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E-Commerce Markets: Opportunities and Challenges for the Western Cape Agricultural Sector

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Executive Summary

Smallholder farmers face numerous challenges to be able to benefit from marketing opportunities. Agriculture e-commerce (Agri e-commerce) is a relatively new approach for smallholder farmers to sell their produce to buyers including agribusinesses, retailers, restaurants and consumers. Agri e-commerce creates improved market access and higher levels of transparency in the value chain.

This report examines the market opportunity in agri e-commerce for smallholder farmers in the Western Cape. It highlights e-commerce trends, the factors inhibiting e-commerce as a business model, as well as opportunities that exist for smallholder farmers to enter the agri e-commerce market.

Acceleration of technology adoption is critical to realise the benefits of the fourth industrial revolution in the agricultural sector in the Western Cape, for smallholder farmers in particular. The adoption of e-commerce by smallholder farmers may potentially assist in solving constraints faced by smallholder to access market opportunities.

The key recommendations are:

- SWOT analysis of the different agri e-commerce models needs to be conducted.
- In-depth study of the factors inhibiting agri e-commerce and the opportunities that exist in the agri e-commerce sphere for smallholder farmers needs to be steered to determine the viability of this marketing platform.
- Determine the major agri e-commerce players and have round table discussions to determine what is needed and what standards need to be in place for smallholder farmers to access these platforms.
- Building trust in online purchasing, focussing on service quality and timely delivery is of utmost importance.

1. Introduction

The world is an ever-changing place, with many uncertainties, a changing climate and a growing global population expected to increase by 2 billion people in 2050 (UN, 2019). Continued rapid population growth and urbanisation presents many challenges for sustainable development, especially on the African continent where 52% share of population growth is expected to occur. By 2050 around 60% of the African population will reside in urban areas (UNCTAD, 2019). These trends have major implications for agricultural value chains and their ability to supply food in the context of land and water scarcity, climate-related disasters, as well as keeping the food price range reasonable for consumers (WCDOA & USB, 2018; Uys, 2019). There are also several megatrends expected on the African continent which will impact the agricultural transformation currently underway. This includes volatile food and energy prices, rises in per capita income resulting in the rise in the middle class, soil degradation and greater climate variability (Traub et al, 2014). Agricultural systems will need to make much gains in productivity which will depend to a large degree on technology and research and development.

The Fourth Industrial Revolution (4IR) brings about changes in technology and information that will make feeding a growing population possible (WCDOA & USB, 2018). These new technologies enable the measurement of soil conditions, implement water management practices more efficiently and monitor livestock and crop conditions remotely by the use of smartphones, tablets, in-field sensors, drones and satellites (WCDOA & USB, 2018). The Western Cape (WC) (with a population of 6.2 million, which is 11% of the total SA's population) is one of the provinces in South Africa that is globally competitive and in the foreground of testing and adopting many of these new technologies (WCDOA & USB, 2018).

The WC agricultural sector is unique compared to other provinces in South Africa mainly due to being a Mediterranean climate with winter-rainfall. This allows for the production of fruits and wines which are mainly exported (Vink & Tregurtha, 2001). In 2018, the agricultural sector contributed to around 4.1% to the Western Cape Gross Domestic Product (GDP) and if one adds the Agri processing sector this proportion rises to around 10% (Quantec, 2019). The Western Cape has around 2.5 million hectares under production, which is contributing 23% to South Africa's total agricultural GDP (Kuschke & Cassim, 2019; WCDOA & USB, 2018). The agricultural commodity break-down for the WC

sector is 50.5% horticulture, 41.6% livestock, 6.9% field crops and 1% other commodities (WCDOA & USB, 2018). The advantages that the agriculture sector brings to the province are food security, job creation, improving economic stability and inputs to the other sectors (WCDOA & USB, 2018). Furthermore, the sector combined with agro-processing is responsible for 18% of all formal employment opportunities in the WC (Kuschke & Cassim, 2019). The agricultural sector is made up of commercial farmers and smallholder farmers. These smallholder farmers play a valuable role in rural communities and are responsible for creating food security and job creation (Barends, 2016), therefore it is of utmost importance to give them support.

In the WC there are approximately 9844 smallholder farmers and the WCDOA supports these farmers by creating opportunities to operate at a commercial farming level (Barends, 2016). To do this, farmers are required to stay up to date with the latest technology and research, to ensure that the farm operates or is managed efficiently and effectively. Staying up to date with the latest technology and research is not always a main priority of smallholder farmers as focusing on market access and input costs are crucial to productivity (Barends, 2016). Therefore the question of “*Where to sell?*” arises. With smallholder farmers having little to zero bargaining power, e-commerce was considered as a potential answer to the “*where to sell*” question (E-agriculture, 2017).

The main focus of this report will look at e-commerce markets as a possible platform for smallholder farmers to sell their produce by highlighting existing opportunities. This will be done by defining e-commerce, identifying potential as an alternative market channel for producers, reviewing the global online food shopping market and assessing South Africa's e-commerce market. Finally, using existing sources, the various marketing channels of farmers are discussed, together with the factors that influence this decision. This will inform further research that will particularly focus on the option of online retail for smallholder farmers in the Western Cape.

2. E-commerce globally

The internet makes it possible for businesses to operate 24/7 and for customers to shop at any time of the day without having to go to a brick-and-mortar store (Mpinganjira, 2017). Today, global online businesses have become widespread and range from online florists, cleaning services, food delivery services, etc. (Budree, 2017; Mpinganjira, 2017). The success of the growing e-commerce industry is made possible by the increase in smartphone adoption by the consumers. Developing regions can attest to this because mobile internet is their primary source of connectivity and studies have shown that over the last five years the adoption of smartphones has tripled to 56% of total connectivities (Joiner, J. & Okeleke, K. 2019). One of the key enablers of e-commerce is digital payment solutions which mobile platforms can facilitate and this “mobile money” grew to 79% in value for e-commerce transactions in 2018 (Joiner, J. & Okeleke, K. 2019). Mobile operators are playing a vital and active role in the e-commerce industry, especially as mobile e-commerce tends to increase.

Many terms and concepts that relate to the trading of goods and services online are prevalent in the literature reviewed. The most prevalent terms are electronic commerce (e-commerce), mobile commerce (m-commerce), online retail, online grocery, online shopping, and online food delivery. Table 1 below provides a definition for each term:

Table 1: Definition of key terms in online retail

Term	Definition
E-Commerce	Buying and selling of products and or services online (Investorwords, 2018; Budree, 2017; Qwerty Digital, 2017; Mueller, 2000).
M-Commerce	Refers to online sale transactions that use wireless electronic devices such as hand-held computers, mobile phones or laptops (Techopedia, 2018)
Online Retail	A process that allows the customers to search, select and purchase products, services and information remotely over the Internet (IGI Global, 2018), so no physical “product” contact is needed.
Online Shopping	The act of purchasing products or services on the Internet (Business dictionary, 2018; Ward, 2008).
Online Food Delivery	A process of ordering food from a local restaurant or food co-operative using a web page or app (Premier Food Safety, 2016).

Source: Own compilation, 2019

The past two decades have seen significant growth in e-commerce with global retail sales in this category valued at \$3 trillion and continue to grow rapidly (Joiner, J. & Okeleke, K. 2019). E-commerce provides small and large businesses with a platform to expand their business into new markets previously inaccessible at a zero or minimum cost (Budree, 2017). It is also expected that the expected growth in online purchases will be underpinned by factors such as shifting consumer preferences, growing internet and mobile adoption, and improved service delivery. For consumers, it also means increased convenience, whilst at the same time enable greater choice and better deals (Joiner, J. & Okeleke, K. 2019).

According to Budree (2017), a potential positive spin-off from e-commerce will be an expansion of the import and export markets which will positively affect employment. New jobs will be created directly and indirectly and these "new jobs" will range from software development, data processing, information related goods, and services, software and digital products, as well as courier services, packers, etc. (UN, 2002). Other potential positive spin-offs from e-commerce will be:

- Provides an alternative venue for promoting and marketing agricultural product,
- Lower transaction costs and the speed of transactions,
- Opportunity to eliminate barriers to entry and streamline coordination,
- It provides better access to market prices,
- Reduced inventory, and
- Reaching a wider consumer population (Budree, 2017; Carpio, Isengildina-Massa, Lamie and Zapata, 2013; Tregurtha and Vink, 2002).

There are some concerns associated with increased e-commerce such as the protection of privacy and national-level data. There might also be a need to regulate these transactions for the tax to be tax compliant (Budree, 2017). With this in mind, countries must also look at ways to stimulate their domestic IT (Information Technology) industry so it is in a position to compete globally, especially in the face of rising trade and competition from abroad (Budree, 2017).

2.1. Evolution of global online food shopping

In 2008 the global population was approximately 7 billion people with 20% (1.2 billion) using the internet. Of these, 627 million were making use of online shopping (Ward, 2008). In 2018 the global population grew to 7.7 billion people with 19% (1.5 billion) shopping online at least once in their lifetimes (UN, 2019; Budree, 2017). In 2018 total global online retail was at 11% of all retail sales with China having the largest market share at 20% followed by the United Kingdom (UK) at 18% and Germany at 11% (Fin24, 2018).

Online shopping has been around for many years in South Africa with a current share of total retail sales amounting to 1% (Fin24, 2018; Ward, 2008). Retailing may be categorised as shop retailing, specialty retailing, non-store retailing, mail order, the internet (online shopping) and vending machines. Online shopping's share of total retail sales in SA is expected to increase exponentially over the next three years rising to about 4% by 2021 (Fin24, 2018).

Figure 1 shows items that are in demand for buying online and are grouped into product categories, with fashion-related products having the highest share of 58%, followed by travel products or services (55%) and 50% share from books, music, and stationery. The least popular categories are pet food and suppliers with a share of 13%, followed by wine and alcohol (14%) and baby care and flowers, gift sets sharing an 18% share in online shopping. The study was an online survey that was distributed globally, with a response rate of 30 000 respondents.

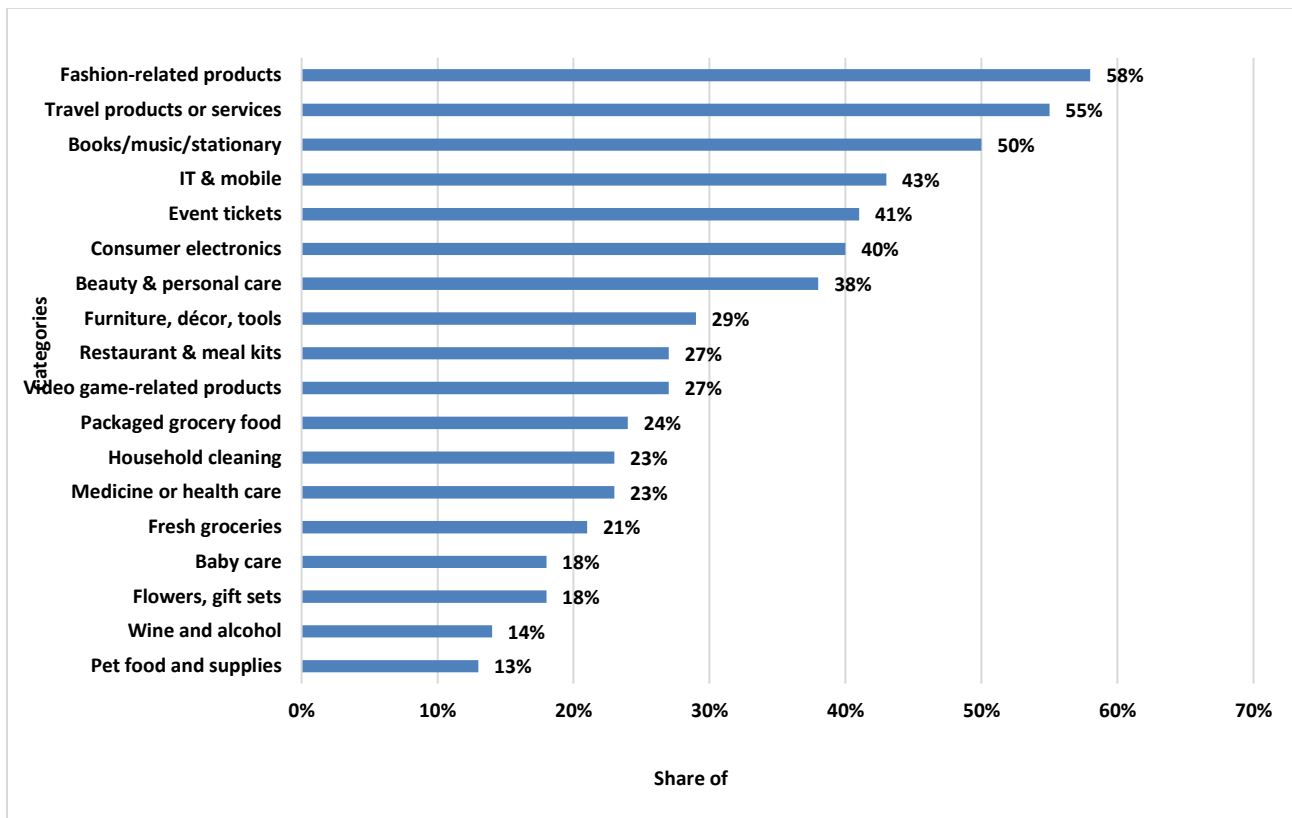


Figure 1: Share of products purchased online as of November 2016

Source: Statista, 2017

3. South African E-Commerce

In South Africa, approximately 17.1 million e-commerce users are spending \$2.3 billion annually representing 31% of the population with an average expenditure of \$136 (R2 055.16) (Qwerty, 2017). Figure 2 below gives a summary of e-commerce¹ in South Africa and the Western Cape. The categories looked at were wholesale and retail trade, communications, finance, and insurance and business activities.

Electronic means. The stages of the transfer of ownership of goods or services are a) placement of the order, b) payment and c) the delivery of goods and services. E-commerce can be defined based on all three" (StatsSA, 2012). The blue line (SA) shows and growing upwards trend South African e-commerce versus the red line (WC) which shows growth but at a slower pace for the Western Cape e-commerce.

¹ The definition used is as follows: "E-commerce is any business transaction that transfers the ownership of good or services through the internet or by

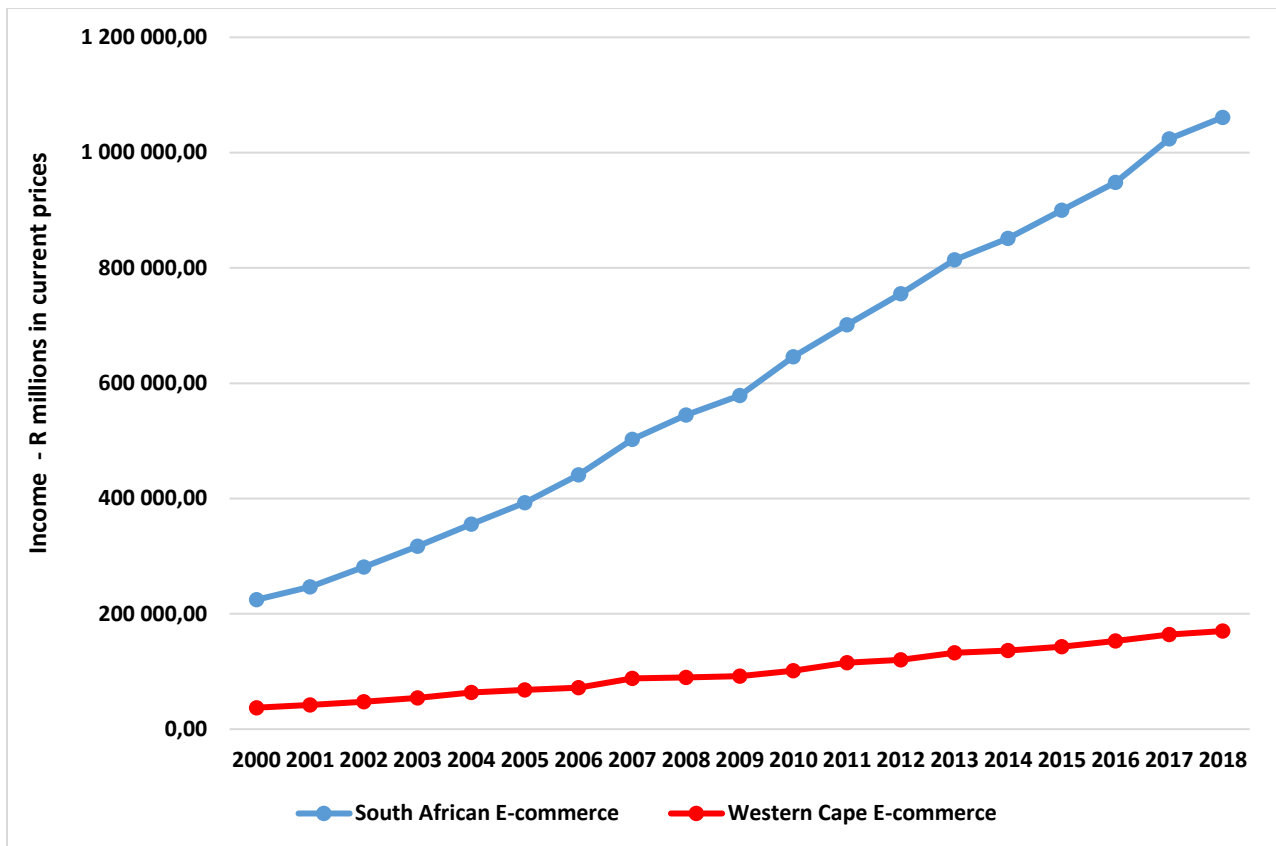


Figure 2: The South African and Western Cape E-commerce industry

Source: Quantec EasyData, 2020

Figure 3 shows a monthly breakdown of the e-commerce industry, illustrating that users not only go online to make a purchase (28%) but also to search for products and to do price comparisons (45%). A 17% drop occurs between users that go online to search for a product and users buying the product. This is of particular interest and it shows that there is significant space for increased online buying for those that already visit an online store. As more people start to experiment with the benefits of online buying, it is highly probable that these will expand purchases to many other categories of products.

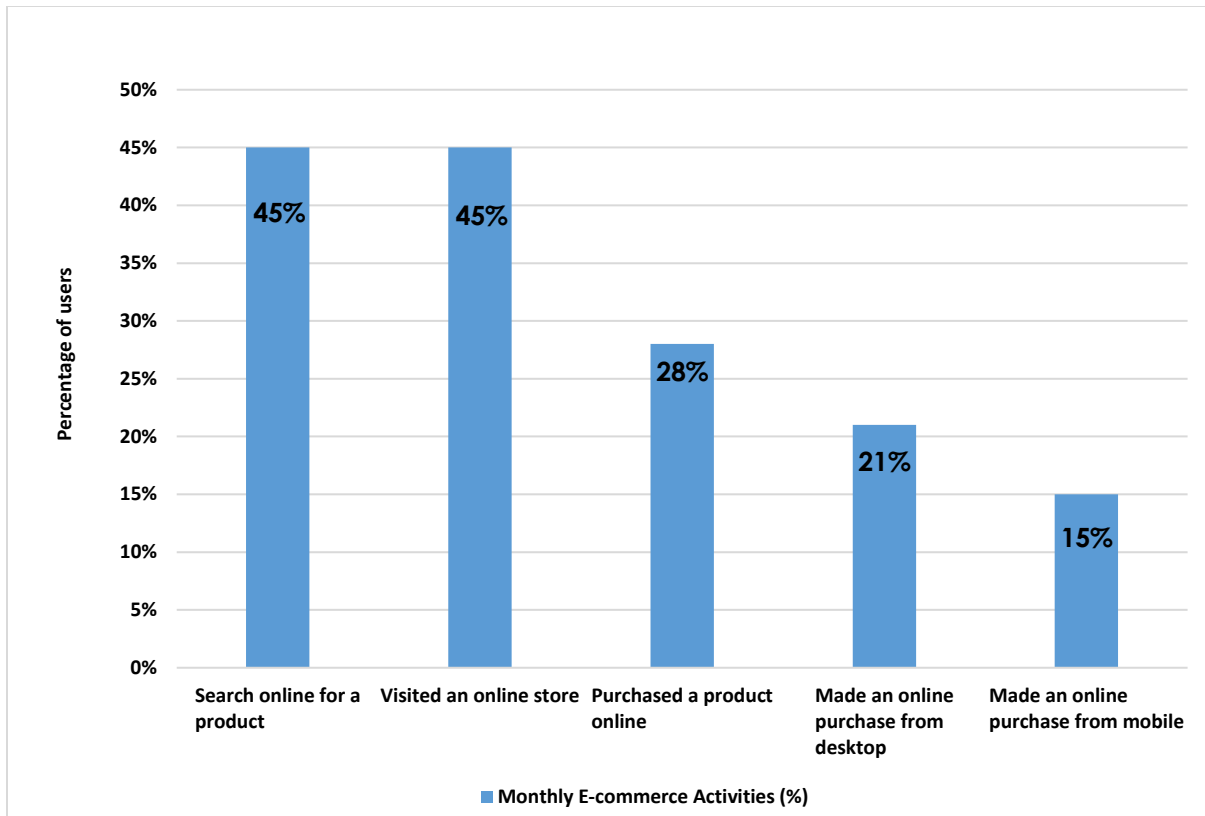


Figure 3: E-Commerce over 30 Days (2016 - 2017)

Source: Qwerty Digital, 2017

Figure 3 also provides a break-down of what device the consumer used. Most e-commerce users use a desktop (21%) whilst 15% make use of a mobile phone for purchases. This is also expected to change as there is a global movement away from desktop use towards mobile operation and in 2016 for the first time, mobile users exceeded desktop use to connect to the internet (The Guardian, 2016).

A study conducted by My Broadband (2015), indicated that the vast majority of South Africa online users use the internet for e-mails (89%), banking (68%) and for research as well as obtaining information (64%). Figure 4 gives a summary of the items being bought in South Africa online. This study was conducted using an online survey that was distributed to local internet users and the response rate was 273 023 respondents. Figure 4 shows that purchasing food online counts 10%, showing that buying food online is not as popular as buying tickets to events (46%) or some of the other highly ranked categories.

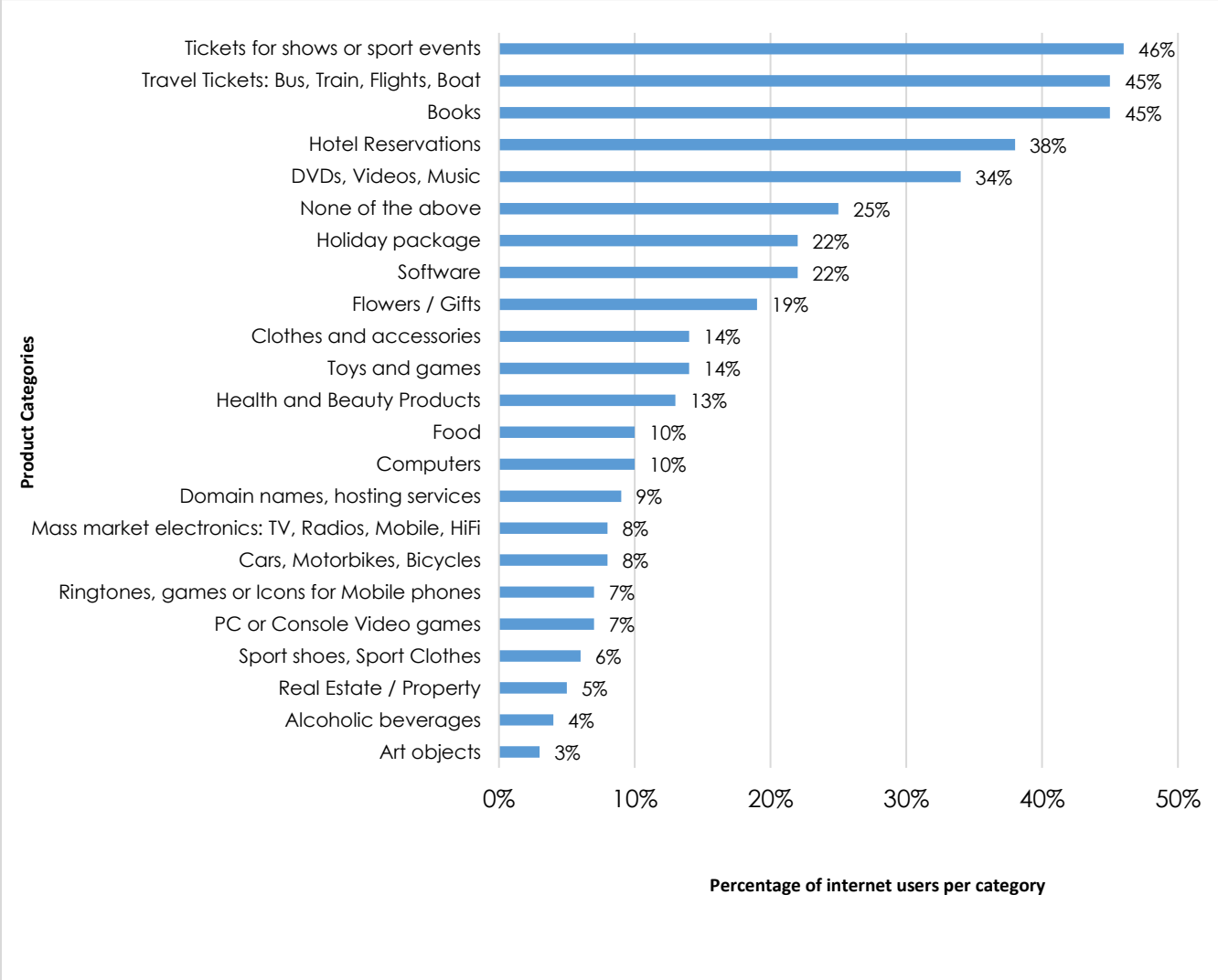


Figure 4: Items purchased in South Africa via the internet

Source: My Broadband, 2015

To get a better understanding of the South African online shops, Table 2 gives a summary of the major companies by market share. Takealot is the front runner when it comes to the online shopping market with a 12.5% share, followed by Apple App Store (5.5%) and Pick n Pay (5.1%).

Table 2: Market share of online stores in South Africa in 2018

Online	Market Share
Takealot	12.5%
Apple App Store	5.5%
Pick n Pay	5.1%
Woolworths	2.7%
Sportsman's Warehouse	2.2%
Incredible Connection	2.0%
Exclusive Books	1.8%
Home Choice	1.6%
Amazon	1.5%
Mr Price	1.5%
Net Florist	1.5%
Spree	1.4%

Source: Bratt, 2018

Of those listed in Table 2, both Pick 'n Pay and Woolworths sell fresh and processed agricultural products. Other brick-and-mortar stores are also interested in this market opportunity and are entering this platform by creating and implementing new initiatives. For example, in November 2019, Checkers launched its new on-demand grocery delivery service in which around 5 000 different products can be bought via its Sixty60 application and delivered within 60 minutes (Businesstech, 2019). Examples of other smaller agricultural produce retailers that sell mostly online are as follow:

Table 3: Online agricultural produce retailers

Business Name	What they selling	Location and website
Faithful to Nature	Variety of products –health store: <ul style="list-style-type: none"> - Food - Body and beauty - Home - Baby and kid - Lifestyle 	Capricorn, Cape Town https://www.faithful-to-nature.co.za/
UCOOK	Healthy dinner solutions: <ul style="list-style-type: none"> - Can order a dinner box with all the ingredients and recipe 	Woodstock, Cape Town & Johannesburg https://ucook.co.za/
Daily Dish	Pre-portioned ingredients and recipes for dinner boxes. They cater for the following: <ul style="list-style-type: none"> - Carb conscious - Vegetarian - Express (dinner done in 30min or less) - Fitness - Family 	Montague Gardens, Cape Town https://www.dailydish.co.za/
Terra Madre	<ul style="list-style-type: none"> - Cold pressed apple and pear juice - Organically grown vegetables and herbs - Seasonal fruit - Greek spice - Craft cider 	Elgin (Grabouw) https://terramadre.co.za/

	<ul style="list-style-type: none"> - Preserved products like plum jam, olives, olive oil, pickled chillies and rockin' scilli. 	
Earthshine	Raw, nutritious and organic foods, as well as kitchen equipment.	Cape Town https://earthshine.co.za/
Superfoods	Selling organic, raw and plant-based whole foods. Products are artificial ingredients and GMO free.	Capricorn, Cape Town https://superfoods.co.za/
Umatie	Ready to eat frozen meals for babies, kids and families.	Plakenbrug, Stellenbosch https://umatie.co.za/
Think Organic	Organic food products, fresh and frozen, as well as household, body and pet supplies.	Kenilworth, Cape Town https://thinkorganic.co.za/
Wild Organics	Fresh vegetables and fruits, as well as breads, cheese, metas and dried and bottled goods.	Paarden Eiland, Cape Town https://www.wildorganics.co.za/
Fresh Earth	GMO and pesticides free products. Fair Trade products. Products range from fresh, to canned.	Emmarentia, Johannesburg https://www.freshearth.co.za/
HelloChoice	Is a digital trading and auction platform that has transformed fresh produce trade by directly connecting Farmers and Buyers. Focus is on fruits and vegetables.	Areas covered: KwaZulu-Natal, Limpopo and Gauteng https://www.hellochoice.co.za/

Evergreens	Solely sells fresh agricultural products via online marketing	Online buying is only available in Pretoria. https://www.evergreens.co.za/
Khula	They provide various services but one of them is a e-commerce platform where clients can make orders directly from the farmer. Focus on fresh produce.	http://www.khula.co.za/
FarmFreshOnline.co.za	FarmFreshOnline.co.za is a service created to deliver quality and convenience. They focus on healthy foods and sell fresh fruit and veg boxes as well as eggs, fresh milk and a few preserved foods.	http://www.farmfreshonline.co.za/home-deliveries-blriw7.html
The Veg Box Company	Specialises in veggie boxes, but also focusses on pickled and preserved foods, as well as meats and dairy.	http://thevegboxcompany.co.za/product-category/veggie-boxes/

Source: Daily Dish, 2019; Earthshine, 2019; Evergreens, 2018; Faithful to Nature, 2019; Farmfreshonline.co.za, 2020; Fresh Earth, 2019; HelloChoice, 2020; Khula, 2020; Superfoods, 2018; Terra Madre, 2019; The Veg Box Company, 2020; Think Organic, 2019; UCOOK, 2018; Umatie, 2019; Wild Organic Foods, 2019

The abovementioned retailers in Table 3 are only a few online retailers that sell agricultural products online.

4. E-commerce in agriculture

The potential success of e-commerce in agriculture holds much promise despite the inherent challenges (Leroux et al., 2001). One of the challenges faced by smallholder farmers is where to market their produce, especially due to them having little to zero bargaining power (E-agriculture, 2017). E-commerce could be the answer to the “*where to sell*” question for South African farmers.

The more markets penetrated, the more sales will increase which will lead to more opportunities for expansion due to the need for more outputs. In turn, this may promote job creation. Farmers making use of online platforms sell direct to the buyer, therefore, cutting out the “middle man” which may realise better prices for the farmers, as well as fresher produce reaching the consumer on time, with less food wastage (Joiner & Okeleke, 2019). The “middle man” in this context refers to bigger companies/farmers buying produce from smaller farmers to either meet their demand for supply or are sourcing products from various regions in SA. This creates the outcome that smaller farmers are just price takers and should take whatever the “buyer” is willing to give.

Since agriculture and its related industries make up a significant share of GDP and employment, this online option is set to boost sales and lower transaction costs towards greater economic growth and job creation (Joiner & Okeleke, 2019). When referring to job creation it specifically looks at jobs that will make the e-commerce route easier, for example, more logistic companies established or expanding, storage facilities increasing and becoming more suited to the needs of fresh produce storage, packing and sorting facilities increasing or expanding. The list of possible jobs being created from going online can vary but the few mentioned are some of the more important jobs.

4.1. Adoption of e-commerce in agriculture

The adoption of e-commerce in agriculture occurs at the firm level with the main adopters being individual farmers, e-commerce firms, agribusiness firms and agricultural cooperatives (Zeng et al., 2017). Few studies have assessed the adoption of e-commerce in African countries (Makame et al., 2014). Gaps in the literature are the farmer's preferences and willingness to pay (WTP) for online food marketing platforms. Vassalos and Lim's 2016 study looked at the farmer's willingness to pay for various features of electronic food marketing platforms. The examined features they looked at were different fee requirements, an online marketplace to facilitate transactions, social media

advertisement of the farm, an online directory service where farmers can search for potential buyers based on demographic statistics, and different operators for the website (Vassalos & Lim, 2016).

Consumer awareness and their attitude towards e-commerce also plays a role in adoption, especially in the fresh produce sector. Due to products not having a physical presence when buying online, consumers are not aware of the quality until the product is received. This uncertainty influences their willingness to buy and some may see “this” as being too risky (Kumar & Timalsina, 2016). Online producers have to focus on their product’s reputation and quality to ensure future growth. Uptake of fresh produce being sold online are either in the form of a trading platform where buyers and sellers trade and/or in the form of a box scheme² (tailor-made boxes to seasonal boxes). These two online platforms are more popular in Gauteng and surrounding areas than in the WC. This can be seen from the list of e-commerce retailers in Table 3, especially when looking at where they are situated and the areas they supply. Therefore the assumption that in the WC consumers still go to the local store or markets to buy fresh produce.

Agriculture in the Western Cape has a “low digital maturity” with the medium impact of technology disruption predicted in the next five to ten years with key characteristics related to adoption given below:

- Lack of clarity on government policy related to land reform may be a hindrance to technology adoption.
- A clear definition of smallholder farmers' digital quotient is needed.
- Demonstration using successful pilot studies may promote technology adoption (WCDOA & USB, 2018: 46).

The South African agricultural community is a close-knit community and business is mostly driven by personal relationships, meaning more one-on-one transactions take place and decisions are not purely based on economic principles. Tregurtha and Vink (2002) identified six main factors influencing technology in South Africa's export horticultural industry, which can also be applied to the other fresh produce industries in agriculture, namely:

² The box scheme is a specific production-market value chain where a variety of locally sourced fresh produced vegetables, fruits, and herbs are sold directly to the online consumer (Bosana et al., 2011).

- Limited personal interactions hence trust that is lacking,
- The short lifespan of fresh produce,
- The duration of the export season is short,
- Producers have to ensure products are of high quality,
- Lack and or limited Internet connectivity in rural towns, where most of the smallholder farmers are situated, and
- Lack of skills in information technology.

4.2. Marketing channels for smallholder producers

Smallholder farmers use a variety of marketing distribution channels to market and sell (Louw and Jordaan, 2016). This study focuses on investigating the opportunities that online retail and pure-plays³ present as an alternative market distribution channel for smallholder farmers in general and fresh produce in particular. A literature review was conducted to analyse existing market distribution channels and the potential to sell online. Smallholder producers use different channels to market and sell products as shown in Figure 5 with some channels more onerous than others.

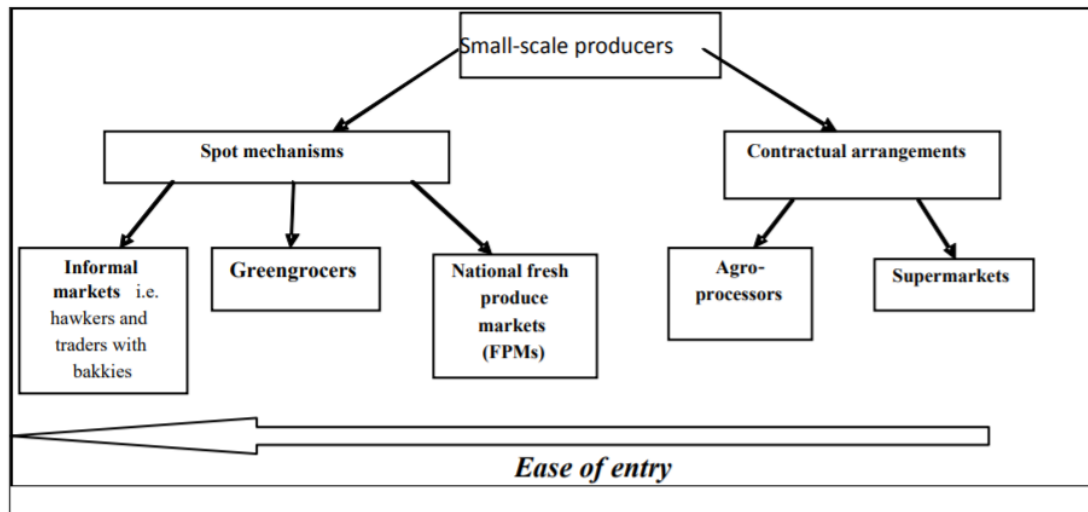


Figure 5: Marketing distribution channels for smallholder producers

Source: Louw and Jordaan, 2016

The onerousness of the marketing channels is summarised in Table 4 and it also gives a clear indication of why smallholder farmers choose the marketing channels that they do.

³ Pure-plays are companies that only sell one type of product online (Investopedia, 2019).

Table 4: Factors determining the selection of marketing distribution channels by smallholder farmers

Factors	Formal							Informal	
	Fresh Produce Markets	Whole-sale	Retailers	Hawkers	Processors	Institutional buyers	Consumers' direct	Informal shops	Street Traders
Marketing costs	High	High	High	High	High	High	Low	Low	Low
Highest prices	High	Low	High	Medium	Medium	Medium	High	Low	Low
Security	High	Medium	High	Medium	Low	Low	High	High	High
Swiftiness of payment	Low	Medium	Low	High	Medium	Medium	High	High	High
Quality control	Low	Low	High	Low	High	Medium	Medium	Low	Low
Access to finance	n.a.	n.a.	High	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Extension	Low	Low	High	Low	Low	Low	Low	Low	Low
Access to market information	High	Low	Low	Low	Low	Low	Low	Low	Low

Source: Adapted from Louw & Jordaan, 2016; NAMC, 2017

Figure 6 shows the different distribution channels for fresh produce used by smallholder farmers. The majority of smallholder farmers sell fresh produce to informal markets (62%), supermarket retailers (52%) and direct to consumers (52%). The percentage value indicates the percentage of farmers using that specific distribution channel. It also highlights that smallholder farmers use multiple channels to market and sell products.

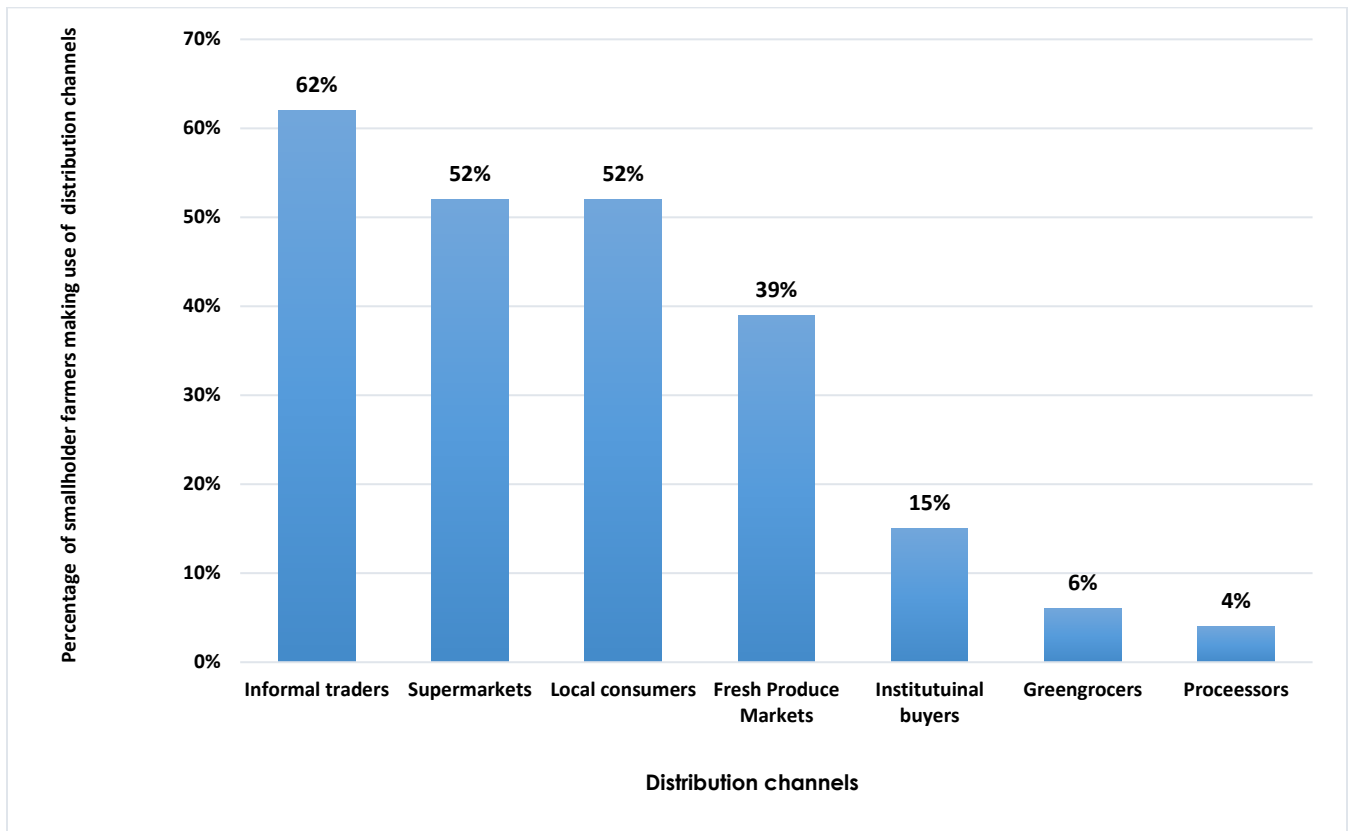


Figure 6: Fresh produce distribution channels of smallholder farmers in 2016

Source: Louw and Jordaan, 2016

As from Figure 6, online retailing is not one of the distribution channels. This can be due to the unpopularity of e-commerce in the agricultural industry (due to the products produced) as well as the risk associated with agricultural produce. Risk such as the short lifespan of the product, the quality, and safety for consumption standards of the product.

4.3. Factors inhibiting the adoption of agricultural e-commerce

The factors inhibiting smallholder farmers of participating in the online sphere are as follows:

- The website crashing due to high volumes and bad bandwidth connectivity,
- Security concerns – Protecting consumers' personal and financial information,
- Quality and consumer satisfaction – Products are intangible online and customer satisfaction can only be measured after the product has been received,

- The balance between supply and demand has to be accurate, especially in the starting phase,
- Delivery being late due to unforeseen events such as strikes, road accidents, road closures, the consumer not being at home, the retailer of the product is striking, etc.,
- High labour cost for the technical team that operates and maintains the website, and
- Traditional markets – The unpopularity of using computers and smartphones as a business tool (Kumar & Timalina, 2016; Mpinganjira, 2017; Tregurtha and Vink, 2002).

4.4. Benefits of using agricultural e-commerce as a marketing channel

The Agri e-commerce platforms also have positive spin-offs that can be used as a business opportunity. These benefits are:

- Entry to larger and diverse markets. Smallholders can in this way reach individual consumers, businesses and potential export markets.
- Barriers to entry for smallholder producers are becoming less or non-existent.
- Potential to generate a higher income for producers (cutting out the middle man).
- It can link with third-party market places that are reaching a bigger and wider audience – already established.
- Post-harvest wastage can be minimised.
- Social media can be used as a free or cheap marketing tool.
- Services linked with e-commerce will also be impacted positively, for example, logistic services and infrastructure will improve.
- Opportunity for value-adding to expand the lifespan of the product (Joiner & Okeleke, 2019; Mueller, 2000).

5. Conclusions and Recommendations

Smallholder farmers face numerous challenges to benefit from market opportunities. Agri e-commerce is a new approach for smallholder farmers to sell products to buyers including agribusinesses, retailers, restaurants, and consumers. E-commerce also creates improved market access for smallholder farmers with higher levels of transparency in the value chain. According to Zeng et al (2017), e-commerce can also promote the development of rural economies in facets like economic growth, poverty relief, and employment growth.

This study is limited in its sole reliance on desktop literature. Future research needs are to secure buy-in from leading Agri e-commerce adopters in South Africa and Western Cape in particular to include their insight on growth prospects, factors hindering and positively influencing agriculture e-commerce adoption. More in-depth analysis is needed for existing and successful agriculture e-commerce firms in South Africa and Western Cape using a case study approach.

Recommendations are:

- Swot analysis of the different Agri e-commerce models needs to be conducted.
- In-depth study of the factors inhibiting Agri e-commerce and the opportunities that exist in the Agri e-commerce sphere for smallholder farmers needs to be steered to determine the viability of this marketing platform.
- Determining who the major Agri e-commerce players are and having round table discussions and workshops to determine what is needed and what standards need to be in place for smallholder farmers to access these platforms.
- Building trust in online purchasing, focussing on service quality and timely delivery is of utmost importance.
- E-commerce training and awareness are essential (Fecke, et al., 2018).

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