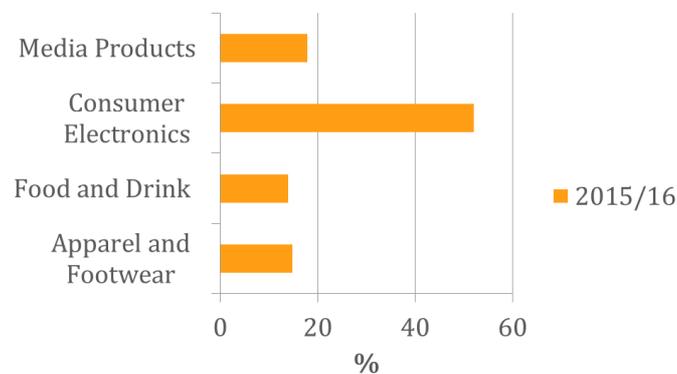
Source: Euromonitor 2017

In line with international experiences online stores are better positioned to sell what is termed a "long tail" or wide range of low volume items (including specialty or unusual items) than would be possible in physical stores. This partly explains the initial attraction of offering product verticals such as books and music which required a large inventory (though the rise of e-books and music streaming has reduced this channel to some extent).

South African online retailers have been operating for at least two decades with Kalahari.com, one of the earlier online websites launching in 1998. While there has been a proliferation in terms of the range and number of websites, many of these are very small in terms of traffic. There has also been consolidation that has resulted in the emergence of one prominent online retailer in the country, Takealot.com owned by the Naspers group (which also owns other brands Superbalist and Spree), discussed further in section 3.1. Most interviewees highlighted Takealot, and the Naspers group overall, as a key competitor in the online market. The other notable players in online retailers are predominantly large traditional retailers that are offering online sales as an alternate channel. Some of the larger websites with a strong South African presence and their main product categories are shown in the table below.

Table 1: Categories of products sold across selected e-commerce websites active in South Africa

	Home	Fashion	Computers and phones	Electronics	Toys	Movies and music	Alcohol	Non-perishable food	Fresh food	Sports and Outdoors	Flowers and gifting	Books	Health and beauty
Takealot	☐	☐	☐	☐	☐	☐	☐			☐		☐	☐
Loot	☐	☐	☐	☐	☐	☐	☐			☐		☐	☐
Makro	☐	☐	☐	☐	☐		☐	☐		☐		☐	☐
Wantitall	☐		☐	☐	☐	☐				☐			☐
Zando		☐											
Spree		☐											
Superbalist		☐											
Yuppiechef	☐												
Amazon (shipping to South Africa)	☐	☐	☐	☐	☐	☐		☐		☐		☐	☐
Mr Price	☐	☐			☐					☐			
Foschini group stores	☐	☐											☐
Truworths group stores		☐											
Pick n Pay									☐				
Woolworths	☐	☐					☐	☐	☐			☐	☐
Incredible Connection			☐										
Clicks	☐			☐									☐
Game	☐		☐	☐	☐		☐	☐		☐			☐
Netflorist											☐	☐	

Source: CCRED, collated from websites

d) Channels

In South Africa e-commerce occurs across both mobile and conventional internet devices. However, a fairly high proportion of traffic originates on mobile devices with more than half of the traffic on certain websites originating on mobile devices (Similarweb, 2018). Companies interviewed are all placing increased effort into developing slick mobile interfaces as a result.

Figure 3: Traffic share by device type (%)
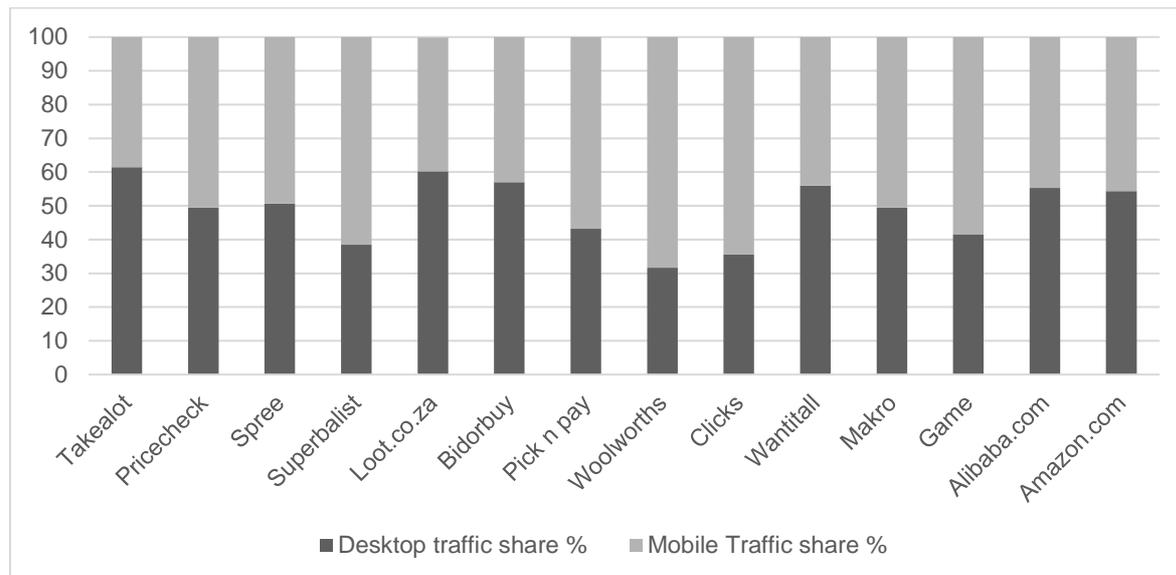
Source: Similarweb (July 2018)

In terms of the physical spread of consumers, interviewees concurred that the bulk of delivery is concentrated in metro areas, particularly, Johannesburg and Cape Town at present. This is supported by the fact that many online stores (such as Takealot, Woolworths, Pick n Pay) have warehouses located in those two cities.

If a broader definition of e-commerce is taken a high proportion of South African online shoppers have also shopped online from websites in another country (notably the US, China and the UK). Paypal research (which is based on a broad e-commerce definition) showed that while 38% of South Africans only shop online domestically, a further 50% shop both domestically and cross-border (Paypal, 2018). However, the majority of interviewees believe that at present purchases are skewed towards local websites.

2.2 The e-commerce value chain

The e-commerce ecosystem has a variety of participants. From the customer perspective a simple e-commerce process generally involves the following:

1. *Choice of e-commerce store*: A customer begins by selecting a physical or e-commerce store on the basis of marketing or customer awareness. Common forms of marketing used in the industry include online advertising through mediums including direct online advertising, personalized online advertising (for example through google search placements), social media advertising including through social media influencers and offline advertising such as radio advertisements or billboards that directs them to a particular website. Stores selected can be locally or internationally based as long as delivery to South Africa is supported (by either the website itself or a logistics provider).

2. *Selection and ordering*: Once online the customer browses the website for their preferred products and selects them into a virtual "shopping cart". Apart from competing on factors such as price, quality and range, websites also compete on certain factors specific to online retail. Websites compete on the quality of their website interface (including the quality of photos and websites design) and may focus on optimizing the user experience through minimizing the number of clicks to access products. They may also provide personalization such as recommendations based on previous searches or purchases, etc.

3. *Payment*: The customer checks out and is directed to pay through a payment gateway. This may be managed by the website itself, but more often is administered by a third-party gateway that provides a variety of payment options. As is discussed in more detail later, in South Africa these may include credit and debit cards, EFT, instant EFT, online credit, rewards points, online wallets and cryptocurrency (such as bitcoin).

4. *Order processing*: The order is then processed and the sent to the supplier. Suppliers may manage orders separately for each website on which they are listed or have a central inventory and order management system. They may also subscribe to a channel advisor tool which allows them a unified view of all platforms they sell from. The supplier may be the same as the website owner in the case of a direct seller, may be the platform (who either manufacture or purchase the products themselves for resale), or may be a third-party supplier who uses the website as a marketplace on which they list their product.

5. *Dispatch*: The order is then dispatched, either directly by the manufacturer or supplier or by a centralized warehousing and distribution centre. Distribution centres in turn could be owned by the supplier, a marketplace platform or a third party provider.

6. *Delivery*: A logistics or courier company then transports the order to the final customer. Delivery systems could be integrated or third party owned.

This is shown in the diagram below:

Figure 4: E-commerce order process
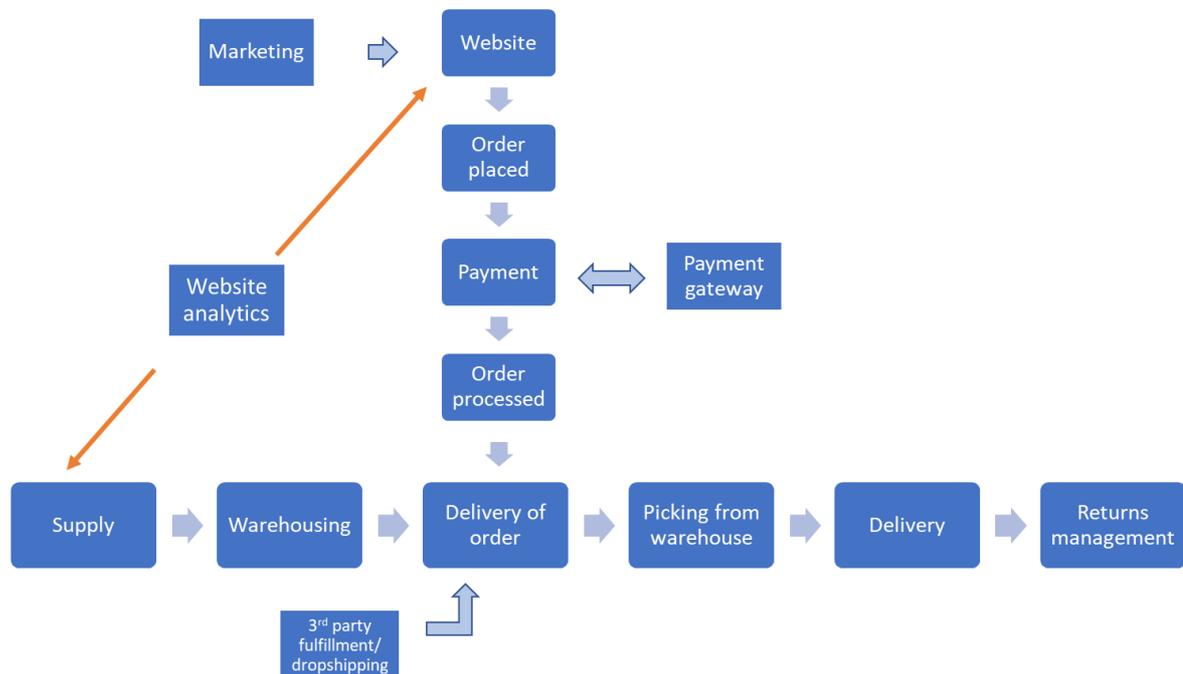
Source: Authors own

As such the value chain of online retailers includes inputs such as marketing and customer analytics, provision of the technical platform, supply of sales stock, inventory management, payment systems warehousing, logistics. Every one of these functions can be provided in-house or outsourced.

2.3 The role of technology in e-commerce

Competitive dynamics in e-commerce are similar to those in traditional retail markets. Features such as marketing and branding, inventory management, and logistics all play a role in attracting and maintaining customers. However, technological advancement has meant that retailers are now able to draw on more advanced systems so that the means by which customers are accessed and catered to has changed. These changes will be examined in more detail in the second paper. However, there are a few features that strongly emerged from the interviews that provide important background.

a) *The role of data*

Data plays a pivotal role in retail internationally and can be used effectively as a means of providing an enhanced e-commerce offering. In both the literature and discussions with international experts in the field, concerns have been raised over data ownership and its impact on e-commerce. There are concerns that data plays significant role in providing a company with insight into consumer preferences which feeds back to inventory management and manufacture decisions and that this places local and smaller businesses at risk relative to international e-commerce platforms such as Amazon and Alibaba.

Our interviews have shown that data can gathered through various means: Firstly, company-specific data such as order data, reviews, and search terms used on the website. Companies such as Amazon have a wide range of data to process and scale provides a comparative advantage. Secondly, through schemes that a company may set up to collect data (sometimes with partners). This includes loyalty cards which combine online and offline data, tracking cookies etc. Thirdly, data from third-party sources such as search-engine data and keywords that trend on social media. This can be purchased from some sources and other data (such as online review data) can be "scraped" off websites and processed. All three forms of data provide insight into customer requirements and trends which can feed into inventory management and manufacture. Scale is important in collecting proprietary data. However, manufacturers and companies that we interviewed use other sources of data in conjunction with this. Some of the international manufacturers that we interviewed were focused on scraping data and gather trending data through scraping and social media. In addition, companies such as Amazon Web Services are providing larger South African retailers with services that allow them to process this data in a meaningful way. However, a strong insight from the interviews is that the use of data requires a level of sophistication and investment. As such, it could form a barrier to entry and expansion.

b) The role of platforms in routes to market

Our interviews highlighted that for online stores access to customers is increasingly reliant on inclusion in search platforms such as Google. As this includes paid-for adverts this often creates a bias towards larger companies who have greater marketing budgets and a better ability to engage in these sometimes complex advertising platforms. This also forms a barrier to entry for smaller participants. Going forward increased dependence on automated voice-controlled assistances such as Amazon's Alexa, Google's Home and Microsoft Cortana as well as Apple's Siri[5] may make such routes to market even more difficult to access.

2.4 E-commerce models in South Africa

In South Africa there are a range of models of e-commerce used. These tend to be differentiated based on factors including the technical platform used, delivery model, payment processing methods, marketing and customer service. There are also different supply arrangements, with some stores acting as marketplaces with independent suppliers, others as full-service virtual retailers and others that provide an online channel for bricks and mortar retail stores. Online stores also differ in terms of the size and complexity of their offering, the categories in which they compete and their range of stock.

Some of the main business models and the key participants within the South African market are as follows:

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[5] According to a recent study almost a quarter of people surveyed in the US had an in-home voice-controlled devices and another 20% were planning to purchase one, see Walker Sands, "Future of Retail: 2017", available at https://www.walkersands.com/Thank-You-for-Downloading-Future-of-Retail-2017-The-Connected-Consumer-and-the-Changing-Face-of-Commerce

a) *Online only retailers (also referred to as "pure play"):* Some retailers purchase their own stock and add a mark-up before selling and delivering to consumers. This model relies solely on online sales and companies generally operate out of warehouses without storefronts that consumers can use to view products. These models vary from large online retailers that are vertically integrated from the platform through to logistics and payment systems to the websites of small business. The most prominent online stores using a retail model often have a marketplace alongside. In South Africa the largest store is Takealot which provides an offering across a range of categories. Other prominent online retailers include Spree, Superbalist (both owned by Naspers and run by Takealot) and Zando which focus on online fashion as well as international sites such as Amazon.com. A very wide range of smaller websites also compete. While larger online retailers often have custom built platforms, the barriers to building an online shopping website have fallen significantly for smaller companies as platforms such as Shopify and Magento allow companies to set up online stores without having to code it themselves, and often at a fairly low base rate.[6]

b) *Omnichannel retailers:* Retailers with bricks and mortar presence can use online stores as a channel that consumers can use to make purchases outside of existing retail stores. This can be done using online order and deliver but may include hybrid options such as "click and collect" in which shopping can be done online and collected in retail stores, or the facilitation of returns to offline stores. In South Africa retail stores that have online channels include sites such as Makro, Woolworths, MrP, Pick n Pay, Incredible Connections etc. At present Makro provides a large range of products across most categories outside of fresh food. Pick n Pay and Woolworths provide grocery including fresh produce (with Woolworths also providing clothing and homeware). Many other stores specialize in a particular product line as they do in their general retail offering (for example, Exclusive Books sells books online, @home sells homeware, Sportsmans Warehouse sells sporting clothing and equipment). Brands may also host websites that sell their particular brand alone (e.g. Nike sportswear, Le Creuset cookware).

c) *Marketplaces*: Certain websites provide the infrastructure for other sellers to sell their goods. This can be done using various models including those that require the sellers to ship their goods to a central warehouse for fulfillment and those that provide the platform for sales but that allows resellers to ship independently. This includes standalone marketplaces such as Bid or Buy, specialized ones such as Hello Pretty (that specializes in locally produced handcrafted goods) or ones that are hosted on websites that offer these services in addition to their own retail offering such as Takealot. Fees for online platforms in South Africa use a range of

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[6] For example, a basic Shopify offering allows a seller to set up a store with unlimited products and storage, and various features for a monthly rate of US$29 plus a 2% transaction fee.

models generally with some combination of listing fees, monthly subscriptions, commission and success fees, as shown below:

Table 2: Marketplace fee structures for selected South African websites

Marketplace	Registration/ startup fee	Monthly fee/ subscription	Other fees	Commission	
Takealot	0	R300	Logistics and storage fees	4%	Cameras
				7%	Electronic Devices, Gadgets and wearable tech, Computer Components, Gaming Consoles, TV & Audio Equipment, Liquor & Soft drinks
				10%	Academic and trade books
				15%	Baby Products, Camping &Outdoor Equipment
Bid or Buy	Listings fees of R50 for particular categories (R100 for property) for which success fees aren't paid		Enhancement fees to promote visibility available	10.06%	Antiques & Collectables, Art, Baby, Books & Education, Clothing, Shoes & Accessories, Garden, Outdoor Living & Pets, Gemstones & Rocks, Gift Vouchers & Coupons, Holistic & Esoteric, Jewellery & Watches, Militaria, Sport & Leisure, Toys & Hobbies, Travel & Entertainment, Unusual, X-Rated Adult Material
				8.34%	Bikes, Boats & Other Vehicles, Business, Farming & Industry, Car Parts & Accessories, Crafts, Health & Beauty, Home & Living, Stamps
				6.61%	Cell Phones & Accessories, Coins & Notes, Computers & Networking, Electronics, Gaming, Movies & Television, Music & Instruments, Photo & Video
				2.88%	Cars
Hello Pretty	0	Starter- Free	R10 -success fee	15%	
		Social- R49		15%	
		Standard- R99		3%	
Makro	0	Standard- free	R15 success fee	Commissions vary based on category.	
		Professional- R499	No success fee		

Source: CCRED, collated from websites

d)   *Classifieds*: This is similar to a marketplace and allows consumers to place small adverts for goods and services. These generally centre on the sale of a single item but also include services, property and cars. Large classifieds websites in South Africa include OLX (owned by Naspers) and Gumtree.

3. Key online retailers in South Africa

South Africa has a range of online retailers. As noted previously these differ in terms of scale and value as well as product verticals provided. In this section we briefly highlight some of the key market participants.

3.1 General merchandise

There are several stores that provide products across a range of verticals. These vary in terms of business model (online-only, bricks and mortar with online channel and marketplace), and include both local and international participants. While there are difficulties in finding consistent comparable data, the largest websites in this category are likely to be Takealot, Bidorbuy, Amazon and Makro (Massmart group). Their share of traffic is shown in the figure below. As these represent some of the largest e-commerce retailers in South Africa we discuss each in turn.

Figure 5: Online traffic share for selected general merchandise websites South Africa
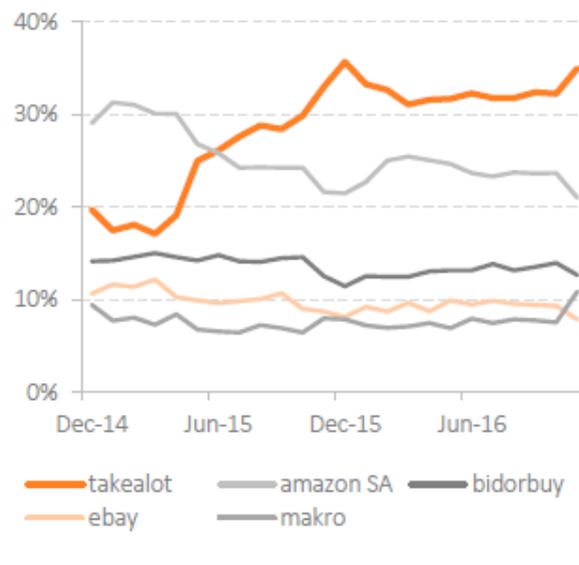
Source: Naspers Annual Report 2017

Takealot: Takealot is by far the largest online retailer in South Africa in terms of market value, revenue and volumes. Its estimated revenue market share varies between the mid-teens and approximately 29.5% (Euromonitor, 2018). It has been growing rapidly with a compound growth rate of 107% for the last 4 years (Planting, 2017). In 2017, it had a turnover of R2.3bn and processed 2.9 million transactions from one million customers. In July 2018 it had 3.6 million unique visitors (Similarweb, 2018). While similar information is not available for most

other websites, estimates suggest that Takealot is the largest by some magnitude. It has the highest share of online traffic in South Africa having surpassed its international rivals eBay and Amazon, its local marketplace rival BidorBuy and Makro, the largest online competitor from the bricks and mortar space (Naspers, 2017). It functions across a broad range of product categories. Furthermore, apart from its own retail line, it also has a marketplace for 3rd party retailers that can use the platform for sales and returns and can use its warehousing and fulfillment capabilities.

Launched in 2011, Takealot has had significant investment capital with US$100 million in funding from Tiger Global in 2014, and a cumulative investment of R4.5bn by Naspers who have incrementally grown their share in the company to 96%. While part of the growth in market share has been organic it has also increased its scale through mergers. Strategic acquisitions include the merger with Naspers-owned Kalahari.com (once a market leader in South African e-commerce) in 2014 in which an aggregate purchase of R1.2 billion was paid by Naspers to Takealot (Businesstech 2015), the prior purchase of Superbalist (an online fashion retailer) and 2018 merger between Superbalist and the Naspers-owned Spree (another online fashion retailer owned by the Naspers group). It has also grown into adjacent markets for example the 2014 purchase of Mr D the delivery service (both food and courier) (Bizcommunity, 2013). It can be noted that as part of the Naspers group of companies it is part of an umbrella of technology companies including payment system PayU, Similarweb (the internet data research company), and OLX the classified website (Naspers, 2017).

Takealot operates two 30 000m^2 warehouses. This stocks their own products as well as that of third party vendors, which make up 17% of the total (Planting, 2017). Apart from investing in warehousing and logistics capacity Takealot has also invested in its tech capabilities such as hiring artificial intelligence experts to work on features such as algorithms to create personalization (such as recommendations based on browsing history). They employ 1200 employees, half of which work in the supply chain and 200 of which are in the call-centre. There are also 1000 drivers that work with Mr D Courier providing delivery services (Planting, 2017).

Massmart group stores: Massmart is one of the largest retail groups in sub-Saharan Africa and is one of the largest online retailers in South Africa. As a large bricks and mortar retail company it operates online through four websites, Makro, Game, Builders Warehouse and DionWired. Makro and Game operate in almost all categories except for fresh grocery, DionWired which is focused on consumer electronics and Builders Warehouse is focused on building materials and home. Unlike Takealot they leverage off their existing bricks and mortar businesses for logistics. They have been growing rapidly, however, with online sales up by 47% in 2017. Massmart is still primarily a physical retailer with online sales accounting for a very small proportion of total sales. Massmart notes that for those products listed online it sells 1-2% online in line with general country trends. However, Makro has 4% of sales online, which is above the average for retail in the country. (Massmart, 2017). Massmart websites do not use external logistics companies but utilize the existing delivery infrastructure and warehouses

that cater to their stores. Makro has also developed an online marketplace that allows third party resellers to sell through their website.

Amazon: Amazon.com is one of largest international retailers and was ranked as the second largest retailer in the world (Forbes, 2018). It has a wide geographic footprint and delivers to a range of companies globally. Amazon does not at present have a South African website but delivers to South Africa from the Amazon.com website using its Amazon Global service. This means that the goods available for purchase are more restricted. In addition, the delivery costs are higher than those of local websites as it incorporates international freight (generally air freight). Furthermore, as products are imported customers also need to pay customs duties and import VAT. Nevertheless, Amazon has been growing in South Africa as shown in the graph above. Unlike many international websites which require the customers in South Africa to settle import duties and VAT once it has arrived Amazon provides an estimate of costs and refunds customers if it is less, while absorbing the cost if it is more, thereby providing a close approximation of actual costs. However, the drawbacks relate to the time taken to ship and the additional delivery costs which mean that Amazon is not often competitive for lower value products or for customers who value urgency. Furthermore, international delivery from Amazon (or other international websites) is not feasible for larger and bulkier products (such as larger consumer electronics such as televisions and coffee machines etc.). As Amazon does not have a South African presence many of the features available in other markets such as Amazon Prime subscriptions which offer free delivery after paying a subscription, and next day or even one hour delivery are not provided. However South African customers do purchase from Amazon and an interviewee familiar with their logistics estimated that there are three containers worth of products shipped into South Africa daily direct from Amazon. Amazon has also adapted to serve the needs of South African consumers. For example, due to customer requirements on the presentation of tax invoices, South Africa is one of only a limited number countries for which Amazon provides for a download of a tax invoice (which is a requirement for customs).[7]

Bidorbuy: Bidorbuy is the largest South African marketplace and acts as an online auction site as well. It was founded in 1999 and has 1.6 million unique users. Bidorbuy features a range of products that can be sold through auctions, fixed prices or through classifieds. Bidorbuy has a stake in payment system Payfast and partners with UAfrica which provides logistics for SMEs. Bidorbuy does not hold stock but relies on third party sellers engaging in the transactions and fulfilling the order the item independent of the platform.

Outside of the largest few companies there are others that offer general merchandise across a range of categories. For example, Loot.co.za while far smaller than the others discussed is an online-only retailer in South African offering a wide range products across 18 departments. It was launched in 2002 primarily focusing on books but from 2011 onwards has expanded to become an online retailer of general merchandise across a range of product verticals. They

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[7] As at August 2018 these were European Union, Switzerland, Liechtenstein, Iceland, South Africa and Japan, as shown here https://www.amazon.com/gp/help/customer/display.html?nodeId=201895240

have grown at 98% year on year and are valued at R14 million (Khumalo 2017). This is smaller than Takealot (who is valued at around R5 billion) by an order of magnitude.

In addition, South African consumers are increasingly purchasing from other international websites including Chinese websites wish.com and aliexpress. The South African Post Office saw a 20% increase in entry for parcels coming into South Africa by air in the last year (SAPO, 2017). One logistics company executive interviewed estimated that customers using his importation service bought 70% from the US, 15% from the UK and 13% from China at present. Interviewees in the logistics sector have noted that Chinese imports are still slow and face greater issues relating to shipment and delays due to the customs process. This was attributed to the fact that concerns over underinvoicing and counterfeit products mean that shipments from China are more likely to be inspected and delayed at customs.

3.2 Grocery and fresh products

While there are various companies that are online-only selling general merchandise, thus far the only companies to attempt selling perishable groceries online are traditional bricks and mortar stores. Of the big retail groups in South Africa only two, Woolworths and Pick n Pay have entered the e-commerce space. Providing a fresh offering is more complex than other types of e-commerce. This is largely because it requires control over the cold chain, and hence needs delivery vans that are refrigerated. Furthermore, there needs to be someone physically present to accept deliveries.

As such internationally and locally fresh online stores compete on the type of factors that other online stores compete on (such as the range of their products, the quality of their website and ease of use and payment) as well as some that are specific to fresh grocery. This includes using data and analytics to predict a shopper's basket and then maintain shopping lists, providing quick turnaround in delivery and short delivery windows. The advantage of offering an online channel is the possibility of stocking a far greater range in a warehouse than in a store. Additionally, when orders are fulfilled out of a store there is the risk of not finding the products required. However, fulfillment out of stores allows companies to leverage off existing infrastructure in areas with low volumes which do not warrant purpose-built facilities.

Pick 'n Pay: Pick and Pay run an online store alongside their bricks and mortar retail stores. This includes both home delivery and "click and collect" options which allows customers to shop online and fetch the order from a store. The online retail division has two dedicated distribution centres in Cape Town and Johannesburg, which account for approximately 80% of their online turnover. Outside of this, orders are fulfilled from the nearest store or delivery point. Online shopping still accounts for a small portion of sales. They cater both for consumers as well as businesses. The distribution centre employs 100 staff and they also employ 150 drivers in Johannesburg and another 100 in Cape Town (Pick n Pay, 2018). They also have a mobile interface and estimate that 40% of online customers use their app. There has been a 70% increase in use of the app in the last year (Pick n Pay, 2018). Pick n Pay are working achieving a one-hour delivery windows during which goods will be delivered so that customers are better able to arrange their delivery times.

Woolworths: Woolworths uses their online store to sell a wider range than groceries alone (encompassing for example, homeware, clothing and beauty as well). They utilize a combination of key stores, and what are termed "dark stores" which are fulfillment centres which contain all the key SKUs used for the online store. In addition, they use key stores for fulfilment. In 2017 online retail made up 0.7% of sales, though this showed substantial growth with an increase of 33% on the previous year (Woolworths, 2017). Woolworths also has an app that can be used for browsing, but requires use of the website for payment.

3.3 Other

There are a range of retailers that provide online clothing. These range from purely online larger retail companies to bricks and mortar retailers as well as smaller niche providers. The largest online retail stores appear to be Superbalist and Spree which are Naspers-owned clothing retailers. They have merged operationally in 2018 and will be managed by Takealot. Zando, another clothing retailer, owned by the international group Rocket Internet entered in 2012. However, it has fallen behind and as at July 2018 the analytics suggested that it had 1.32 million visits as compared to Spree with 2.72 million (Similarweb, 2018).

Most large South African clothing retailers also have an online presence and offer online purchase and delivery. This includes groups such as MrP, Edcon stores, Truworths group and the Foschini group. In addition, there are wide range of smaller retailers and designers with an online presence, including micro-retailers who have an online ordering system, and even smaller businesses that operate through social media.

There are also a range of niche providers including online-only and omni-channel across different product verticals. For homeware the online-only stores include Yuppiechef which has subsequently branched from online into physical stores and Homechoice who compete with omnichannel home retailers such as Mr P Home, @home etc. Likewise, in addition to the general merchandise suppliers there are several online sellers of electronics such as computers such as raru.co.za as well as niche retailers with a physical store presence such as Incredible Connections.

4. Payment systems

A second group of companies that form an integral part of the e-commerce environment are payment systems.

4.1 Payment systems for South African websites

At present there are a wide range of payment methods that are offered in South Africa. These include the following: Credit and debit cards (eg. Visa and Mastercard), Manual Electronic Fund Transfers (EFT), Instant EFT (through systems such as iPay and Payfast), proprietary payment systems (such as Paypal), loyalty points (such as eBucks and Discovery Miles), counter payments (eg. sCode, Pay@). This is wider than is seen in many markets internationally. However, at present it is estimated that 70-75% of payments are made by credit card, 30-35% by Instant EFT and the remaining payment systems account for under 1%

(Payfast 2017). Credit and debit cards in South Africa are predominantly provided by Visa and Mastercard. The other systems are generally developed by third party payment providers (often in conjunction with a bank partner).

Table 3: Payment options of a selection of South African websites:

Website	Payment options accepted										
	Credit card	Debit card	Conventional EFT	Instant EFT (i-Pay, SID, Instant EFT etc)	Mobile payments using QR codes (Snapscan and Zapper)	Mobile credit (eg. Mobicred)	Direct deposit	COD	Loyalty points (Discovery miles, Ucount, ebucks etc)	Payment at counter (Pay@, Scode)	Store credit
Takealot	☐	☐	☐	☐		☐	☐	☐	☐	☐	☐
Spree	☐	☐	☐	☐	☐	☐			☐	☐	☐
Loot	☐		☐	☐			☐			☐	☐
Wantitall	☐		☐				☐				
Zando	☐	☐	☐	☐			☐		☐	☐	☐
Superbalist	☐		☐	☐	☐	☐			☐	☐	☐
Pick n Pay	☐	☐									
Woolworths	☐	☐	☐								☐
Yuppiechef	☐	☐	☐		☐		☐		☐	☐	☐
Amazon (shipping to South Africa)	☐	☐									
Makro	☐		☐						☐		
Mr Price	☐	☐	☐	☐							
Foschini group stores	☐	☐	☐	☐	☐		☐				☐
Truworths group stores	☐										

Source: CCRED, compiled from websites

Credit and debit cards: At this stage the majority of consumers (70-75%) use credit and debit cards (Payfast, 2018). Historically there have been concerns over card fraud, and consumer have been hesitant to share their credit card details over online channels. This is justified to some extent as "Card Not Present" fraud is the highest contributor to gross fraud and continues to grow (growing by 7.5% between 2016-2017) (SABRIC, 2018). However, card

industry developments such as the introduction of 3D secure[8] has increased the safety of transacting online and the level of card fraud over e-commerce channels has fallen significantly (PASA, 2014). In addition, Visa and Mastercard have created various forms of innovation focused on the e-commerce market to smooth the customer experience. For example, Visa has launched a Visa Checkout service and Mastercard the Masterpass service which securely store information such as your card information, delivery details etc., allowing you to purchase without having to re-enter information each time. Together with American Express they are currently working on a single button that will appear at checkout that is used for any of the systems (Bloomberg, 2018).

EFTs: EFTs are the second most widely used system at approximately 30-35% (Payfast, 2018). Customers that do not have credit cards or prefer direct payment often have the option of manual EFT transfers from their bank account. However, this can be cumbersome in that they need to log in separately and manually insert payment details. Furthermore, it also takes up to two days to clear. As such, there has been innovation in this space with the introduction of "instant EFT" products. These allow customers to log onto their banking system through the payment gateway and pay. However, instead of customers having to wait for two days for an EFT to clear they have immediate confirmation of funds, allowing the e-commerce supplier to dispatch goods. Companies involved in providing these services including iPay, SID and Instant EFT by Payfast. These systems have created some regulatory concerns related to the safety of data and where sorting at source occurs, concerns have arisen over the impact of sorting at source on the banking system. Head of the Payment System of South Africa, Walter Volkner has stated that sorting at source will erode interoperable payment systems. Concerns with this innovation and its interactions with payment system regulations are discussed in the next paper.

Mobile payments: There are also a range of mobile payment options. These are generally app based. One version is a payment system based on QR codes used by apps such as Snapscan and Zapper (by Paygate). QR codes are unique codes, an example of which is shown in the figure below. Customers download the app and input their credit card or payment details. At checkout a customer is provided with a code. They then scan this with their smartphone and the app converts it to a payment based on card details. Other mobile payment options exist. For example, Mobicred is an online credit facility that works similar to a store card. Customers sign up and are provided credit. This can be used online through the payment gateway once they sign and and confirm using a one-time-pin. They then pay the account directly back to Mobicred using installments.

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[8] 3D secure is a technology that allows the cardholder to authenticate any transaction before it takes place. The cardholder is sent a password or One Time Password/PIN (OTP), usually through their mobile phones which have to be provided before an online transaction can be approved.

Figure 6: Snapscan and Zapper example

Cash payments: Few companies (with the exception of Takealot) accept cash on delivery. However, there is some innovation in terms of cash payments. For example, some online merchants accept Pay@ and sCodes which provide the online shopper with a code that can be taken to a kiosk at participating supermarkets and paid in cash, after which their item is delivered.

There are a range of companies that operate payment gateways that create the integration for a website to access different payment systems. These include Payfast, Paygate, Mygate etc.

4.2 Payment systems internationally

International purchases through online sources are subject to regulatory restrictions on international currency exchanges. This means that there are limitations on the means of payment possible.

Credit cards: Internationally, credit cards are often used. It can be noted however, that the South African Payment authorities are unable to regulate the level of security is less when transacting across borders and 3D secure is not always supported (PASA, n.d.)

EFT: EFT payments on an international basis are onerous and expensive. They require a Balance of Payments (BOP) declaration and sometimes require a physical copy to be printed, signed and physically taken to or faxed to a branch. They are also time-consuming and international EFT's can take up to 10 days depending on the consumer's bank. Furthermore, they are often not supported on popular websites such as Amazon.com. As such, interviewees have stated that EFT payments are not used a lot for international purchases.

Digital wallets: Another commonly used system is a digital wallet, the most popular being Paypal. In South Africa Paypal works in partnership with FNB which allows customers to top-up their Paypal accounts and also allows for withdrawal of their balance in Rand. It has options for businesses as well as consumers who purchase occasionally. It is still small however, with only 150 000 registered customers (FNB, 2018). Furthermore, it is not instantaneous as it is

still subject to foreign exchange regulations. Transactions take 5 days to clear at the moment. They are also subject to forex conversion fees above the transaction fee of 1.5% which makes it expensive for customers. (FNB, n.d.)

5. Logistics

A core component of e-commerce is logistics services, including warehousing and delivery. The e-commerce logistics market can be segmented in different ways. This includes segmentation by service type (namely, transportation, warehousing and value-added services). It can also be segmented by market, namely international (cross-border) and domestic, which can be further segmented by national and last-mile. There are also different delivery models such as door-to-door, counter-to-counter etc.

The South African Express Parcel Association (SAEPA) estimates the income from the South African express parcel industry (incorporating both e-commerce and general delivery) to be about R20bn per annum (Kneale, 2017).

5.1 Cross-border shipping

International shipping into South Africa for e-commerce from various international markets is rising. However, online retailers (within and outside of South Africa) and logistics companies have all pointed to barriers in international shipping as being the single biggest obstacle to international trade using e-commerce channels. Interviews with stakeholders in the logistics industry highlighted several reasons.

Firstly, as South Africa is still geographically distant from many manufacturing markets the cost of shipping is still high relative to the cost of most products. This is particularly relevant for low value to volume products.

Secondly, difficulties with the South African Post Office raises the costs and time for delivery. International shipping has an international and local component. Most countries have depended on the Post Office to drive e-commerce growth through lower cost delivery services in the local component, once the goods reach the borders (particularly where postal services have not been liberalized and have monopoly over certain items as is the case in South Africa). However, in South Africa this has been stilted due to issues with reliability of the South African postal services. The Post Office is a state-owned company mandated to provide postal services within South Africa. It is licenced and enjoys a monopoly over "reserved services" which include letters, postcards, printed matter and small parcels (SAPO, 2017). However, despite having this monopoly over certain types of products including small parcels the South African Post Office has had difficulties in adapting to the needs of e-Commerce. This relates to both shrinkage and issues in efficiency. In 2008 Amazon blacklisted the South African Post Office due to theft (News24, 2008) Stakeholders have stated that packages delivered by the Post Office may take as long as two months to be delivered. This has been particularly marked during peak periods, for example in December 2017 there was a 400% increase in parcels from abroad which they did not have sufficient staff and systems to manage (Mercury, 2017).

Furthermore, the Universal Postal Union has ranked South Africa as 88th in world in terms of its index for Postal development, behind various African countries such as Nigeria, Ghana, Kenya, and Mauritius and having fallen by over 9 points since last year.

As shown below the number of parcels delivered by the Post Office both domestically and internationally has dropped from 5.1 million parcels in 2012 to 3.4 million parcels in 2016.

Figure 7: Number of parcels delivered in South Africa
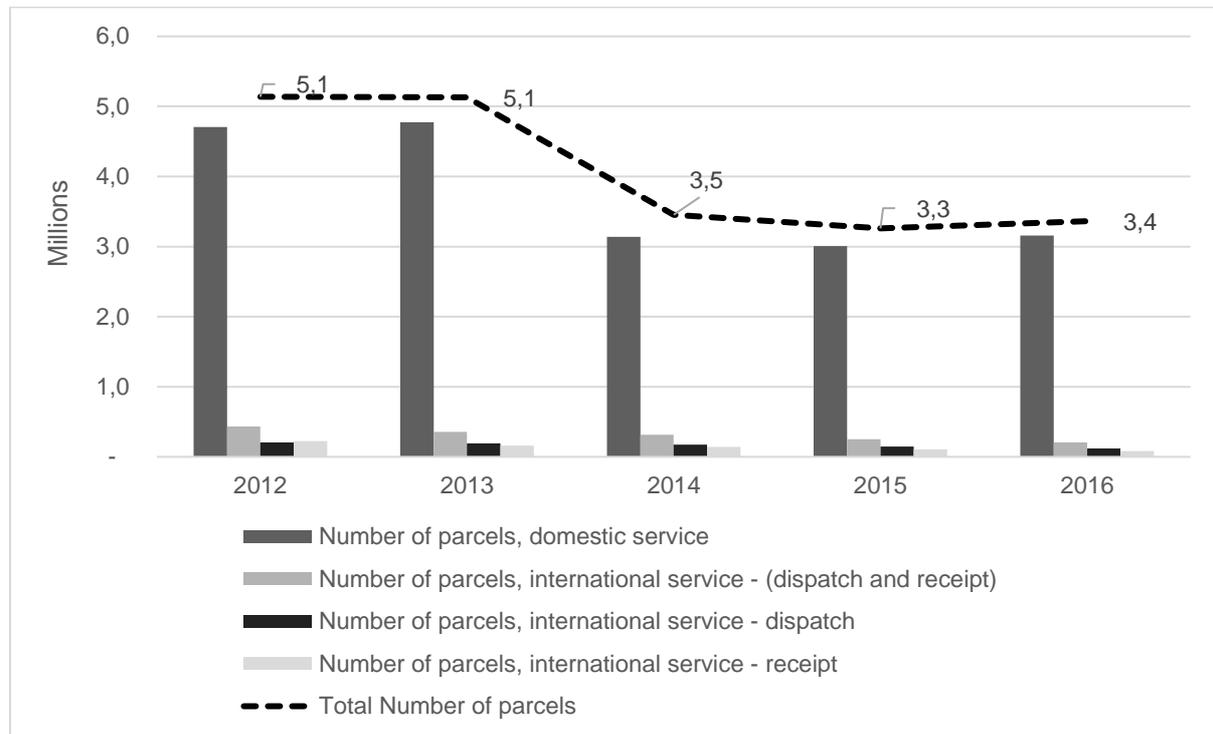
Source: Universal Postal Union

As such, according to interviews conducted with logistics companies, international retailers that would generally ship using postal services are hesitant to supply the South African market, and South African consumers are hesitant to purchase goods that would be shipped using the Post Office.

Thirdly, there numerous issues with the customs and duties processes. Interviewees from both logistics and e-commerce websites have noted that it that takes a long time for goods to clear customs, that there is no transparency and consistency in how goods will be assessed, that customs and SARS have processes that are not streamlined, and that there are various regulations which are cumbersome and difficult for consumers to navigate.[9] For example, if a consumer receives more than three e-commerce shipments in a year they are required to register as an importer by physically going in to a SARS office (SARS, 2017). Stakeholders that we interviewed noted that most consumers are not aware of this until it is picked up by the authorities. It has been suggested that certain logistics companies are creating

workarounds to avoid the delays at the South African border for their e-commerce products. In particular, one stakeholder stated that some customers have found it easier to bring in their products through Namibia where there are much smoother processes. As they are then within the customs union they can bring the goods into South Africa.

Shipping out of South Africa is also difficult, mostly due to the high cost involved. This is also true of shipments to SADC countries. Marketplaces that engage with businesses in surrounding regions have pointed to this being an obstacle to the rise of regional e-commerce. Furthermore, logistics providers that we interviewed have stated that companies that are shipping into other African countries are changing their routes to avoid shipping into and out of South Africa due to the delays and are instead using other countries as hubs (such as Ghana which has a free trade zone).

5.2 National logistics

Logistics within South Africa are slightly different. While the price is still often high relative to cost, there are differences in the level of innovation as more companies enter and benefit from scale economies due to growth. E-commerce companies have various means of optimizing logistics.

1. *Vertical integration*: Large online retailer Takealot has purchased MrD and vertically integrated their logistics including warehousing and delivery.
2. *Store distribution networks*: Others such as Makro and Pick n Pay leverage off their store distribution network, warehouse and delivery hubs (though it can be noted that Pick and Pay and Woolworths have also created warehouses and distribution for e-commerce alone). They may also use their stores as collection points
3. *Outsourced logistics*: Other online retailers often make use of courier optimizing companies such as uAfrica and ParcelNinja which provides assistance in logistics optimizing, using other courier companies. These companies may also provide warehousing and fulfillment capabilities. Alternately couriers collect parcels from manufacturers or sellers and deliver to final consumers without warehousing required.

The overall market for parcel delivery in South Africa is growing. While historically delivery was primarily by the Post Office (given legislation reserving certain segments), this appears to not be the case in the e-commerce space. The bulk of companies that we spoke to and surveyed did not use the Post Office as a delivery option.

Stakeholders have estimated that there are up to 300 registered courier companies that operate nationally in South Africa. They have stated that local logistics run on thin margins and require scale to compete. However, there has also been a rise in very individual on-demand delivery models, including some using courier apps that enable consumers to order for a courier online or via their mobile phones have parcels picked and delivered (Kneale, 2017).

There has also been an expansion in collection options. "Click and Collect" methods mean that customers can increasingly purchase products and collect it from retailers with a physical presence. Collection points are also available for other retailers. Pargo, a company that provides collection points recorded a 372% increase in use of collection points by platforms in 2015 (Thomas, 2017). Makro can deliver products to storage lockers in over 75 locations in service stations, drive-through restaurants etc., for which a customer is provided with a code to unlock and fetch their goods (Massmart, 2017). Counter to counter options including those by postal services such as Postnet and retailers such as Pep and Pick n Pay have also increased options for e-commerce providers and stakeholders that we interviewed had novel plans for expansion to different demographic groups in time.

The table below shows some of the key national delivery options offered and prices.

Table 4: Delivery options from selected South African Websites:

Website	Delivery options						Free delivery threshold	Deliver to door cost if under threshold (main centre/outlying)	Delivery to door (Same day delivery/Express)	Collection
	Postal Delivery	Premium/ expedited delivery	Standard Courier/ door to door	Collection	Counter to counter/ Pick up points	Locker				
Takealot			□	□			450	60	120/95	0 (CT)
Spree		□	□	□	□		350	50/100	+39-49	
Loot	□	□	□	□	□		250	35/60	45	0 (CT)
Wantitall			□				None	Dependent on location and weight		
Zando		□	□		□		250	25	80 (CT) /60 (main centres)	
Superbalist		□	□	□			350	60	80/70	
Pick n Pay			□		□			60-90		0
Woolworths			□					50-95		
Yuppiechef			□	□	□		400	60		
Amazon (shipping to South Africa)			□					$6.99 plus per item charges	$13.99 plus per item charges	
Makro			□		□	□		Dependent on size and location.		

Mr Price (clothing)			☐		☐		350 (store delivery)	45		5/35 (express)
Foschini group stores		☐		☐	☐		500	R 50	125/75	50 (over 500 is free)
Truworths group stores			☐	☐				R50		

Source: CCRED, collated from websites

It can be noted that the logistics industry in South Africa is expanding due to e-commerce. This is positive in terms of its contribution to employment. Warehousing and fulfillment in South Africa is still largely labour based and has not been mechanized. Delivery to customers is also labour intensive. As such, logistics potentially provides the biggest contribution to employment from e-commerce.

6. Trends, opportunities and challenges in South African and international e-commerce

6.1 Growth of the largest platforms and concerns over dominance

Internationally, a common pattern that has emerged in the e-commerce space is the rapid expansion of one large dominant e-commerce platform within a country. For example, in the US, UK, and Germany Amazon.com has grown to become the largest platform, in China it is Alibaba (though Taobao and T-Mall websites), in Japan is Rakuten, while in South America it is Mercado Libre (Edquid, 2017).

This is in part due to the scale economies in online markets. This occurs both through traditional scale economies and those specific to online markets:
1. *Traditional scale economies:* Larger volumes lead to increased funding, a better ability to scale logistics and warehousing to enhance efficiencies.
2. *Growth without profit expectations:* More specific to online markets is the willingness of online platforms forego profits in order to establish growth. For example, Amazon for a large part of its existence made very thin profits, yet continued to benefit from high levels of investment (Khan, 2017). This allowed it to operate on very thin margins and displace traditional retailers and competitors whose investors have profit expectations, while entrenching its market share through increasingly sophisticated offerings.
3. *Platform effects on the consumer side*: Consumers may prefer to use platforms that attract a large number of users. In e-commerce, buyers may gravitate towards platforms with the most reviews and sellers, with sellers choosing to sell on the platforms with the most buyers. This dominance is reinforced as better consumer data is gathered from this large cohort of customers allowing platforms and their suppliers better insight into spending patterns and allowing them a competitive edge on rivals in

terms of the provision of better targeted adverts and better curated supply (Evans, 2008). Consumers can also get 'tied into' one site through direct and indirect inducements (Candeub, 2014).

4. *Vertical integration:* The largest international online platforms have all integrated across multiple related business lines. Amazon is integrated in delivery services, cloud computing, etc. It also has both a retail arm and a marketplace. Alibaba has logistics, payment systems. Expansion into adjacent lines of business requires both funding and scale.

Internationally concerns have been raised over the size, scope and increasing dominance of large platforms, particularly as they have also in many instances acquired smaller competitors. For example, the size and scope of Amazon has led some to voice concern about its potential monopoly power. In addition to being an online retailer, it is a marketing platform, delivery and logistics network, payment service, credit lender, auction house, book publisher, film and TV producer, fashion designer, hardware manufacturer and leading host of cloud computing services. (Khan, 2017) Furthermore, it has used additional funding to subsidise products aimed at creating customer loyalty such as Amazon Prime which for a subscription provides services such as movie streaming and free next day delivery, but ultimately creates a pool of customers that are less likely to shop around. This growth which is partly a result of platform effects otherwise mean that these companies have the potential to crowd out otherwise competitive local suppliers (both online and bricks-and-mortar). (Khan, 2017). It also allows for abuse of dominance in other spheres. Amazon can compete directly with sellers in its marketplace, benefitting from insight into their ordering data, accusations have been made that they have used their dominance in sales to benefit their ebook business over that of traditional publishers and have used it to demand better terms from publishers, leading to consolidation in traditional publishing (Khan, 2017). Competition to Amazon has come from marketplaces (particularly eBay) and traditional retailers with an online offering (particularly Walmart). However, the different cost structure faced by online companies (which does not have the same high retail property costs) and the low profit expectations have led to concerns that they will eventually lead to closures in traditional retail.

A key question is therefore whether we are likely to see similar patterns emerging from the larger platforms in South Africa. In South Africa there are some parallels. Takealot, the largest platform has grown rapidly over the last few years, acquiring many of its online competitors (Kalahari.com, Spree, Superbalist). It is larger than the next largest online general merchandise store by an order of magnitude. It also has increased scale and volumes and attracted significant amounts of investment without providing investors with high returns. Takealot is utilizing data generated from its volume of customers to enhance its offering.

However, this does not mean that Takealot will necessarily fall into similar anticompetitive patterns to Amazon. At present a differentiator between Takealot and Amazon (or Alibaba) is the level of customer loyalty that it has induced. It still remains to be seen whether Takealot will follow the Amazon model of introducing loyalty retaining features that induce customer stickiness (such as bundling entertainment options such as video streaming, offering subscriptions for unlimited short window deliveries etc.). At the moment, however, switching to competing platforms in South Africa is fairly easy and multihoming is possible. There are no switching costs or usage-based tariffs. Takealot is also not offering digital products in competition with international companies such as Apple and Amazon (Atagana, 2014) and does not benefit from the benefits associated with Amazon's cloud computing arm. It currently

therefore offers a far more limited menu of physical retail products in direct competition with stores. In addition, the market that Takealot is targeting (South Africa) is relatively small in size.

This is not to say that the possibility does not exist. While Takealot does not currently offer adjacent services such as movie screening as part of its bundle, there is the potential for it to grow further along the Amazon model given purchase of logistics company MrD. Furthermore, its parent company Naspers (now that it is almost wholly owned) also owns content companies that could potentially be an attractive component of such bundles such as M-Net, SuperSport, Multichoice and a range of magazines and newspapers, though the video entertainment companies are to be unbundled and separately listed (Naspers 2018). Furthermore, it has links with various international tech companies through its parent company Naspers and the funding to embark on more aggressive strategies. However, at present, it is still in the formative stages of its development. In addition, it is likely that Takealot would be constrained by the presence of large online retail competitors with a physical presence such as Makro and Massmart stores (which could benefit from Walmart's experience in other markets.

Our sense is that at present the issues that relate to having a dominant platform that has effects on entry and expansion in the market are not currently present in South Africa and that Takealot, while it has the potential to grow, is currently not dominant and is too small a platform to pose a competitive threat. As such, at present we would recommend that the assessing and regulating the power of e-commerce platforms such as Takealot is not a policy priority.

6.2 The rise of omni-retailing- threats to the mall?

Various retail stores within South Africa have noted the importance of online channels and though online shopping often accounts for a small portion of total sales it is still seen as important. There is some agreement that there is scope for e-commerce sales to rise as a channel for bricks and mortar stores, particularly among the higher LSMs. Some interviewees pointed to sales in other countries in which they were active as a comparator as an indicator of the direction in which they believed their online offering would grow. For example, Mr P notes in its Annual Report *"Although online has a relatively low market share in South Africa, we believe this will grow over time, much the same as in other markets".* In interviews, Woolworths pointed to similar growth potential, comparing its 0.7% online sales in South Africa with 4.3% at its David Jones stores and 15.5% online at its Country Road Group stores in Australia (Woolworths 2017).

However, focusing on the choice between online and physical shopping misses the dynamics between the two and the interplay between online and offline markets. In line with international patterns, retailers interviewed in South Africa point to increased use of hybrid models as is elaborated on more extensively in the next paper in this series..

For example, "click and collect" models (used by retailers such as Pick and Pay and Mr P) allow consumers to purchase online and fetch their products at a store. There are products that allow consumers to purchase online and take a code to a counter to pay in cash (such as Pay@ and SCodes). Stores often facilitate online returns. Many interviewees have noted the need for an online platform as complimentary to their core business. Mr P notes in their annual report that 50% of their customers collect online purchases in-store, and 20% of these customers make an additional purchase while in the store. In addition, another interplay

between physical and online stores they note is that 65% of their customers browse online before shopping in store (Mr P, 2018).

However, there was a sense that online sales are generally small (generally under 1%) and that bricks and mortar retail would continue to play a strong role in South Africa. In fact, there has even been a reverse movement in some quarters with Yuppiechef, which started as an online store opening physical branches in Cape Town. On their launch founder Andrew Smith stated:

> *"For a long time we believed that ecommerce was the future of retail, and that eventually this channel would "win" and the others would "die".* **We were wrong.** *For many South Africans shopping is one of our favourite past-times — spending a Saturday at a mall, meeting friends and eating out. Or perhaps for certain products you prefer the physical shopping experience — browsing, getting advice and the immediacy of the purchase. Shops and malls are not going to disappear any time soon. We believe that the future of retail is 'omnichannel', which means a combination of physical stores and ecommerce."* (Yuppiechef, 2017)

Enhanced use of online channels by traditional retailers can lead to concerns over the impact that it will have on commercial property and employment in physical branches. Internationally, this has been the case. However, unlike other markets where there is a sense that online sales are partially responsible for closures in offline retail, and lower footfall in malls, there was no sense that the growth in e-commerce would lead to store closures or reductions in South Africa at this stage. In contrast stakeholders strongly emphasized the shopping mall culture in South Africa and stressed that offline retail was not under threat, particularly in areas such as grocery. Instead, it was seen as a complementary channel.

The rise of marketplaces and price comparison websites have also created an online channel to single location stores to reach a wider market and to compete in a more geographically dispersed area. The impact of increased e-commerce sales on retail employment was also not considered to be a cause for concern. Stakeholders with an e-commerce arm noted that warehousing and delivery was fairly labour intensive and that the effect on employment had been fairly neutral thus far.

As such, it appears likely that while online retailing will provide an additional sales channel it is unlikely to reduce employment in the traditional retail sector in the near future and is likely to remain fairly labour intensive as it grows.

6.3 Opportunities and challenges in using online sales to increase microbusinesses

In South Africa many small businesses are embracing online sales through models including their own websites, marketplaces and social media. Like the offline counterparts, small businesses online are often less sophisticated with less funding available. However, online retail provides these companies with a far larger market than would be ordinarily achievable and therefore opens up a range of opportunities.

Indications are that barriers to entry for small businesses are falling. While in the early years of e-commerce it was necessary to hire a web-designer to develop code, platforms such as Woocommerce and Shopify have reduced the technical barriers to creating an online store, and provide free trials and templates that allow for the creation of a storefront, with simple options for integrating payment systems etc. Third party marketplaces provide another outlet

for sellers who are able to access a larger market through listing on BidorBuy or Takealot (or multihoming) than they might attract on a standalone website. Furthermore, social media such as Instagram and Facebook groups (for example, Brownsense, a Facebook group aimed at providing a platform for black owned businesses) provide another platform to market products to a wider audience.

Social media such as Instagram and Facebook provide cheap or free outlets for marketing and smaller companies often use informal advertising channels on and through social media influencers. Furthermore, there is a growing support industry that provides payment and logistic solutions for small providers with online websites. Some companies (such as UAfrica) allow companies to list on multiple websites and manage it centrally, assist in generating shipping labels, optimizing courier services and tracking parcels.[10] Other companies (like ParcelNinja) focus on providing warehousing and courier solutions.[11] Price comparison websites may also create an opportunity for their products to reach a wider market.

However, there are still various areas in which small businesses in the online market have difficulties. A Unido report on SMEs in E-commerce in South Africa noted that challenges for SMEs in e-commerce are aligned with challenges faced by SMEs in general. This included access to finance, poor physical infrastructure, low levels of R&D, labour issues, skills shortages, lack of co-ordination in government, taxation among others (Mkhosi, 2017). Interviews with companies that support small businesses in the e-commerce space supported this. However, they also pointed to specific issues related to the need for funding and high costs faced within e-commerce environments. In particular, they noted that margins can be thin and the cost of the various services required such as platform fees, payment system fees and logistics costs reduce profitability substantially. Advertising online can be expensive for a small business. One interviewee noted that one of their SME clients spent R10 000 a month on Facebook ads alone, which was a significant outlay for a small business. The same business stated that some of the online advertising platforms like Google Ad words were complex to use and that they had "*burned through money*" trying to use it, with little visible return.

Banking and payment transaction fees in particular were highlighted as a barrier with one marketplace focused on small businesses noting that out of an 8% margin close to 5% went on bank fees alone. Businesses that transacted with international customers faced even more onerous fees. For example, if they used Paypal they lost money off the forex conversion, and paid fees in addition. The variability in the Rand was seen as an additional risk for business as listed prices could turn from profitable to lossmaking as the currency turns.

As such, while e-commerce has opened new markets and reduced entry barriers in some areas for small businesses, the expansion and domination of large platforms and the advanced manner in which monetarization of advertising channels is appear to be raising these barriers again. In addition, concentration and high fees in banking is having an adverse effect on the growth of smaller online retailers.

6.4 International entry in South African e-commerce: direct imports and its effect

A concern that is often raised with regard to e-commerce is the propensity for e-commerce to encourage direct imports by consumers. While this may enhance consumer choice and drive

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[10] Interview conducted with UAfrica, 18 July 2018.
[11] Interview conducted with Parcel Ninja, 23 July 2018.

efficiency by forcing companies to compete internationally there is a concern that it may lead to imports that threaten local manufacture in instances in which competitive pricing is the result of uneven competition (for example, due to subsidization). Furthermore, there are concerns that under-invoicing may lead to lower taxes being paid.

In various markets international manufacturers and suppliers (particularly from lower cost manufacturing countries such as China) have used online sales as a channel to take products straight to final consumers. For example, Chinese sellers supply products on sites such as Amazon.com and eBay. This is using different models:

1. *Drop-shipping through existing platforms*: Some international suppliers list products on the main platform with a country, but directly ship products to consumers that are from their international warehouse without it passing through a locally based intermediary. There is increased sophistication in supply by international manufacturers that are drop-shipping with companies focused on analyzing platform and customer data (including key word searches, keyword combinations, influencers etc.) to inform what to manufacture based on customer searches. For example, if a celebrity is seen with a polka dot dress and this prompts people to search for it, the trend would be picked up by data analytics and the international manufacturers would develop a version supply it on the platform within a few weeks.

2. *Fulfillment through existing platforms:* Some international suppliers provide products directly to the main platforms. This is based on data analytics on what consumers are searching for or popular trends but is driven by the platform itself. The platform itself then orders products at a particular price (often with quality assurances, maximum return rates and minimum review requirements) store it in their warehouse and fulfill customer orders directly. An example of this internationally is the Fulfilled by Amazon selection where Amazon orders products and stores them in their warehouse for delivery.

3. *Creating own websites:* Some international suppliers create platforms or websites that are designed to look as if they are located in the country targeted (in terms of language and style, currency, and even local addresses). However, these are actually virtual and products are shipped from international warehouses.

From interviews with market participants it appears that drop-shipping and supply by international websites with direct shipping to consumers is not occurring to the same extent in the South Africa as it is in other countries such as the US. Most South African websites appear to be selling products that are shipped within South Africa. International purchases are more from the US than China at this point. The key reasons identified are the time taken for delivery, issues relating to taxes and duties and the lack of clarity over the final price due to be paid by consumers (due to this uncertainty over taxes) which makes price comparison and selection difficult.

Interviews with international suppliers supported this. Suppliers in Hong Kong and China that we interviewed pointed to the South African market being less attractive than others at this point for a variety of reasons.

Firstly, it is seen as relatively small, which deprioritizes it given that there is scope for growth in larger markets. Secondly, shipping to South Africa takes a long time and is expensive

relative to other countries (for example it takes 30-45 days to ship from China to SA by sea). Thirdly, this is compounded by an unreliable local postal service and high product loss rates (estimated by one e-commerce company to be 20%). Fourthly, there are strong currency fluctuations which increase the business risk. (Lim, 2018, Yip, 2018, Lee, 2018, Huang (2018))

Furthermore, from a consumer perspective international purchases are more complicated relative to local e-commerce purchases. With an exception of Amazon, most websites do not provide all-inclusive prices. As such, consumers are unable to estimate the cost of a good as there is no clarity over the duties and taxes that they will need to pay. These duties can be sizeable. Clothing, for example attracts duties of around 45% before 10% VAT (this varies depending on the material used). Furthermore, there are often delays as goods are held at customs which increases the time to delivery. As such from a customer perspective too, international purchases are more complex.

There are workarounds that exist. Various firms are set up to provide logistics to e-commerce consumers that wish to purchase goods from abroad. Examples include Aramex. These producers have an address to which customers can ship goods, and these are grouped and shipped to South Africa after which it is couriered to the final purchaser. However, this is subject to the same constraints in terms of time, cost and duties and taxes.

As such, there are indications that trade barriers, inefficiencies in postal services and the poor transport integration have ultimately led to a protectionist environment in which South African e-commerce companies are being sheltered from international competition to a greater extent than is occurring elsewhere.

However, this does not mean that consumers are not purchasing from international websites. While there are no definitive statistics on actual purchases, internet traffic patterns suggest that a high level South African traffic goes to Amazon.com, eBay and even Aliexpress. The table below shows traffic shares for general merchandise for South Africa. It can be noted that Makro is classified incorrectly as an electronics provider and does not appear. However, it shows that Amazon, ebay and Aliexpress are active in the market. While Takealot is still dominant, this does suggest that international e-commerce companies are making a mark at present. However, if the inadvertent protection that has arisen due to inefficiencies in the postal services and customs processes are address this could change quite quickly. As such, policies related

Figure 8: Top 5 general merchandise websites (desktop) in South Africa

	Domain 256	Traffic Share	Rank
1	takealot.com	41.97%	#3,567
2	amazon.com	26.56%	#13
3	ebay.com	8.22%	#33
4	aliexpress.com	4.91%	#49
5	amazon.co.uk	2.79%	#66
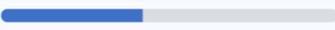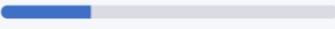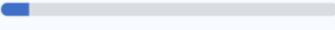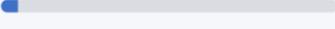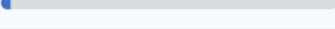
Source: Similarweb, July 2018

6.5 Slower growth in international e-commerce in South Africa – possible reasons

It is clear that online retail in South Africa has not grown to the extent it has in other countries. In our interviews several common explanations have been given. These include the following:

1. *The shopping culture in South Africa*: A strong emphasis on mall culture means that shopping is seen as a form of entertainment. This together with the high concentration of malls and shopping centres means that bricks and mortar shopping is prevalent.

2. *Delivery costs*: At present the cost of delivery in South Africa is high relative to goods purchased. While there are arguments that the price has come down and that it is in many instances in line with international markets (outside of subsidised free delivery) the fact that delivery can be around R100 means that consumers need a fairly large basket of goods to make the fee worthwhile. Interviewees have suggested that this is partly due to the fact that the alternative of fetching goods from a shop is seen to be cheap in South Africa. The target market of higher income consumers have access to cars and parking costs are seen to be low. This is different from some countries with high penetration such as the UK in which public transport is more common.

3. *Postal services:* The postal services have been the lynchpin for e-commerce growth in several countries as it provides a cheap option for postage. However, in South Africa, small businesses and consumers are hesitant to utilize the post office due to concerns over goods not arriving or arriving too late.

4. *Trust in online payment systems:* Surveys have suggested that concern over online fraud is an additional barrier to the adoption of online shopping in South Africa. However, measures to enhance credit card protection have significantly reduced fraud rates.

It is unclear whether greater familiarity and trust in payment and delivery systems will lead to a substantial increase in the uptake of online retail in South Africa. In the near future it appears that many e-commerce online retailers are focused on the upper income market segment. However, this is a dynamic and innovation driven market is therefore is subject to disruption and has the potential to grow in unexpected ways.

7. Policy recommendations and conclusions

South Africa has a nascent online retail market which is currently growing rapidly. It is characterized by the emergence of large leading platforms that are competing head-to-head with omnichannel retailers who often leverage off their existing wholesale and distribution platforms. Online retail is also providing a new channel for small businesses to reach a wide market. In addition, the customs and duties regime, distance from major manufacturing hubs and inconsistent postal services have meant that local online retailers have been inadvertently protected from the full competitive impact of international e-commerce companies allowing for greater domestic growth. As such the core fears that e-commerce will lead to a substitution of international products instead of local have not been realized as yet.

However, the local online retail markets have yet to reach maturity. At present online retail accounts for a small fragment of retail in general and delivery charges, lack of familiarity and trust in online payments and a shopping mall culture have all contributed to a small take-up relative to other countries. However, there is substantial innovation in adjacent industries such as payment systems and logistics. As such we expect that this will lead to future development.

Going forward it seems likely that innovation will increase. However, various policy developments may be important to consider. This may include measures to increase trust in online systems, better systems for e-commerce importation, and skills development. Fundamentally, South Africa needs to consider whether and how it would like to promote international online retailers as opposed to local retailers. There also may be scope for enhancing customs systems particularly to allow for the development of an e-commerce logistics hub into other countries in Africa. Furthermore, a broader digital and e-commerce framework should also be developed.

7.1 Promotion of international e-commerce

If it is believed that the benefits of enhanced competition is likely to lead to local manufacturers increasing competitiveness and efficiencies and lead to South Africans accessing a wider range of products, sometimes at lower prices, then the policy and regulatory environment needs to be enhanced to make it more customer-friendly.

International e-commerce has been slowed significantly by specific challenges relating to cross-border movement of goods. Policy adjustments that may assist in easing this may include the following.

- Simple online importer registration for individuals (who may order more than 3 shipments a year from abroad but is purchasing for personal use rather than commercial purposes)
- Transparency over duties and tariffs. This can include clear and user-friendly guides, and potentially an online calculator to allow customers to estimate costs prior to purchase.
- Streamlining of systems at the ports of entry to reduce the delivery times.
- Changing the deminimus under which duties do not have to be paid.

Furthermore, there may be significant opportunity to position South Africa as an e-commerce logistics hub for the rest of Africa. This has the potential to stimulate the logistics industry, draw in foreign direct investment (for example in enhanced warehousing) and employment in the logistics sector in South Africa. At present products shipped to Africa are often brought through Durban or Johannesburg. However, the customs processes mean that companies are often incentivized to route it through Mauritius or Namibia instead. Industry participants believe that by creating a free trade hub there may be scope for positioning South Africa in a manner that allows them to benefit from trade to other parts of the continent. In time this may prove beneficial if trade routes into other countries lead to enhanced scale and reduced costs. This could lead to enhanced scope for South African industries to increase their export-oriented e-

commerce in competition with other international companies that are selling into these markets. This is especially pertinent as African and Middle Eastern markets import 50% of all online purchases from other regions making it the top online importing region worldwide, in contrast to 14% in North America, and 15% in Western Europe (KPMG, 2017).

The protections that are accorded to payments made within the South African payment system are limited when interacting internationally and as such greater consumer advocacy around safety in online payments is necessary. To the extent that safer options require use of online wallets, prices should be observed to ensure that regulatory protections do not create an environment for excessive pricing.

7.2 Promotion of domestic e-commerce

If, alternatively, South Africa, prefers to allow the development of the local e-commerce industry with a measure of protection, there are still changes that could aid this that were raised by stakeholders.

Postal services: Importantly, a key lever to creating better local e-commerce (particularly for SMEs) is a better local postal service that can provide for lower costs of delivery. Issues in the South African Post Office need to be addressed. This includes allowing customers to choose a delivery counter for collection (rather than basing the post office for delivery on postcode), and ensuring that shrinkage, and loss is minimized. Alternately, reform of legislation governing participation in postal services needs to be reconsidered to ease private participation in the sector.

Payment and fraud: Greater levels of consumer awareness and literacy around use of payment systems over online channels, systems in place to protect consumer information (such as 3D secure) and safe use of payment information etc. would assist in easing consumer use of online channels. Furthermore, consideration of ways in which innovation in the payment space can be encouraged while balancing systemic risk needs to be considered. We discuss these issues in further detail in our later paper.

Regulatory alignment: e-commerce is regulated and impacted on by regulations from a range of departments including SARS, ITAC, DTPS, DTI and the Competition Commission, among others. As such it is important that there is regulatory alignment in how the different arms of government approach e-commerce policy. As will be discussed in further detail in the third paper in this series there are a range of issues related to regulation that will require substantial discussion and consideration (such as data sovereignty, data localization and other trade issues, taxation etc). It is important that there is full alignment across regulatory bodies for measures taken to be effective and that any policies are evidence-based and country-specific.

Competition issues: Given the potential for scale economies, data analytics and platform economies to lead to the emergence of dominant platforms it is important that competition authorities are aware of potential for platforms to exert their dominance going forward (for example, in terms of relationships with suppliers on their marketplace etc.). In addition, as online systems transfer business input costs from physical premises to online shop-faces

powered by international programming companies, and advertising in local media shifts to advertising on large international search platforms and social media it is increasingly important that competition authorities to be aware of the potential for large international suppliers of online advertising or technology located outside of South Africa to abuse their power to extract rent from local companies. Further evidence-based research and investigation on this is required.

Skills development: South Africa requires STEM graduates. In terms of technical skills local software developers and data scientists are in short supply, and compete in a global market. As such the industry will benefit from a boost in investment in skills such as coding (languages such as PHP online scripting, Javascript and Python). Cape Town is emerging as an e-commerce hub and this could potentially be developed further. However, e-commerce is not only driven by deep technical skills, but also entrepreneurial and business skills and these should also be considered in any programmes targeted at the sector.

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List of interviewees

	Company	Name of interviewee(s)	Position	Date of interview
1	Aramex	Denton Haridass	National Customs Compliance Manager	20 August 2018
2	Aramex	Mark Mahoney	Manager E-commerce Services	02 August 2018
3	Brownsense	Mzuzukile Soni	CEO	14 August 2018
4	DHL South Africa	Wayne van Rensburg; Carla Ferreira	Commercial Director; Relationship Channel Manager	16 July 2018
5	DHL Southern Africa	Hennie Heymans	CEO	06 August 2018
6	Foschini	Brent Curry	Chief Information Officer	09 October 2018
7	FNB	Bafana Mabasa	Operations Manager Foreign Exchange	14 August 2018
8	Hello Pretty	Samantha Marx; Scott Hadfield	Founders	07 August 2018
9	National Treasury	Aneesa Baig	Director Indirect Tax	16 August 2018
10	Nedbank	Dayalan Govender	Managing Executive - Nedbank Card and Payments	17 September 2018
11	Pick n Pay	Richard van Rensburg; David North	Deputy CEO; Group Executive- Strategy and Corporate Affairs	24 July 2018
12	Pricecheck	Kevin Tucker	CEO	24 July 2018
13	South African Revenue Services (SARS)	Adrienne Veary	Specialist: Legislative Research and development	18 August 2018
14	The Payments Association of South Africa (PASA)	Walter Volker	CEO	20 July 2018
15	Uafrica/Bidorbuy	Andy Higgins	Managing Director	18 July 2018
16	Wantitall/Parcel Ninja	Justin Drennan	Chief Executive Officer (CEO)	23 July 2018
17	Woolworths	Ralph Buddle	Director, Strategy and business development	18 July 2018
	Interviews in Hong Kong and China			
1	E-Commerce Association of Hong Kong	Stanley Lee	President	01 June 2018

2	E-Services Group/China Cross-border E-commerce Association	Alan Lim	CEO/ Vice President	02 June 2018
3	Guangdong E-business Association	Zirong Huang	President	04 June 2018
4	Xsight	Lewis Chan	Founder	04 June 2018
5	Xsight	Tak Yip	Vice President	01 June 2018