



Community Group Buying (CGB): Improving Stokvel Grocery Procurement through Technology

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.....In Loving memory Nokwanda Andani Mthembu.....

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ABSTRACT

At a time when technology is becoming entrenched in how we do things both in business and our day-to-day activities, Stokvels' use remains a challenge. Stokvels are a popular form of informal savings and investment groups in South Africa, with over 11 million South African population participating annually. Despite grocery Stokvels' popularity and potential to encourage a savings culture, purchasing goods is mainly done manually, negatively impacting efficiency. This study sought to assess the extent to which South African stokvels use technology in their day-to-day operations up to procurement, to determine why some stokvels do not use technology and explore the challenges and problems experienced by stokvels in the townships and rural areas in Gauteng because of manual processes. The study further sought to explore how technology could improve the running of the stokvel up to the point of procurement while understanding the technology retail stores use to support stokvels in their procurement process. A qualitative approach was used as the primary research strategy to gather in-depth and insightful information from four focus groups based in townships and rural areas in the Gauteng region. The study found that while the use of technology in the procurement process of grocery in Stokvels is not widespread, there is potential for significant benefits if technology is integrated into the procurement steps, such as aggregating Stokvel members' needs (consolidating the bulk grocery list) into one platform, allowing Stokvels to evaluate different suppliers and be able to view quotations and negotiate for best prices and discounts from retailers on a digital platform. The study concluded that the age factor, limited technology literacy, a lack of proper governance structures, and a lack of appropriate technical skills and training were the key challenges experienced by stokvels in the townships and rural areas in Gauteng because of their manual processes. To address the several procurement challenges that emerged from the study, stokvels can leverage technology to streamline their procurement processes. This can be achieved with online procurement platforms and mobile applications specifically designed for stokvels. The study recommends investing in training and skills development for stokvel members to close the technology skill gap and build trust.

Keywords: *Grocery Stokvels, Collective Group Saving, Bulk buying, Procurement, Technology*

LIST OF ABBREVIATIONS AND ACRONYMS

ASCA	Accumulation Savings and Credit Association
CGB	Community Group Buying
e-Commerce	Electronic Commerce
e-Procurement	Electronic Procurement
FMCG	Fast-Moving Consumer Goods
LSM	Living Standard Measures
NASASA	National Stokvel Association of South Africa
ROSCA	Rotating Savings and credit association
SARB	South African Reserve Bank
POPIA	Protection of Personal Information Act

CHAPTER 1

INTRODUCTION TO THE STUDY

1.1 Introduction

The stokvel industry is a popular business model in the South African region, especially within the local township communities. According to the National Stokvel Association of South Africa (NASASA), it is estimated that one in every two adults in South Africa is a member of at least one of 800 000 stokvels (NASASA, 2020). South Africans invest approximately 50 billion South African rands annually in stokvels (Booyesen, 2016; Mfeti, 2012; NASASA, 2020). Whereas Moliea (2007) suggests that “this has seen Stokvels develop into a system of highly diversified savings and credit organisations to suit the needs of all income groups” (Moliea, 2007, p. 3) Stokvels have been identified as a large contributor to the informal financial sector. The South African Reserve Bank (SARB) included stokvels in the regulatory framework of financial institutions in 1994 (Moliea, 2007).

Stokvels has a group of individuals that have a common goal. This group of people agree to contribute a fixed amount of money to one account or specific person known as the treasurer on an agreed monthly or weekly basis (Schulze, 1997). Globally stokvels are classified into two types of groups, namely a rotating savings and credit association (ROSCA) and an accumulation savings and credit association (ASCA) (Lukwa et al., 2022). The ASCA is formed by a savings group that contributes regularly, and its collective funds are saved for loans or investment opportunities or collective bulk buying of goods by its members. The ROSCA is where a savings group regularly contributes equal savings toward a common fund and distributes this fund to an individual member queued to get the contribution (Kabuya, 2015).

The South African stokvel business model still operates manually with minimal technology compared to the Chinese CBG model. However, there are similarities in the formation of the stokvel and CBG groups. Both business models consist of people who collectively procure goods in bulk to gain a high percentage in discounts (Wang, Zhao & Li, 2013).

The stokvel industry can benefit from introducing new forms of technology to its operation to stay relevant and reach many people.

1.2 Background and Study Context

Historically, stokvels have predominantly been composed of Black South Africans (Lappeman et al., 2020; Shingirirayi & Robertson, 2021) who form a large part of the Lower Living Standard Measures (LSM) population due to the elevated levels of poverty and structural unemployment (Margaret & Ngqinani, 2020). Black South Africans are often poor and struggle to meet their basic needs, such as food, shelter or housing, and clothing (Matuku & Kaseke, 2014). Moreover, Black South Africans were deprived of opportunities and restricted from participating in the mainstream economy during the Apartheid era. Due to poverty in the Black community, they have been forced to rely on self-help community-based initiatives as part of their survival strategies (Lappeman et al., 2020). Stokvels are amongst the vital poverty-alleviation strategies practised for many years by most Black South Africans (Matuku & Kaseke, 2014). South Africa has over 60 million people, of which over 30 million live below the upper-bound poverty line (World Bank Group, 2020). This means that most South Africans survive on R1300 per month or less than R50 per day. For this reason, Grocery Stokvels have become popular to maximise the little income households must use to cater for basic needs such as food and household goods.

Moreover, Grocery Stokvels has become a social cohesion project that brings the collective to work towards a common goal, true to the South African way of doing. This is called the Ubuntu principle (Gwagwa et al., 2022). The Grocery Stokvels members derive many benefits by ensuring they save money towards essential grocery items that can contribute to their household consumption (Matuku & Kaseke, 2014). The stokvels facilitate relationship-building between members through monthly meetings, where a report on the contribution status is shared with stokvel members (Zondi, 2016). However, there are gaps in the institution. Grocery Stokvels in rural communities and townships are run manually through paper-based management books, creating inefficiency and resulting in delays (Menze & Tsibolane, 2019).

The origins of stokvel in South Africa are from the Eastern Cape. During the early 1990s, farmers and labourers attended cattle fairs called "stock fairs". A study by Irving (2005)

states that the Black farmers who participated in these fairs would contribute money collectively to buy livestock. These practices evolved into saving clubs or schemes that regularly contribute money (Irving, 2005; Lappeman et al., 2020). Therefore, several stokvels are practised in South Africa: grocery, family, investment, property, basic funerals, birthdays, gym wear, and expensive bags (Maluku & Kaseke, 2014; Schulze, 1997).

Countries like China have similar business models of buying groceries in bulk, like the grocery stokvels model. The concept is called the Community Group Buying (CGB) business model, the latest trend in China and other developing countries like India. CGBs involve buyers forming groups to place bulk orders for goods or services, often receiving discounts or other benefits (Ying et al., 2022). These CGB groups are run on an online platform or applications. Online community group buying is derived from the social or group buying (Zhang et al., 2016). The online community group-buying groups assign a leader in each community, who publishes group-buying lists with the latest discounted specials from retailers, and the leader will then pool the demands of residents for specific goods/ groceries through social networking applications. China has seen an increase in community group-buying start-up companies due to the technology used in the business model. This leads to more members joining the CGB movement.

1.3 Research Problem Statement

Grocery stokvels make up 30% of the 800 000 stokvels in the South Africa (Lukwa et al., 2022); therefore, over 240 000 stokvels in the country are contributors to the Fast-Moving Consumer Goods (FMCG) sector. The FMCG sector contributes between R460 and R470 billion annually to the South African economy (Lappeman et al., 2020; Makhitha et al., 2019). Grocery Stokvels are given discounts through their annual festive season bulk buying model by retailers (average spend of R200K per stokvel) but still contribute significantly to the FMCG sector (Groenewald, 2017). With grocery stokvels contributing significant revenue to this sector, they still face challenges such as manual paper-based processing versus technology (Menze & Tsibolane, 2019). Members of grocery stokvels in townships and rural areas have limited access to information and resources (Seretse et al., 2018). This contributes to how they still run their stokvels through a manual-based operation. Technology has made the procurement of goods to be more efficient. Technology helps by reducing time spent inside retail stores, such as overcrowded tilling

stations that neglect bulk purchasers. Other challenges grocery stokvels face are the low service levels provided by retailers, such as the lack of ablution facilities (Skenjana, 2015).

Lappeman et al. (2020) support the need for retailers to find better ways to serve groceries. They further indicate a meaningful relationship between Grocery Stokvels and retailers that drive profits for retail stores from the bulk goods being procured. The Grocery Stokvels procuring process (as seen in Figure 2.1) requires a modern take, such as integrating an ordering and buying system, new digitisation tools, and e-hauling solutions. Looking at the latest trends in e-commerce services, improving this business model can help retailers increase revenue and provide Grocery Stokvels with much better offerings, such as advanced options and competitive pricing from retailers (Jenkins, 2022).

This research addressed the problems of Grocery Stokvels' inefficiency when executing its procurement process. It explored the current use of technology to improve inefficiencies. Furthermore, the procurement process must be time-sensitive to eliminate any delays. Should these challenges not be addressed adequately, Grocery Stokvels could lose interest in bulk buying due to the tedious manual process and time spent.

1.4 Research Objectives

- To assess how much stokvels use technology in their day-to-day operations up to procurement.
- To determine why some stokvels do not use technology.
- To explore the challenges and problems experienced by stokvels in the townships and rural areas in Gauteng because of the manual process.
- To explore how technology could improve the running of the stokvel up to the point of procurement.
- Understand the technology that retail stores use to support stokvels in their procurement process.

1.5 Delimitations of the research study

The research was delimited to the literature on the Grocery Stokvel business model. Research has focussed chiefly on the stokvel savings and financial exclusion of stokvels in the mainstream finance sector (African Response Research, 2012; Shingirirayi & Robertson, 2021). This research was limited to townships and rural areas in Gauteng

province. The language used to conduct the survey was more than one South African language due to the demographics in the townships and rural areas in Gauteng.

1.6 Assumptions of the research study

The study would be affected by legal regulations of the POPIA (Protection of Personal Information Act) when collecting data. The National Stokvel Association of South Africa (NASASA) could not confirm the status of the number of stokvels at the time of the research. The study proceeded on the assumption that the formation of stokvels was not officially registered or formalised; thus, the population was estimated. The CGB model is more of an e-commerce business model than the South African version of a Grocery Stokvel, managed manually by elected individuals (Zhang et al., 2016).

1.7 Significance of the research study

The research could contribute to the body of knowledge in the Grocery Stokvel industry, with over 11.4 million South African population participating in stokvels to a total estimated value of R44 billion (Slade, 2011). The Grocery Stokvels contributes 16% to the 11 million members (African Response Research, 2012), making it a sizeable number of people impacted by the current procurement process of groceries, especially during the festive season. The Grocery Stokvel model is still manually managed. This research unpacked the gap in automating the procurement process to reduce inefficiency and ascertained the impact of technology in grocery procurement processes.

1.8 Definition of key terms

Procurement process: Procurement obtains goods and services to sustain an organisation's or individual's daily operations. The method includes the preparation and processing of the needs or demands of an organisation. This can consist of purchasing planning, sourcing of suppliers, inventory management, and price negotiation (Jenkins, 2022).

Bulk buying: Buying large quantities of products at discounted prices (Cambridge Business English Dictionary, 2022).

Technology for stokvels: The application of scientific tools to communicate and execute systems and processes. It is the combination of knowledge and application of skills to solve day-to-day problems and challenges (Venkatesh et al., 2012).

CGB: Community Group Buying is an e-commerce bulk buying business model where customers collectively purchase goods in bulk to gain discounts. The CGB model has a community leader that coordinates the product specials and facilitates the delivery of the products from the wholesaler to the end customer (Ying et al., 2022).

Grocery Stokvel: A group of customers who use their collective buying power to secure discounts on long-shelf life products from major retailers. These goods are usually purchased during the festive season (Verhoef, 2001).

Retailers: Businesses that sell goods to customers but can sell to wholesalers and resellers as bulk purchases (Cambridge University Press, 2022).

E-Commerce: It is the sphere of commercial activity to provide online trading services (Pogorelova et al., 2016).

E-Procurement: The technology solution that facilitates online corporate buying (Lorentz et al., 2021).

1.9 Summary

This report will follow a logical approach to a research report, with the introduction giving contextual details and background of the Grocery Stokvel business model. The literature survey is discussed in the following chapter to understand the latest developments and to explore other studies of work done in the Grocery Stokvel research. This is followed by the data collection chapter, which will use qualitative methodology to answer the problem statement.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

The stokvel industry is a prevalent business model in South Africa, especially within the local township economy. This study aims to understand the role of technology in exploring efficiencies in the goods procurement process of Grocery Stokvels. Research has shown that elevated levels of e-procurement enabled firms to become more effective and efficient in their procurement processes. Therefore, applying technology is an effort to modernise procurement processes and improve efficiency and effectiveness (Frimpong et al., 2020). Furthermore, adopting technology would play a role in realising the improvement of procuring groceries through technology. This chapter seeks to review and provide an understanding of the current challenges faced by Grocery Stokvels, namely the use of technology in the procurement process of stokvels, the technology used during administrative activities, and the influence of retailers, the banking sector, and the retail technology offering and facilities during the procurement process.

2.2 Research Problem Analysis

The current stokvel procurement process used by Grocery Stokvels is manual and runs over eight (8) months (Lappeman et al., 2020). This makes the Grocery Stokvel process inefficient because of the need for more time and effectiveness because of how the process is currently implemented. This section will address the root causes of the inefficiency, as listed in Figure 2.1 and the consequences they have on the Grocery Stokvel. Improving the procurement process will save time for Stokvel members and ensure efficiency, leading to more members joining Stokvels. Grocery Stokvels create a platform for the Black community to collectively accumulate funds to purchase bulk groceries at the end of a calendar year (Shingirirayi & Robertson, 2021). Furthermore, stokvels can adopt the Community Buying Group model, which allows members to procure groceries through an e-commerce platform and allows group administration on the electronic platform (Ying et al., 2022).

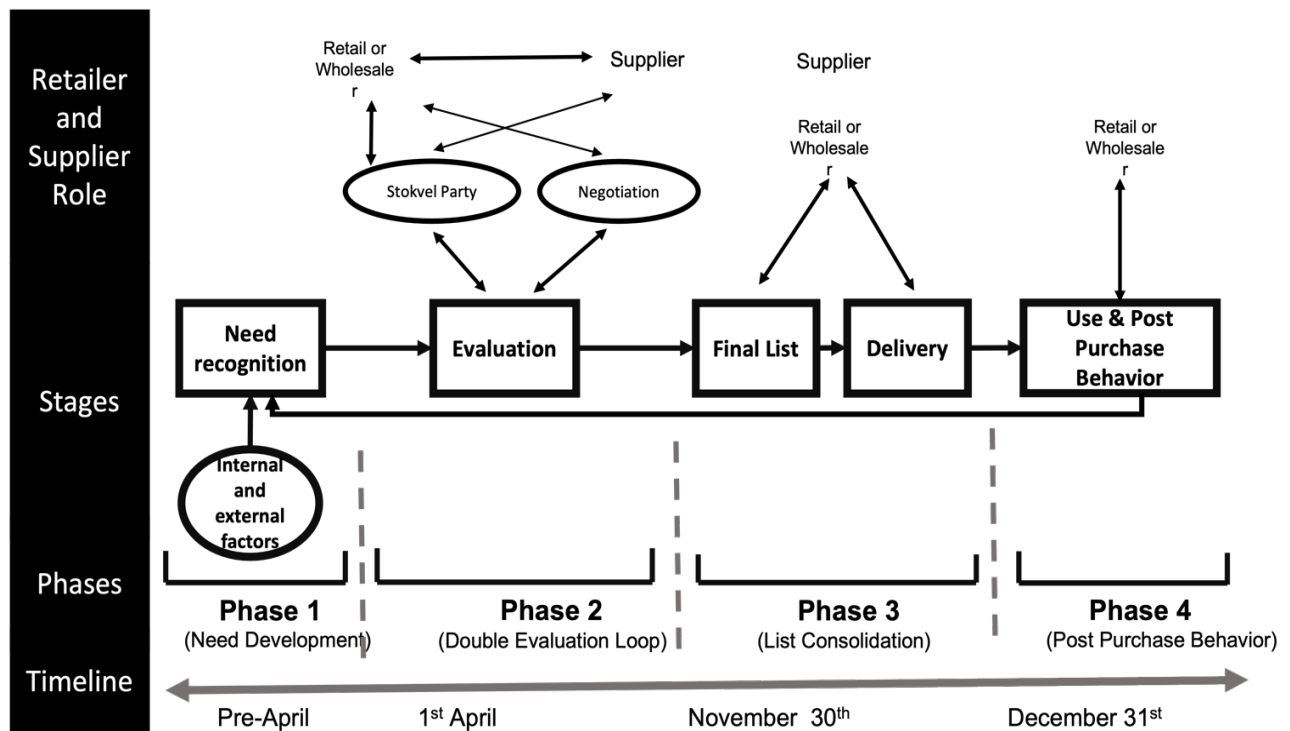


Figure 2.1: Schematic model of the festive season stokvel process

Source: Lappeman et al. (2020)

2.2.1 Technology In Bulk Buying Business Model

“Technology can reduce procurement costs by 30% (Jenkins, 2022, p. 9). It also reduces administrative overheads by automating and tracking procurement processes” (Jenkins, 2022). At the same time, using technology in the procurement process can increase the productivity of buying groups. Stokvels can use technology to plan and prepare for their procurement activities, to improve the effectiveness of the stokvels. In their recent studies, Hallikas et al. (2021) confirm that technological skills and analytics capabilities regarding the business environment are critical for performance in supply chain management. Aiolfi and Bellini (2019) corroborate the latter statement as they also noted that mobile phones are easily adopted and can be used during the buying process for activities related to grocery shopping. However, embracing technology can be challenging, as stated in the Unified Theory of Acceptance and Use of Technology. Therefore, using technology can improve efficiency only if adopting that technology can be sustained (Momani, 2020).

However, there has been some significant development in the banking sector concerning the stokvels industry: most banks in South Africa have developed stokvel bank accounts

(Naidoo, 2021). Conversely, the banking system does increase revenue for these stokvels or gain a high percentage of interest on the lump sum amount saved by stokvels. Other technology tools, such as WhatsApp, have become pivotal in improving how groups communicate. As Kariuki et al. (2017) suggested, WhatsApp has significantly altered the stokvel landscape. The authors further indicate that younger people prefer WhatsApp-operated stokvels because of their ease and accessibility (Kariuki & Ofusori, 2017). Although banking and these communication tools have contributed to Stokvels' efficiency by increasing communication levels, there still needs to be a larger gap in the retail sector in supporting Stokvels (Lappeman et al., 2020). Retailers must develop applications to exploit customers' use of mobile technology to influence customer buying behaviour during the procurement process (Aiolfi & Bellini, 2019). Predominantly, technological applications such as WhatsApp are prone to cyber-attacks and security breaches (Kariuki & Ofusori, 2017). Furthermore, introducing technology applications to stokvels will require a smarter way of using smartphones and stringent security control to mitigate the risk associated with the money security (Darko-Adjei, 2019; Mashigo & Schoeman, 2012).

2.2.2 Technology Systems and Tools

Khan et al. (2013) posit that the use of technology tools has become pivotal in the procurement of services and goods, more over automation of the current process and system has shown a reduction in time and cost of doing business. Therefore, the stokvel procurement process could benefit from the introduction of technology, this will eliminate non-value-added activities in the procurement of groceries at the end of the year.

2.3 Banking and Retail Industry's Role for Stokvels

Several stokvels rely on formal banking to perform their cash transactions. These include cyber-based payments, including eWallet, instances, internet banking, and electronic fund transfers (EFTs) (Maseng, 2022). Even with these banking solutions, many stokvels still need to use these formalised methods to save money. Stokvels prefer putting their money directly with the retail shops, which record these contributions and make stock available for collection during Grocery Stokvel procurement during the buying period (NASASA, 2020). However, the banking industry still needs to fully uncover the economic power of stokvels (Mfeti, 2017). Ojah (2010) states that stokvels can be used to leverage financing for distinct entrepreneurial and developmental SMMEs (Small, Medium, and

Micro Enterprises). With the stokvels industry at R50 billion, the return on investment that the stokvels gain from banks and retail stores is minimal and does not provide maximum return for the stokvel member.

2.4 Procurement Process Activities

Grocery Stokvels follow the procurement process, which comprises critical stages of sourcing, purchasing, and payment (See Figure 2.2). There are significant delays between the three stages. The delay is caused by the manual interaction within the three stages.

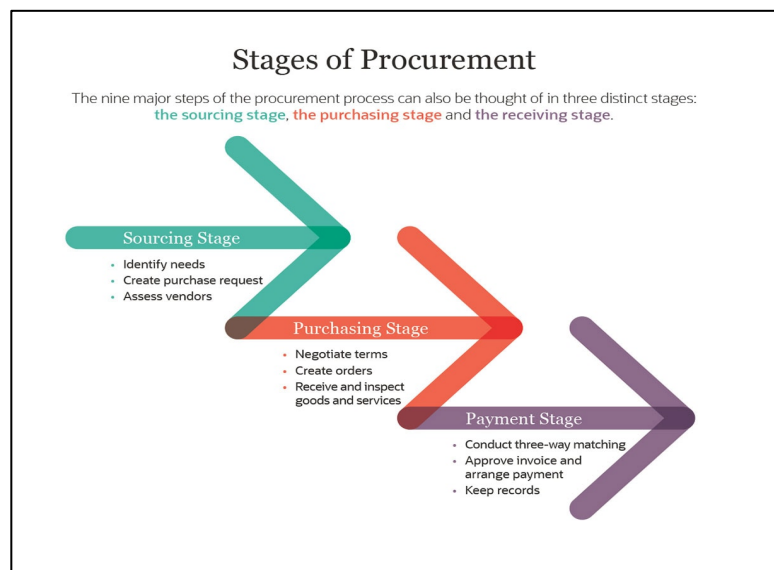


Figure 2.2: Procurement Process Stages

Source: Jenkins (2022)

Stokvel meeting: The meetings are held as physical rather than online meetings. Stokvel members may have mobile phones but do not know how to conduct online meetings.

Collection monthly contributions: The banking industry has created a solution for stokvels to deposit their money into a bank account. However, some stokvels still collect the funds physically at the meeting, money is not banked at the time but kept by the treasurer. Some stokvels also have physical deposit funds at retail facilities/stores. This is done through a specific Stokvel account and EFT (electronic fund transfer).

Quotations Process (assessing vendors): Quotations from retailers are secured manually instead of using an e-commerce platform. There are well-advanced e-commerce solutions that can assist stokvels in generating quotations, e.g., Makro online store.

All these activities are conducted manually, creating a delay between the procurement stages, as illustrated in Figure 2.2. The lack of technology makes a back-and-forth situation in gathering quotations, and it limits the hosting of online meetings for stokvel members and consultation meetings with retailers. The lack of technology in the procurement process results in inefficiency.

2.5 Stokvel Maladministration

Grocery Stokvel elects a chairperson and treasurer as Stokvel representatives. A constitutional document is agreed upon amongst the Stokvel members. However, Schulze (1997) shows that stokvels are not legal entities; therefore, stokvel constitution documents and agreements are deemed voluntary agreements between members of the grocery stokvel. Thus, the elected structure is not legally accountable to stokvel members. The lack of the stokvel being a formal savings institution creates an opportunity for corruption and mismanagement of funds by the elected members.

Furthermore, Members are exposed to moral hazards, such as being defrauded of their funds by unscrupulous members (Dube & Pretorius, 2020). Schulze (1997) further suggests that any legal action on behalf of or against a stokvel must be conducted in the name of an individual stokvel member. This administrative gap needs to be improved in how the stokvel is run. Technology has been known to have tools and systems that can create transparency in the organisation, reducing corruption and maladministration (Adam & Fazekas, 2021). The lack of technology tools that can monitor the running of the stokvel has limited stokvels from entering the formal financial sector. Due to informality, stokvels suffer poor governance, poorly determined benefits, and irregular monthly premiums (Malaudzi, 2013).

2.5.1 Women are key role players in stokvels

Earlier research focused role of women in the stokvel business model. The literature review shows that African women comprise 86% of Grocery Stokvels (Lappeman et al., 2020). The reason for this high percentage of participation can be attributed to the role women play in the household. Moliea (2007) states that men and women spend their money differently. The author suggests that poor women's income can yield higher health and social benefits than men's. At the same time, Lukwa et al. (2022) has identified through their thematic research that stokvels play a role in women's advancing social,

economic, and health conditions in the sub-Saharan region. Therefore, the elevation of women in the financial sector will enhance the status of Black women, and it will facilitate the eradication of poverty by recognising the continued central economic role of women in African families (Moliea, 2007; Shingirirayi & Robertson, 2021; Verhoef, 2001). In summary, there can only be a substantial easing of world poverty once governments and financial institutions focus on female well-being and set the need to support women as a strategic goal.

2.6 The Reason Stokvel Exists

The Grocery Stokvels were initiated as a social support structure for food security and helping individuals escape poverty. Literature states that individuals join stokvels due to unemployment, the source of poverty (Bophela & Khumalo, 2019). Poverty forces the poor to rely on informal forms of social protection and to achieve income security (Dube & Pretorius, 2020; Olivier et al., 2008). Grocery Stokvels are formed among friends, family, or colleagues to buy bulk groceries (Shingirirayi & Robertson, 2021). Nkambule & Mohammed (2019) state that the sociocultural support members of stokvels offer one another represents a form of social cohesion. Therefore, the use of technology, such as social media platforms, including Facebook and Instagram, has heightened the level of communication and interaction between people. As a result, using technology such as WhatsApp in stokvel could yield elevated levels of social cohesion (Stieglitz & Ross, 2022).

2.6.1 The Need for Bulk Buying

Previous research shows that the discount received by Grocery Stokvels from retailers contributes to food security and allows stokvels to procure more goods (Dube & Pretorius, 2020). These discounts enable members of stokvels to get more value for their money. Customers consider the price and quality of goods as the top two essential elements of the grocery shopping (Namin & Dehdashti, 2019). The need for bulk buying helps stokvel members to gain from the sharing economy with group bonification on the received discount. While most Grocery Stokvel members are from poor communities, Moliea (2007) argues that the relationship between income and Stokvel membership is not only based on underprivileged individuals, but she also suggests that “improved income and standard of living correlate with persistent participation in stokvels” (Moliea, 2007, p. 28).

In affluent areas such as suburbs and some urban areas, stokvel members have adopted the grocery voucher system, which allows members to get individual vouchers that they can use to buy their groceries at any time during the year. However, this takes away the total discount of a group as the discounts are applied individually. These individual vouchers are used at any time of the year individually, not as a collective.

2.7 Procurement challenges for Grocery stokvels

2.7.1 Time factor

Grocery Stokvels evaluate the process of procuring groceries over six to eight months (Lappeman et al., 2020). This period can be lengthy, although it allows stokvel members to evaluate their needs for bulk groceries, identify suitable vendors to supply the required groceries and procure the goods. Each stage in the procurement process has activities that require consultation and consensus amongst the stokvel members. It is during these activities that time is mostly wasted. Furthermore, studies have shown that there is a price increase of goods over some time and that stokvels need a price lock because of the time delay experienced when executing the procurement plan, which could be over eight months (Dube & Pretorius, 2020).

2.7.2 The retail facilities

Oziom (2019) suggests shoppers need help in retail facilities, leading to unpleasant and unsatisfied experiences. The retail facilities' layout contributes to the frustration experienced during grocery shopping. According to Oziom (2019), the shopper is overwhelmed by the stimuli and information in the grocery store, with many shoppers spending much time locating and finding products in the store. Sometimes, stock runs out at peak times of the year. This challenge can create anxiety and stress for shoppers. Within the procurement process of Grocery Stokvels, members need more support when purchasing goods, such as the location of goods in a store and the speed at which bulk buying takes place. Pantano et al. (2021) state that the customer concentration inside a store is of pivotal importance for retail management, therefore supporting the role and importance of retail facilities to the shopping experience of a shopper.

2.7.3 Customer Satisfaction and Service

Retailers deploy different methods of picking and packing for the GS (Lappeman et al., 2020). The retailer provides minimum support for stokvels in retail facilities (Skenjana,

2015). This forms part of the delay in the procurement process: the delay is caused by the lack of familiarity of the Stokvel members with the layout of the retail facilities, thus taking longer to execute the purchasing stage of the procurement process. Research indicates that the festive season is the busiest period for retailers (Ahluwalia et al., 2013; Lappeman et al., 2019). Thus, an excess number of customers at retail facilities creates congestion for Grocery Stokvel, which must share the same facilities with ordinary customers. However, in some cases, retailers allocate specific areas away from the rest of the day-to-day customers for the GS to pay and collect the bulk goods (Lappeman et al., 2020). This approach may reduce the delay in the procuring process, as the GS can operate optimally with time and resources allocated to them away from ordinary buyers.

2.8 Research knowledge gap analysis

The literature above indicates many research studies that investigated the usage of stokvels as an income generation tool, wealth creation, and a financial and credit mechanism for underprivileged people (Matuku & Kaseke, 2014; Nkambule & Mohammed, 2019; Zondi, 2016). The literature reveals a considerable body of existing research about stokvels, but more attention needs to be given to GSs, despite their burgeoning popularity (Shingirirayi & Robertson, 2021). On the other hand, Lappeman et al. (2020) state that ‘there is to date no published peer-reviewed model of a festive season stokvels buying process.’ (Lappeman et al., 2020, p. 1). Some studies have explored the Grocery Stokvels procurement process from a retail-oriented perspective and WhatsApp as a technology tool in stokvels (Kariuki & Ofusori, 2017; Lappeman et al., 2020). Figure 2.3 summarises the problem analysis as guided by the literature reviewed.

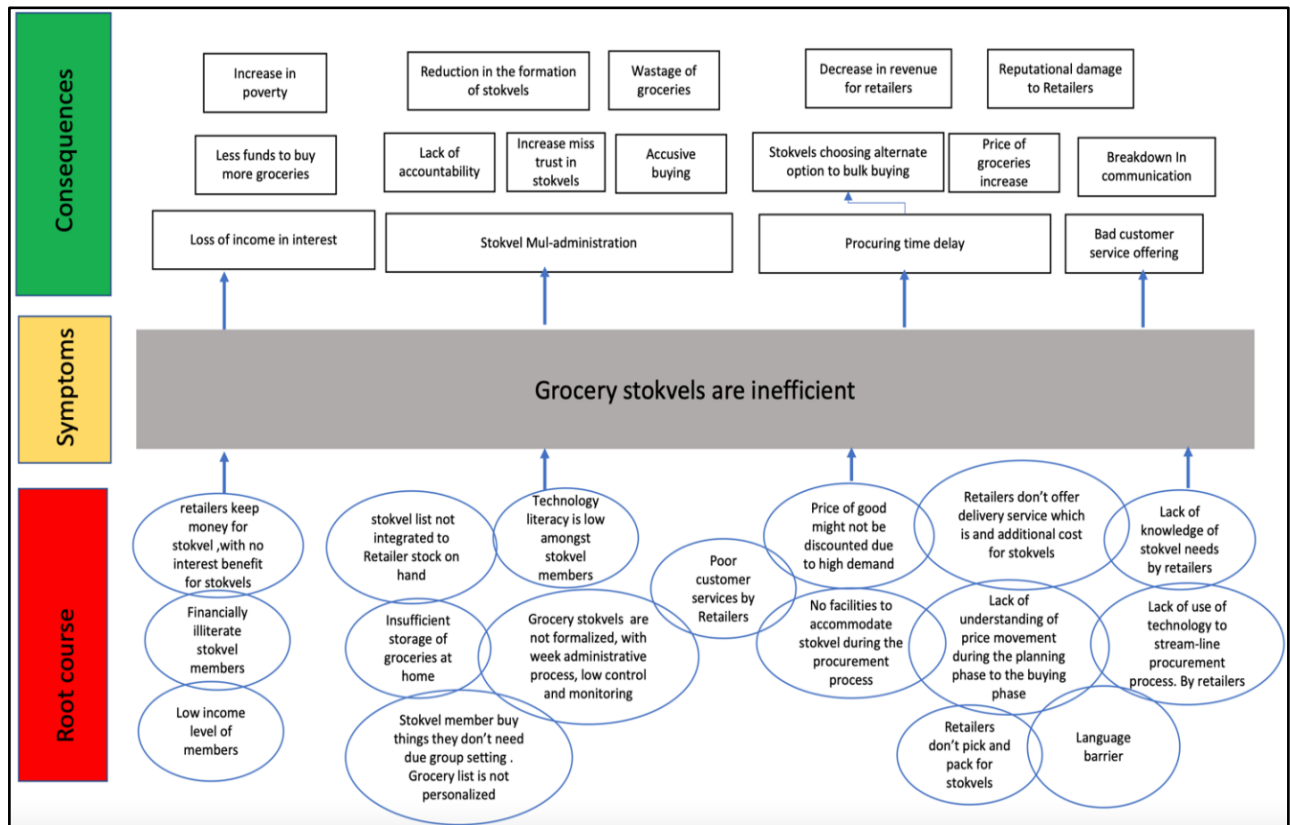


Figure 2.3: Problem Analysis Diagram

Source: Developed for this study

2.9 Summary

In summary, stokvels play a significant role in the financial sector through investment, credit, and microloan activities, especially in South African communities focusing on underprivileged Black women with fewer opportunities. These women use the Grocery Stokvel to provide food security to their families. Therefore, there is a need to explore how Grocery Stokvels are run and to find new ways of making Grocery Stokvels effective and efficient. Introducing technology tools will streamline the time spent on the procurement activities such as sourcing goods, purchasing, and paying for these goods.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Introduction

This chapter will detail how the research study will be conducted through the following sections: research approach and design, establishing the population, the sample size, the data collection method, and the data analysis method. Qualitative research will be used, which is defined as an approach to exploring and understanding individuals or groups ascribe to a social or human problem. The research focused on the use of technology by grocery stokvels and the improvement of the process of procuring bulk groceries. The qualitative research philosophy is interpretive, humanistic, and naturalistic (Creswell, 2007).

3.2 Research Philosophy

Grocery stokvels are socially driven structures where members frequently meet to build social relations and collectively save money for a common goal. With the stokvels being social platforms, the research philosophy that would be most suitable for investing in the use of technology to improve the technology process of grocery stokvels was the interpretivism philosophy. This philosophy involves the need for researchers to integrate human interest into the study, which would be the interest of the grocery stokvels and the impact of technology on their procurement process. Interpretive is associated with philosophical idealism and is used to group diverse approaches, such as phenomenology, which appreciates the difference between people and focuses on the meaning of the study (Soiferman, 2010).

The use of interpretivism philosophy allowed the research of grocery stokvels to accommodate the participants' human aspect and better understand the grocery procurement process phenomenon and technology (Dudovskiy, 2022). Interpretivism is based on the assumption that reality is subjective, multiple and socially constructed, a description that best fits this study. The fact of how stokvels use technology and the ability of technology to improve the technology for grocery stokvels was based on the stokvel members' experience and social influence. We could only understand someone's reality of grocery stokvels through their experience of that reality, which would be different from

another person's shaped by the individuals' historical or social perspective (University of Nottingham, 2023).

3.3 Research Approach

Leedy and Ormrod (2015) describe research as a systematic method of gathering and analysing data or information to understand the topic or subject better. The study followed qualitative research, which could also be deductive or inductive (Burney & Saleem, 2008). Qualitative research, also called inductive research, seeks to describe the meaning of central themes in the real life of participants (Hesse-Biber & Leavy, 2009; Soiferman, 2010). This research approach involved collecting and analysing non-numeric data to understand better the concept, opinion, and experience. To understand better the Grocery Stokvel and its ability to harness technology, the qualitative approach was used to gain in-depth insight into the technology used by the sector, explore current problems and generate innovative ideas in the research of stokvels. The study observed the current Grocery Stokvel model in Gauteng. It explored whether using technology such as Mobile Applications, communication platforms, or digital tools will improve the efficiency in the procurement process activities of stokvels.

3.4 Research Design

The overall aim of this research was to explore Grocery Stokvel procurement process activities and the use of technology. The generic qualitative phenomenological methodology was followed. This methodology aimed to understand the procurement process experience from the stokvel member and get their point of view (Groenewald, 2004; Marvasti, 2018). The approach was to engage through focus groups to gain an in-depth understanding of the social issues (Nyumba et al., 2018). Interviews were used to collect data (Bhattacharjee, 2012).

The interviews were used to get a better understanding of the current Grocery Stokvel procurement process. Furthermore, it was used to understand the life experience without bias and determine the phenomenon in the collected data. All interviews were audio-recorded with the participant's consent to obtain a fuller interview record (Matuku & Kaseke, 2014). The participants were Stokvel members likely to have a well-rounded knowledge of the Stokvel model and its procurement process. However, it must be noted that this unit of analysis (stokvel members and retail shop participants) would be subject

to respondent bias based on their interests. The interview results were thus analysed based on the trends and the relationship emerging in the procurement process. This research aimed to collect as much, and as diverse data as possible that can help generate the best possible insight into the procurement process and technology (Bhattacharjee, 2012).

3.5 Population and sample

3.5.1 Population

The population is the finite number of individuals or members (Wani, 2017). The population for this study will be the entire group that forms part of grocery stokvels in South Africa. These were estimated to be at 16% of 810 000 stokvels countrywide. The grocery stokvel population was thus estimated to be 128 000. According to the African Response Research (2012), it is further estimated that 17.4% of these are based in Gauteng, totalling an estimated population of 2,387 grocery stokvels in Gauteng.

3.5.2 Sample and sampling method

A sample represents the targeted population that is methodologically to participate in the study (Cooper et al., 2006). The Grocery Stokvel members in Gauteng formed the basis of the population. Qualitative research employs small samples so that the respondents can provide information. Non-probability sampling was used for this research. The researcher used the perspective of the geographic parameter to seek research participants, referred to as a purposive sample. Due to the number of members belonging to stokvels, the likelihood of being selected for the research in the sample was unknown.

The following was used as selection criteria for the focus groups that were interviewed:

- The participants were on the stokvel academy list.
- They were members of grocery stokvels and above the age of 18 years.
- They are based in a township, a rural informal settlement area within the Gauteng province.

Qualitative research employs small samples so that the respondents can provide in-depth information (Moliea, 2007). Four focus groups were conducted in and around the Gauteng province. The four (4) focus groups comprised five (5) to six (6) participants, as supported

by literature. Research suggests a minimum of six participants per focus group (Creswell, 2009). The number of participants allowed the researcher to capture the input of all participants in the focus group. Furthermore, it allowed for an open and safe space for participants to express their views without being over-shared by a larger number of people. The groups were made of different stokvel representatives, bringing in a different perspective from with different experiences from the different stokvels in the area.

3.6 Data collection methods

The Stokvel Academy have over 2000 Stokvel affiliates countrywide (Nasasa, 2020). A list of Stokvel members was obtained from Stokvel Academy. That list was used to set up focus group sessions with stokvels on the database of the organisations. The interview addressed both demographic of the sample leading to open-ended questions that addressed the procurement process's inefficiencies and the use of technology in stokvels. As part of the qualitative method, data was collected through interviews or focus groups to understand and interpret participants' perceptions of using technology in the stokvel industry (Marvasti, 2018). The interview was based on a representative from Stokvel Academy. Table 3.1 illustrates the schedule of the interviews for this study.

Table 3.1: Schedule of Focus Group Interviews

Location	Date	Time	Venue
Evaton	29 Nov 2022	1 pm	Participant 1 house
Atteridgeville	6 Jan 2023	11 am	Participant 8 House
Meadowlands	12 Jan 2023	10 am	Participant 17 House
Soshanguve	6 Feb 2023	5 pm	Participant 19 House

Source: Stokvel Academy (2023)

The representative would then confirm the venue in the different locations, the time and the number of participants in the focus group. As illustrated in Table 3.1. The focus groups were comprised of five to six participants. The total number of participants in the whole study reached 23 stokvel members. The 23 participants were gathered through the four groups, with 5 to 6 participants in each focus group.

Moreover, these participants were represented by different stokvels from the four locations in Gauteng. The interviews were conducted in both English and the local native language spoken by most participants in the focus group. In the Pretoria region, the Soshanguve and the Denville Stokes spoke Sesotho. Whilst the stokvels from Everton and meadowlands spoke both isiZulu and Sesotho. The sessions were scheduled to be an hour long; however, the nature of the focus group allowed for the conversation to flow and to let the participants express their views in an open and free manner. With the consent of the participants, the focus group discussions were voice-recorded, and detailed notes were scribed to ensure the input from stokvel members was well documented. As part of the focus groups, the session discussed the stokvel's use of technology. Furthermore, two online retailers were interviewed to ensure triangulation of the information received from the focus group. This was to ensure a border understanding of the use of technology in the retail sector. The retailers listed in Table 3.2 were interviewed online and with structured questions based on the use of technology in the retail industry, focusing on the township and rural market sectors.

Table 3.2: Schedule of Retail Interviews

Location	Date	Time	Venue
Retailer 1	21 Feb 2023	3 pm	Online
Retailer 2	27 Feb 2023	7 pm	Online

Source: Twala (2023)

Document analysis and literature were used to substantiate the research results and improve the validity and reliability of this study. All the data was loaded onto an online tool critical for outlining the structure of the data received. The recordings of interviews are stored in a password-protected cloud file.

3.7 Data analysis and interpretation

Data analysis aims to obtain information from the interviews and formulate results that can contribute to the body of knowledge and be further investigated by other researchers. Following the interviews and collection of data, tools such as *Atlas. ti* (Version 22) was used to interpret, process, and analyse the data sets. Multiple data types were received from the interviews. The transcript was consolidated into a data pack for focus group and

retailer interviews. Data collection from the focus group necessitated the need to further unpack the introduction of technology into the stokvel procurement process by interviewing retailers that use technology in the township and rural areas intending to make the recursive research (Soiferman, 2010). The analysis process, therefore, involved distinct steps, including reading to familiarise oneself with data and coding to generate ideas around data. The second reading was to redefine codes and establish relationships between the codes, and the last reading was to eliminate redundant codes and further refine subthemes and relationships between codes. The approach was to analyse the data and identify patterns related to each common theme from the data. The study reached a stage where general conclusions and theories are formed about the procurement process in Grocery Stokvels.

3.8 Data transferability, credibility, dependability, and confirmability

In assessing the rigour of the qualitative study, a criterion in qualitative research known as the four dimension criteria, namely credibility, dependability, transferability and confirmability, was used (Forero et al., 2018; Jones et al., 2012). This criterion was used in the study to evaluate the study's validity and aligned to the qualitative research methodology that requires data to be credible through the duration of the data collection and having a proposer audit trail of how data was collected and stored.

3.8.1 Transferability

The transferability was assessed as per the results and the participants' demographics to understand the context of the behaviour and experience of the participants.

3.8.2 Credibility

Credibility was accessed through prolonged presence during data collection. The data was collected from Nov 2022 to Feb 2023. This gave sufficient time to gather the data; the interview with the retail specialist ensured data triangulation as a second source of information (Korstjens & Moser, 2018).

3.8.3 Dependability and Confirmability

To ensure dependability and confirmability, an audit trail was established. The data collected, and the process of collecting the data were presented as an annexure to this study to ensure that the data collected is not misinterpreted. Dependability is concerned with the stability of the data over time (Korstjens & Moser, 2018). Concerning

confirmability, the study's results must not be the researcher's interpretation or viewpoint. The study must further be able to be accessed and confirmed by other researchers.

3.9 Limitations of the study

The research methodology selected has disadvantages, such as the data collected does not provide evidence bias by the population, and the feeling and opinions of the population can influence the findings (Bhattacharjee, 2012; Creswell, 2014). Two additional retailers were approached for this study who rejected the request that Stokvels be a strategic market segment and did not want to share strategic business information on their relationships with Stokvels.

3.10 Ethical considerations

Ethics are norms or standards of behaviour that guide moral choices about our behaviours and relationships with others (Creswell, 2009). Wits Business School Ethics Committee reviewed and approved this research for ethical considerations and ethical compliance issued as a clearance (Protocol Number: WBS/BA1145412/116, see appendix 3). Research states that ethical issues and challenges in research reflect significant moral concerns about the practice of responsible behaviours in society (Cooper et al., 2006). This research study ensured ethical compliance by protecting participants' rights and complied with the POPIA Act. Participants were assured of anonymity through an agreed participation mandate that clearly outlined the research question of this study, sought permission from the participant to contribute to the study, and informed the participant of the research philosophy. Ensuring the study maintained participants' rights, interests, and wishes (Creswell, 2014). For safety and confidentiality, the study used participant codes to label data and did not use names. This collected data was stored in a password-protected file on Wits Google Cloud for three years.

3.11 Summary

In summary, this chapter focused on the fundamental methodology that was followed in the study. The study looked at a qualitative interpretive approach through focus group interviews. An explanation of the population about the stokvel industry was also addressed, resulting in the sampling method and the sample. The ethical consideration and approval were detailed. Finally, the chapter ended with how validity would be

checked, as well as the limitations of the study. In the following chapter, an in-depth perspective of the focus group participants will be outlined as the research results.

CHAPTER 4

DATA ANALYSIS AND PRESENTATION OF RESULTS

4.1 Introduction

This chapter focuses on the analysis and presentation of findings of the qualitative data to the research question, which is to ascertain the use of technology and the improvement to the grocery stokvel procurement process through technology. The findings are based on the research methodology outlined in Chapter Three. This chapter analyses findings from two individual interviews (with retailers Mbewu and Yebo Fresh), four focus group discussions (Danville, Everton, Meadowlands, and Soshanguve) and qualitative findings from the survey.

4.2 The Sample Demographics

4.2.1 Stokvel Groups in Gauteng

Grocery Stokvels are a popular method of shopping and have been explored in recent years even though they have a critical role to play in the retail sector ((Bophela & Khumalo, 2019). They provide food security to the member of grocery stokvels within the township, informal settlements and rural areas. Stokvels are mainly run on a manual basis. Hence, this study needs to be carried out and investigate the current practices and challenges grocery stokvels face regarding technology. For a better understanding of their problems and to improve service delivery, the study explored Gauteng townships; Soweto, Orange Farm -Everton, Danville and Soshanguve, as seen in Figure 4.1. Furthermore, one-on-one interviews were held with retailers involved in the supply of groceries to the local communities in Gauteng.

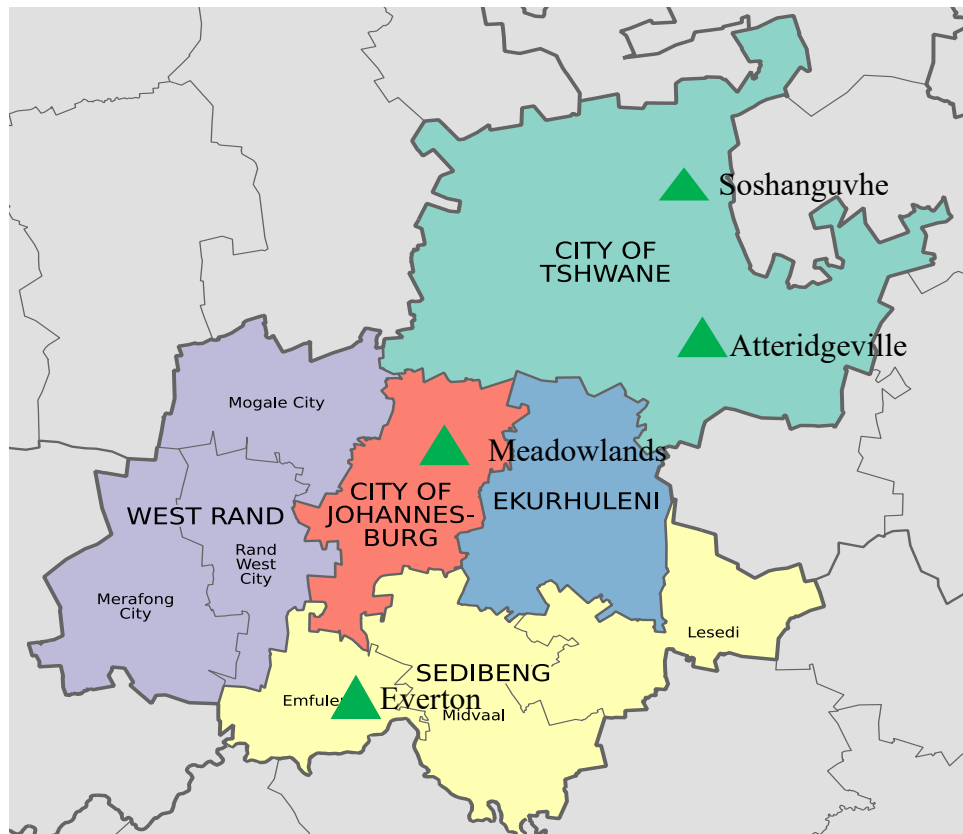


Figure 4.1: Map of Gauteng and location of townships, rural areas
Source: Nhamo et al. (2021)

4.2.2 The Focus Groups

Focus Groups involve hosting small groups of participants at a specific location and having them discuss a phenomenon of interest for some time (Bhattacharjee, 2012). Focus groups were hosted on four (4) sites. Each group was allocated up to two (2) hours' time slot with a minimum of 5 participants per group.

Evaton Focus Group 1

Table 4.1:Everton Stokvel Focus Group Demographics

	Gender	Age	No. of Stokvel members per participant	Monthly Contribution	Total per group p/m	Total contribution for bulk grocery (11 months)
Participant 1	F	58	24	R300	R7 200	R79 200
Participant 2	F	69	12	R500	R6 000	R66 000
Participant 3	F	60	50	R500	R25 000	R275 000
Participant 4	F	53	5	R150	R750	R8 250
Participant 5	F	49	10	R550	R5 500	R60 500
Participant 6	F	63	8	R650	R5 200	R57 200
Totals			109	R2 650	R49 650	R546 150

Source: Survey (2023)

Evaton is a township based in the Sebokeng district. The township has a population of over 250k and a 99% black African demographic. The participants were only women with an age average of 58,7 years. Each participant of the Evaton focus group was a representative of a specific stokvel based in the Sedibeng district. Therefore these six (6) representatives in the Evaton focus group (see Table 4.1) were a sample of 109 stokvel members.

The stokvel members indicated that they contribute money on a monthly and weekly bases to save for groceries. The weekly stokvels contributed R30 per member, buying cleaning and washing items for a specific week. The other five (5) members indicated they have a monthly contribution and buy groceries at the end of the year. With the total representation of 109 members, the total contribution can be summed up to R49 050.00 per month. The 5 Stokvel representatives indicated they saved for 11 months and bought bulk groceries in December. The summed total contribution at 11 months is estimated at R539 550,00.

Atteridgeville Focus Group 2

Table 4.2: Atteridgeville Stokvel Focus Group

	Gender	Age	No. of Stokvel members per participant	Monthly Contribution	Total per group p/m	Total contribution for bulk grocery (11 months)
Participant 7	F	42	137	R150	R20 550	R226 050
Participant 8	F	38	12	R500	R6 000	R66 000
Participant 9	F	29	37	R600	R22 200	R244 200
Participant10	F	67	7	R500	R3 500	R38 500
Participant11	M	45	137	R150	R20 550	R226 050
Totals			330	R1 900	R72 800	R800 800
<i>Removed duplicate from members from same stokvel(P7 &P11)</i>						
			193	R1 750	R52 250	R574 750

Source: Survey (2023)

Atteridgeville is a township based in the west of Pretoria. The township has a population of over 64 425 and a 99% black African demographic. Data was collected by the author on 6 Jan 2023 in Atteridgeville at Tshwane Municipality, Gauteng. The participants were 4 females and 1 male with an age average of 36,8 years. Each participant of the Atteridgeville focus group was a representative of a specific stokvel based in the Atteridgeville district (See Table 4.2). Therefore these five representatives in the Atteridgeville focus group were a sample of 193 stokvel members. There were two members from the same stokvel. Thus only data from one member was incorporated into the data analysis not to duplicate the inputs and demographic of the representative totals.

The stokvel members indicated that they contribute money every month to save for buying groceries at the end of the year. The five members indicated they have monthly contributions ranging from R150 to R600. With a total representation of 193 members, the total contribution sums up to R52 250 per month. The five Stokvel representatives indicated they saved for 11 months and bought bulk groceries in December. The summed total contribution at 11 months is estimated at R574 550,00.

Meadowlands Focus Group 3

Table 4.3: Meadowlands Stokvel Focus Group

	Gender	Age	No. of Stokvel members per participant	Monthly Contribution	Total per group p/m	Total contribution for bulk grocery (11 months)
Participant 12	F	45	7	R500	R3 500	R38 500
Participant 13	F	30	4	R300	R1 200	R13 200
Participant 14	F	39	10	R300	R3 000	R33 000
Participant 15	F	52	15	450	R6 750	R74 250
Participant 16	F	55	3	100	R300	R3 300
Participant 17	F	40	20	R500	R10 000	R110 000
Totals			59	R2 150	R24 750	R272 250

Source: Survey (2023)

Meadowlands is based in the heart of Soweto, known as the Greater Soweto. The township has over 150 000 and a 99% black African demographic. Data collected by the author on 12 Jan 2022 in Meadowlands at Soweto Local Municipality, Gauteng. The participants from Meadowlands focus group represented a specific and different stokvel based in the Soweto district (See Table 4.3). Therefore these six representatives in the Atteridgeville focus group were a sample of 59 stokvel members.

The stokvel members indicated that they contribute monthly money to save for buying groceries and meat at the end of the year. The six members indicated they have monthly contributions ranging from R100 to R600. With a total representation of 59 members, the total contribution sum up to R24 750 per month. The six Stokvel representatives indicated they saved for 11 months, bought bulk groceries, and met in December. The summed total contribution at 11 months is estimated at R272 550,00

Soshanguvhe Focus Group 4

Table 4.4: Soshanguvhe Stokvel Focus Group

	Gender	Age	No. of Stokvel members per participant	Monthly Contribution	Total per group p/m	Total contribution for bulk grocery (11 months)
Participant 18	F	43	8	R440	R3 520	R38 720
Participant 19	M	41	10	R650	R6 500	R71 500
Participant 20	M	40	12	R650	R7 800	R85 800
Participant 21	M	47	12	R650	R7 800	R85 800
Participant 22	F	39	4	R200	R800	R8 800
Participant 23	M	37	15	500	R7 500	R82 500
Totals			61	R3 090	R33 920	R373 120

*Removed
duplicate from
members from
same
stokvel(P20
&P21)*

49

R2 440

R26 120

R287 320

Source: Survey (2023)

Soshanguvhe is based in the north of Pretoria. The township has a population 879 000 and a 99% black African demographic. The participants were two (2) females and four (4) males, averaging 41.2 years. The researcher collected data on the 1st of February, 2023, in Soshanguvhe. Each participant of the Soshanguvhe focus group represented a specific stokvel based in the Soshanguvhe township (See Table 4-4). Therefore these 6 representatives in the Soshanguvhe focus group were a sample of 49 stokvel members. There were two members from the same stokvel. Thus only data from one member was incorporated into the data analysis not to duplicate the inputs and demographic of the representative totals.

The stokvel members indicated that they contribute monthly money to save for buying groceries at the end of the year. The 6 members indicated they have monthly contributions ranging from R200 to R650. With a total representation of 49 members, the total contribution can be summed up to R26 120 per month. The 6 stokvel representative indicated they saved for 11 months and bought bulk groceries in December. The summed total contribution at 11 months is estimated at R287 320,00.

4.2.3 Retailers

The 23 participants shared their preferred retailer from which they bought their end-of-year groceries. Figure 4.2 details the retailers used by participants of the focus groups that contributed to the study. The retailer impacts the way Stokvels procure their grocery during the year. Makro emerged as the most preferred retailer for grocery stokvel to buy groceries, followed by KitKat. These retailers have an impact on the procurement process for grocery stokvels. The data collected from both focus groups and retailers helped enhance then the real-life experience of grocery stokvels and sought to explore current challenges that stokvels must overcome to improve in the procurement process.



Figure 4.2: Retailers and number of participants that shopped from them
Source: Survey (2023)

Gagliardi et al. (2014) regard two to ten participants as sufficient to reach saturation when interviewing focus groups; thus, four focus groups were interviewed. For this reason, the researcher needed to explore different data sources to help validate the data researched from the focus group; thus, retailers mainly focused on the township and rural markets were interviewed. These interviews sought to observe if their use of technology from stokvels in Gauteng's township and rural areas produced the same results and understanding. Simultaneously, collecting data from the retailers as a second source of information is data triangulation, which seeks to contrast and validate the data to yield similar results (Arksey & Knight, 1999). The 23 focus group participants shopped with

different retailers, as shown below. These retailers play a role in the purchasing step of the procurement process.

4.2.4 Saving Grocery Stokvels Funds

The fundamental principle of group saving to buy groceries drives grocery stokvels. Thus, these stokvels are funded from two sources; regular contributions by members and fines imposed on members. Fines are imposed as a disciplinary measure for nonconformance to the stokvel rules, such as being late to meetings or not paying your subscriptions on time. The stokvel groups represented by the focus group participants ranged between 3 to 137 members, and each member contributed weekly or monthly. Figure 4.3 shows the amount contributed based on the available data of the 23 participants representing 410 stokvel members.

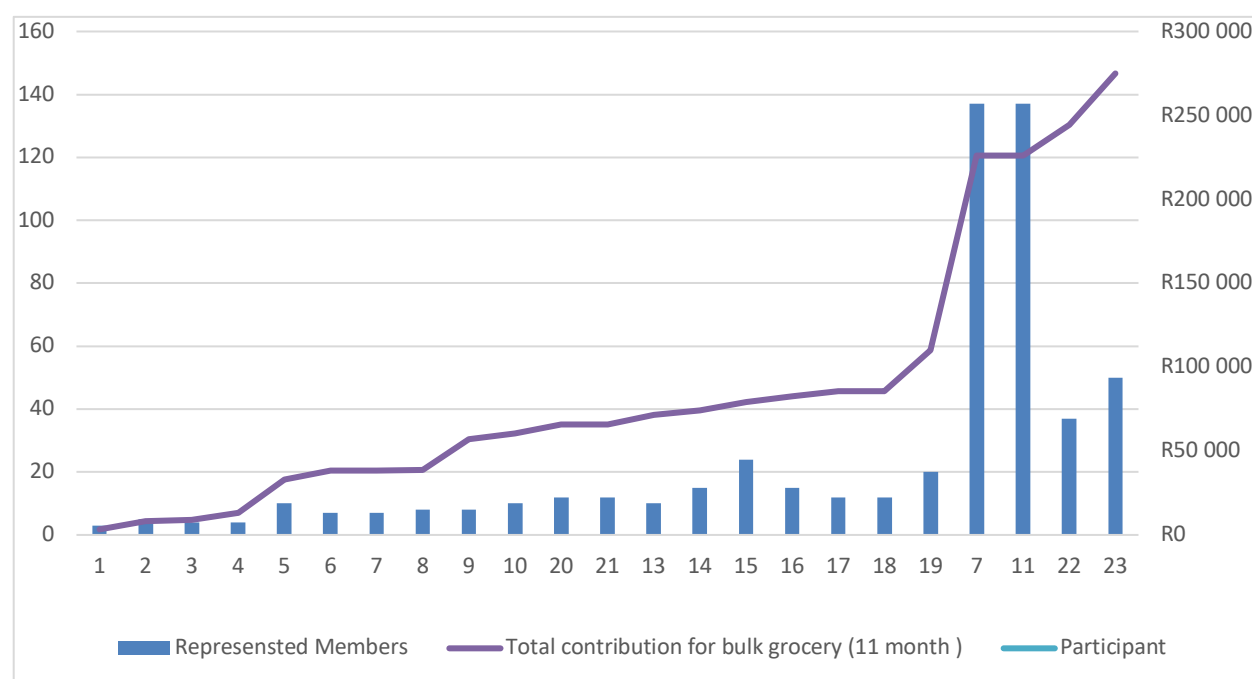


Figure 4.3: Approximate funds collected by Stokvels from each member annually.

Source: Survey (2023)

Based on Figure 4.3, in a collection cycle (11 months), each stokvel group contributes between R3300 and R275 270 per annum. This data shows 410 stokvel members could save up to R1 766 270 in one calendar year within the Gauteng province. It can then be

estimated that the contribution of stokvel annually in the Gauteng province is around R1 088 870 450 with a population of over 2387 stokvels at an average of 10 members. This is a significant contribution to the economy of the province. As a base to the grocery stokvel, technology can ensure a more effective way to save and spend this money. The technology used in the funds' collection process entails all the technologies employed in the stokvel procurement process, such as meetings and payment collection. And with the industry's enormous contribution to the GDP, using technology is a must to create a safe and productive way for stokvels to use their money.

4.3 The Extent of Technology Use in Stokvels

Technology use in grocery stokvels was accessed through the current tools and systems used by stokvels in procuring groceries. The grocery stokvel is mainly based on buying groceries for the festive system or major events. The stokvel operations is an annual cycle that comprises meetings (funding), planning for end-year purchases (procurement), and executing the plan (actual purchasing). As shown in Figure 4.4, the life cycle of a stokvel begins with collecting funds (saving money). This continues for 11 months, during which members contribute to the stokvel in predetermined frequencies.

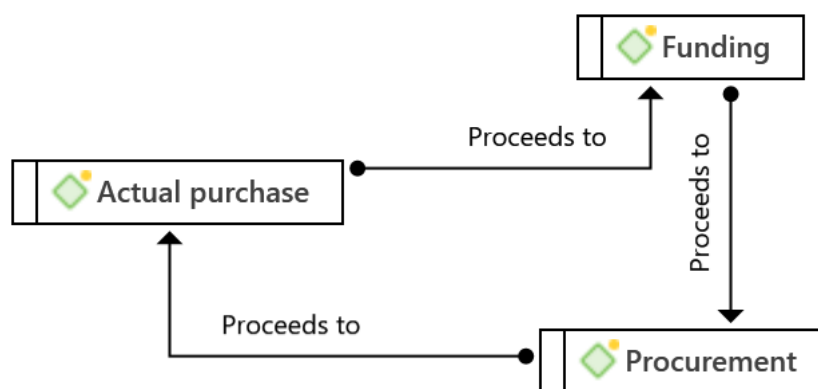


Figure 4.4: Stokvel annual operational cycle

When the funding period ends, the stokvels enter a procurement period in which they plan what to purchase, where, and when. The procurement period is followed by one day of purchase, logistics, and division of grocery items among stokvel members—the end of the purchase ushers in a new funding cycle.

4.3.1 Meetings

While some stokvels had very regular meetings (weekly or monthly), especially those who did not use WhatsApp, these stokvels had physical meetings where members must

be present to participate. However, some struggled to meet, and some rarely met. In one of the groups, the members mentioned they had slowly replaced meetings with WhatsApp group chat. The respondent explained,

“We don’t meet because we chat a lot on WhatsApp.” (Participant 13/F/30).

WhatsApp was also used to remind members of meetings. One respondent indicated they used WhatsApp chat, voice notes, and group calls to fulfil their communication needs.

“Yes, we all have smartphones”. (Participant 16/F/55)” ... “Family stokvel, we communicate on a family WhatsApp ... when we go for meetings we meet physically or have them online with WhatsApp group call, we usually communicate using WhatsApp notes.” (Participant 17/F/40)

Only one participant indicated that they use email to share forms with members of the stokvel.

4.3.2 Payment collection

WhatsApp was the most mentioned app in payment collection. Members shared bank slips and pop-up bank messages via text message. A participant stated, *“We have WhatsApp groups, what is discussed. We encourage people to pay, in time., also shares proof of payment ...”* (Participant 4/F/53). Beyond payment collection, these payments were recorded in a manual book, except for one stokvel that used an Excel spreadsheet. The respondent posited, *“We use a group and an Excel spreadsheet that runs our finance. It helps us to track our payments.”* (Participant 19/M/41).

4.3.3 Saving money

The research established that one of the main reasons for joining a stokvel was to save money, and thus, the ability to keep the funds collected over a funding cycle was of great importance to the participants. Some stokvels deposited their money with retailers, and some at the bank. Among those that used the banking technology, a respondent indicated they sent someone to go to the bank to deposit money physically, and another respondent indicated the bank slip is shared via WhatsApp. One respondent acknowledged that

beyond accepting deposits, the bank has a notification system that alerts when payment is made. The Figure below shows the technology used in the funding cycle.

Figure 4.5 represents a three-tier association where the first tier is the funding cycle. The second represents technologies in the funding cycle, and the third represents what the technologies help to achieve.

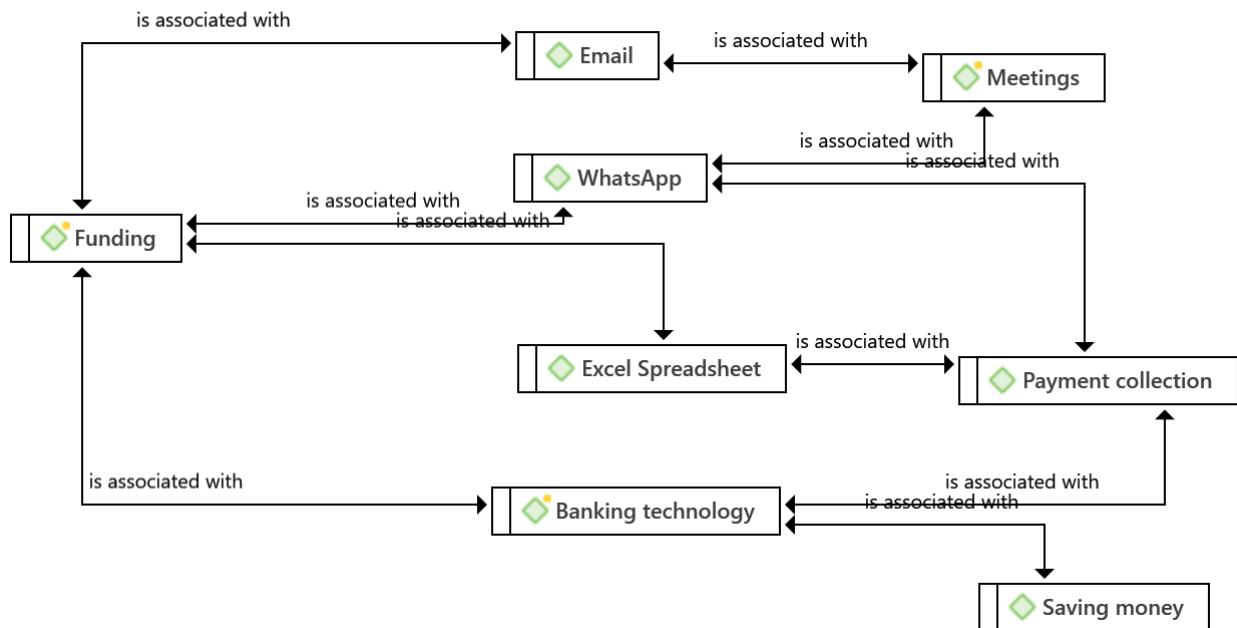


Figure 4.5: The different technologies currently in use in stages of Stokvel funding

Based on Figure 4.5, four technologies were associated with the Stokvel funding cycle - banking technology, excel spreadsheet, WhatsApp, and email. The email was found to be associated with meetings (where savings are discussed and saving rules are reinforced). WhatsApp was associated with meetings (reminders to attend meetings, informal discussions) and payment collection (sharing proof of payment). Excel spreadsheet was associated with payment collection (tracking member contributions in Excel). Lastly, banking technology was associated with payment collection (using a banking app) and saving money (saving through banks and receiving notifications).

4.3.4 Procurement process

Based on the analysis of the responses received, stokvels were either price-driven or non-price-driven. The procurement process involved determining what to purchase and retailer selection. Each step differed by the stokvel's focus (prices or not).

4.3.4.1 Determining the grocery purchase list

The determination of a purchase list had a standard procedure -members had some sort of meeting to agree on what to purchase. In some cases, the stokvel used a previous list; in others, each member was entitled to their own custom list of groceries. A respondent indicated that their list came from items that their households needed (different from looking for the least price item),

“The price does not determine the list we select. We choose things that we think are important to our households”. (Participant 2/F/69)

In the opposite case, members did everything possible to create a list based on the least-priced brands. A participant explained,

“We don’t allow people to choose their brands when it comes to the grocery list. For us to benefit from the discount, we all have to stick to the quantities we all choose.” (Participant 4/F/53)

In this case, the stokvel achieved lower prices by focusing on quantity discounts with bulk purchases per listed item. A respondent indicated an exception where a member is allergic to an item in the list; then they are allowed to select a specific brand. This limitation helps achieve quantity discounts which is the focus of the price-driven stokvel. One technology that was used in the determination of the purchase list was WhatsApp. One respondent noted that *“we also call each other on WhatsApp group to discuss the list and agree on the items from last year.”* (Participant 23/M/37)

4.3.4.2 Retailer selection

Retailer selection involves getting quotes from different retailers and deciding which to purchase from. In some Stokvels, ladies would physically go from one retailer to the next in search of quotes. A respondent explained,

“We send two ladies to the retail store to go and get a quote from the retailer. They will then come back with a list with prices per item. Some of the items are not always on discount.” (Participant 1/F/58).

One respondent echoed the price-driven scenario,

“... the person who will be buying the grocery goes to different retailers to buy groceries based on the best price for a specific item.” (Participant 4/F/53)

In a non-price-driven context, the retailer selection phase was omitted because the stokvel was loyal to a single retailer. To this end, one respondent explained,

“I can say we don't focus too much on the price of items because we don't really go to different retailers to see which items are cheaper. We have not changed the retailer from which we buy our groceries for 3 years now, so we just go to the place we know.” (Participant 5/F/49)

In this scenario, the stokvel placed greater importance on being loyal to a retailer and not on maximizing the use of their accumulated funds. This loyalty emanated from various factors. First, the stokvel funds were tied to the retailer for those saved directly with the retailer. Therefore, at the end of the funding cycle, they had no way but to purchase with the retailer that held their funds. For some stokvels, getting the best price was not a pain point, so they chose the convenience of sticking with one retailer.

Some participants mentioned the use of online technology to get quotes. For instance, (Participant 20/M/40) indicated that in 2022, they checked prices online and found that one retailer (Makro) had the best prices. Some had also procured items online, except for personal items like clothes and not groceries. The relationships are presented in Figure 4.6 below.

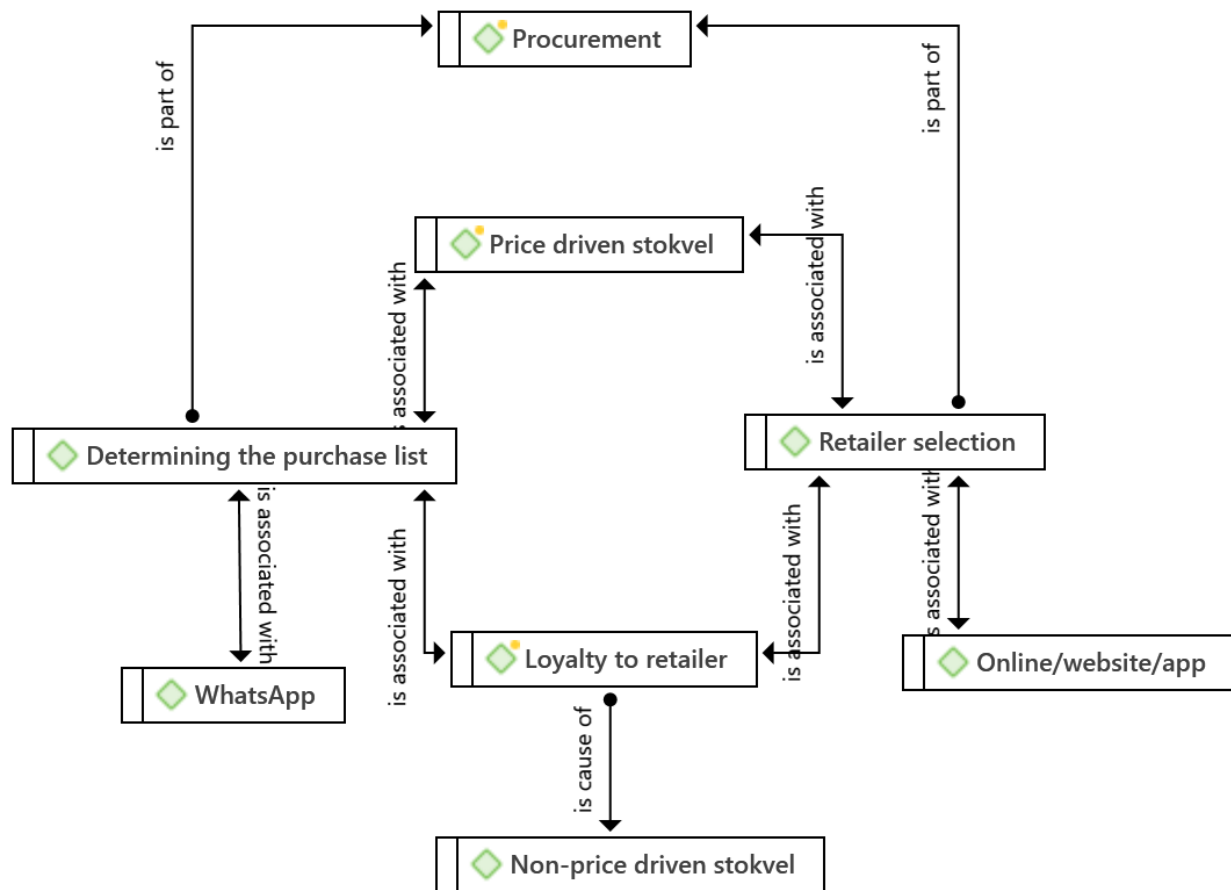


Figure 4.6: The flow of processes in procurement and technology used

Figure 4.6 shows two technologies used in the procurement cycle – WhatsApp (in determining the purchase list) and online/website/app (in selecting the retailers). The two processes are, in turn, part of procurement. However, some issues might affect the procurement processes and technology use. The first issue is loyalty to a retailer, which led to stokvel members not caring about prices (they became non-price driven). Because of their loyalty to a retailer, they bypassed retailer selection (did not conduct this process) and tailored their retail list to what was available in the store. On the contrary, price-driven stokvels determined their lists based on the best prices and collected pricing information from multiple retailers to select the retailer with the best prices.

4.4 Reasons Why Stokvels Do Not Use Technology

The research established several reasons why stokvels do not use technology. These reasons are discussed as follows.

4.4.1 Failed bank performance expectations

The analysis revealed that the technology (especially banking technology) failed to meet the performance expectations of the stokvel members. The focus group members explicitly posited that their main reason for joining the stokvels was to save money (individual counter challenges with saving discipline), to have the ability to purchase grocery items that last a long period and to capitalize on the discounts that come with bulk purchases. Regarding challenges with individual savings, a respondent noted,

“It's better to save as a group, and as a member, you don't want to disappoint other stokvel members.” (Participant 10 /F/67).

The psychology of group saving was a major proposition as it counters indiscipline and promotes motivation. Another respondent explained that stokvels have rules that all members must follow, reinforcing their ability to help members save more. One participant had this to say;

“I have lots of needs that I can't meet, so it's better to join a stokvel to help with getting the things that I need. When you are alone, nothing is achieved, but when you are in a group, you are pushed and achieve a lot. In stokvels, you must follow the rules so you will operate within the rules. So, I save more with the stokvel.” (Participant 8/F/38).

One of those rules is that members who fail to contribute the full amount lose their money. In line with achieving the goal of the stokvel (to fulfil members' reasons for joining), some participants indicated the bank had not met their expectations, and thus, rather than embracing and using the banking system for liquidity management, they opted to deposit money with the retailers. Particularly, participants indicated they evaluated the interests they got from the bank versus the discounts that the stokvels offered and determined the discounts were higher than the bank interests, considering banking fees.

“When we looked at saving our money at the bank, we realised that the discount that we get from the retailer was much more than the interest gained at the bank.” (Participant 1/F/58).

Another factor that emerged was the security of the banking system. The focus group discussion members indicated several safety issues associated with the bank. One member noted that the bank did not offer them electronic funds transfer (EFT); thus, they had to withdraw and carry funds to the retailers. One participant noted;

“We go and withdraw money from FNB, it's not safe, previously the bank indicated that you cannot do an electronic transfer of money on a stokvel account.” (Participant19/M/41).

This introduced the fear that they could be robbed, and thus considered it unsafe to save their money with the bank. Thus, one participant said;

“We don't want to be charged banking fees, and we have seen that it's not safe to move the money from the bank to KitKat; they will rob you of the money.” (Participant 11/M/45).

Moreover, some members indicated other security concerns, such as theft of banked funds or mistakes with one's details. Participant 8 noted;

“These technology things, you can't really trust it, even at the bank sometimes they make mistakes with your account. Or someone can steal the money whilst it's at the bank.” (Participant 8/F/38).

A member also indicated cases where stokvel members make late payments, which means they cannot benefit from the interest offered when saving with the bank.

4.4.2 Safety and Accessibility of Computing Devices

Computing devices included smartphones, laptops, and desktop computers. While some did not have smartphones and thus could not use WhatsApp, some participants wondered who among the stokvel members would have the laptop. Further, the participants indicated that the internet was a problem, and they did not have data. Safety issues included the safety of the device (theft of device), the safety of data (loss of data through deletion) and virus attack. A respondent stated,

“... if we buy a laptop, who will get to use it and who will not? And the laptop might be stolen with all our information.” (Participant 3/F/60)

4.4.3 Distrust of online technology

Technologies distrusted included email (might not reach the recipient) and online purchasing. For online purchasing, the participants indicated that except for the technology from a retailer they know, they would have to make sure it's safe to use. Their main reason is that unknown / distrusted retailers might pack expired products. For instance, one participant noted;

“At a place like Makro, I would use their technology to buy stokvel goods, but at other shops, I would not because I don't trust them. They will pack expired goods or not deliver all our ordered goods.” (Participant 9/F/29).

A participant also indicated that purchasing online might result in items they do not want or do not fit. Moreover, a respondent mentioned the possibility of cyber-attacks and online scams. The respondent from Yebo Fresh indicated that although they have the technology to support the ordering process, they recognized these fears and took their customers through baby steps to get them to trust them enough to shift to online ordering.

4.4.4 Age and Gender

The participants indicated that 18 was the minimum age to join a stokvel. Moreover, older people start stokvels; thus, most members are likely to be old. The oldest among the participants was 69 years. Age was associated with the inability to use email, laptop, and WhatsApp technology. Age also reduced the self-efficacy of members regarding their ability to adopt technology. A focus group discussion member stated, *“We don't think technology will be easy to adopt because we are still very old people” (Participant 2/F/69).*

4.5 Challenges with Manual Procurement Processes

Most of the challenges experienced with the manual procurement process occurred at the purchase and division point. These challenges included long queues and hours of shopping, poor customer service, competition for available stock, and logistical

challenges. The study highlights challenges with the procurement process, which takes over nine months.

4.5.1 Long queues and hours of shopping

Long queues were experienced during the actual purchasing stage because all stokvels shop around the same time, making the stores full. A respondent explained;

“On the day of buying groceries, we start the day at 5 am. When we get to the shop, we split into groups to look for the items we need, We spend a long time in the shop because of the number of bulk items we buy and the lines on the till become long because of other stokvels that come buy on the same day, we can spend over 4 to 5 hours in the shop. We also have to stand a long time at the till.”
(Participant 9/F/29).

4.5.2 Poor customer service

The respondents indicated issues in their shopping process that could point to poor customer service. For instance, stokvels did not have sufficient shopping assistance. They must look for items in the retail shop for themselves. One respondent directly pointed out poor customer service;

“I have been buying at Kit Kat for a long time. They don't have good customer service. When we get there, we just have to make sure we sort ourselves out, and they don't even offer us water because the lines to get into the shop are so long.”
(Participant 10/F/67).

Aside from insufficient shopping assistance, the absence of free drinking water was also cited. Another participant indicated they must pay R2 to use the toilet. They also indicated they got an expired mayonnaise after allowing some store attendants to pack it for them.

Some participants indicated they got good service, is one whose stokvel shopped with Makro, and they had no trouble with long lines because the retailer had allocated them a manager that helped with the queue and pulling items out of the shelf, cutting off the time they would have spent moving from one shelf to another. Further, the results established

that good service is offered only to the loyal stokvels who have identified with the store's management and purchase every year.

4.5.3 Competition for available stock

The respondents indicated that items on the retail store shelves run out due to a high number of shoppers, leading to practices such as stokvels stealing others' shopping. A shopper narrated;

"We sometimes have to monitor our groceries because the other stokvels in the shop will steal your stuff due to insufficient stock by the retailer." (Participant 4 /F/53).

Because of this, a respondent indicated that those who go shopping must be leaders who can make quick decisions if an item in the list runs out of stock.

4.5.4 Logistical challenges

Most of the respondents indicated that sometimes they do not have transport. Under these circumstances, they must hire a truck to move items to a location where members can pick. The respondent explained;

"Then we share our stuff, and some people don't have transport. So, we arrange one truck to move the grocery to the local park so that members can fetch their groceries at a more convenient location." (Participant 16 /F/53).

These challenges are presented in Figure 4.7.

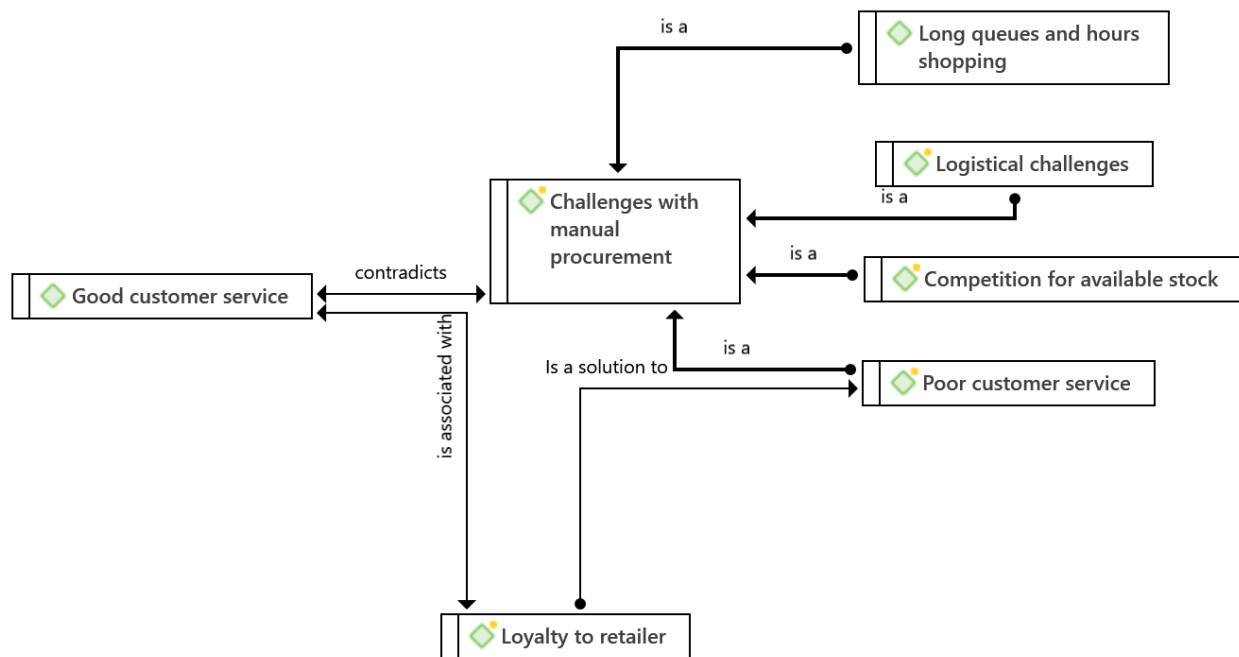


Figure 4.7: Challenges with the manual procurement

From Figure 4.7, challenges with manual procurement include long queues and hours of shopping, logistical challenges, competition for available stock and poor customer service. Some participants indicated they received good customer service, especially those loyal to a particular retailer. Loyalty was expressed through establishing a relationship with a retailer that seemed to solve poor customer service (they were assigned a salesperson/manager).

4.6 How technology could be used in running stokvels

From the Interview, some stokvels had devised ways to solve some of the challenges they faced. The solution was to devise a voucher system of procurement where each member would be given a voucher to shop on their chosen day or time and for what they felt they needed. However, the voucher system still had challenges. These included,

- Long queues because they still preferred to shop during December when other stokvels are also shopping.
- Vouchers must be spent within a day before they expire.
- Choosing the voucher means you customize your shopping list at the expense of a quantity discount.

The participants came up with recommendations that can be pursued to remedy the situation. The recommendations versus what is already available in the market are shown in Table 4.5.

Table 4.5: Summary of Challenges

Challenge	Reason	Recommendation	Currently in the market
Manual record keeping	The stokvels have low trust in computerized tools to store their data due to low education on tools.	<i>“Provide adequate training and show stokvels the benefits of storing information on cloud or computer”</i> (Participant 19/M/41)	Excel, google cloud
Logistical challenges	Stokvels do not have common transport to move their bulk groceries; each member is responsible for their movement, which adds to the bulk buying cost.	<i>“Grocery stores should offer free delivery services”</i> (Participant 9/F/29)	Retailers like Yebo Fresh already offer free deliveries for shopping above R1000.
Long queues and hours of shopping	Due to the peak period for retailers – the festive season has stokvels and regular customers flogging the retail stores. <i>Retailers have not yet streamlined their operations for the increase in demand.</i>	<i>“A stokvel app/app for bulk buying that saves time.”</i> (Participant 9/F/29) <i>“Retailers should prepare deliveries in advance.”</i> (Participant 14/F/39)	Existing apps include Checkers 60 /Makro Online

4.7 Understanding the technology retail stores use to support stokvels in their procurement process.

The participants noted that most retail stores had no technology other than a quick till. However, online retailers like Yebofresh have started adopting tools like WhatsApp to allow customers to order online. The relationship between the subthemes under the hindrances to the use of technology is shown in Figure 4.8.

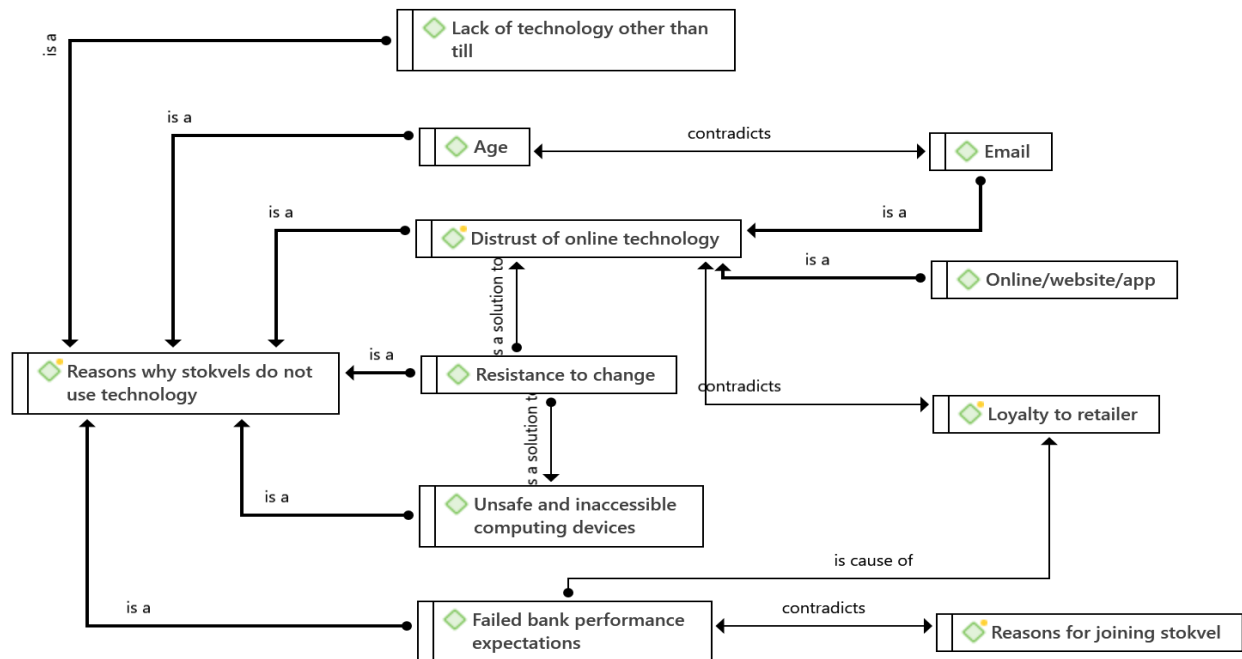


Figure 4.8: The interactions between themes and subthemes under hindrances to the use of technology

In Figure 4.8 above, the researcher identified six hindrances to the use of technology: lack of technology other than the till, age (older people unwilling to use email), distrust of online technology (email and online/website/app distrusted, but this became irrelevant if the technology is from a retailer they are loyal to), resistance to change, unsafe and inaccessible computing devices, and failed bank performance expectations (makes saving with and purchasing from a single retailer admirable while not meeting the expectations of the gains of savings). Further, preference for manual techniques (mainly the Stokvel book) was regarded as a solution for distrust of technology (the book is trusted) and a solution to unsafe and inaccessible technology (the book is kept safely in triplicates and is accessible to members).

4.8 Summary

The findings of the qualitative analysis revealed that stokvels may have several challenges with technology. However, they are willing to resolve these challenges and ensure they find a solution to their current pain points. However, there are two significant hardlines: a) loyalty to a specific retailer and b) loyalty to the stokvel book. Furthermore, stokvels have portrayed low levels of trust in the current technology related to the banking

system due to cyber theft, and they also are not happy with the high banks' charges and banking fees.

CHAPTER 5

DISCUSSION OF RESULTS

5.1 Introduction

This chapter looks at the context of introducing technology to stokvels as a reference to the observations identified in the literature of grocery stokvels. The introduction of technology is a challenge for many people, especially the marginalised people in poor communities and people unfamiliar with the benefits of technology.

5.2 How Stokvels use technology in their day-to-day operations up to procurement

The research has shown that stokvels use technology such as WhatsApp groups to communicate in their day-to-day matters. This is in line with research by Kariuki and Ofusori (2017) on WhatsApp-oriented stokvels, which is in line with the fact that WhatsApp has significantly grown in usage as a tool for stokvels. Conclusively, WhatsApp has altered considerably the stokvel landscape. However, the research identifies gaps in the use of technology in the whole procurement process for grocery stokvels, even with the active use of WhatsApp as a tool.

5.2.1 Communication

WhatsApp is mainly used to communicate meeting dates and discuss grocery stokvel financial updates. Members in the different stokvels that participated in the focus groups confirmed that members share the proof of payment of a monthly contribution in the stokvel WhatsApp group. Lukman (2020) confirms that WhatsApp helps improve the sharing of information to increase knowledge and engagement in a group (Lukman, 2020). Thus, stokvels in rural areas that may be limited in frequently meeting can benefit from using WhatsApp as a communication technology tool.

5.2.2 Banking

Focus group 4 confirmed that they had adopted digital payment methods such as EFT to deposit money into the Stokvel savings account and transfers, making it easier for members to make contributions and keep track of their finances. The findings are by reported findings by Maseng (2022) that EFT and wallets as a form of collecting money and saving create efficiency. Moreover, the use of technology in the banking sector

increased during the covid period. As stated by focus group 1, stokvel members could not host their monthly face-to-face meetings where they collect the money. It is, however, essential to report the glaring gap that exists in this banking technology for stokvels; countries like Kenya have, through their banking sector, implemented stokvel (Chama) tools that integrate both the communication and the tracking of financial activities in the Chama Application (Stanbic Bank, 2023). A Chama is a name used in Kenya for communities, friends and family that save together as a collective (WSBI Scale2Save, 2017). The Chama app was specifically developed for the group saving market. The app allows members to manage all transactions, such as invoicing, payments, deposits and withdrawals from the account. It further allows members to chat instantly amongst members in the Chama.

5.2.3 Stokvel Needs and list compilation

Dube and Pretorius (2020) concur that stokvels are not formal structures or organisations that may contribute to their day-to-day activities' maladministration. The research has shown gaps in compiling the grocery list for grocery stokvels, which could lead to inefficiencies in purchasing grocery items. The current process is manually done and prone to errors and inconsistencies, potentially wasting time and resources. 3 of the 4 focus groups indicated that they use the Stokvel book to compile the list in their respective Stokvel groups. A similar conclusion was reached by Mulaudzi (2013) that the lack of technology that can monitor the running of stokvels has limited stokvels resulting in poor governance and poorly determined benefits.

Groceries use communicative tools to share the latest payments and set up group meetings. However, they do not have a technology system to improve the procurement process's administrative elements. Implementing a digital solution for these administrative processes would improve the efficiency and accuracy of the purchasing process.

5.3 Why some stokvels do not use technology

Stokvels have been a popular form of saving money for many years but are often associated with informal or casual settings (Luthuli, 2017). The use of technology, such as online purchasing, is not common. The observation from the results shows a lack of

knowledge or skills in using technology. This observation highlights the need for education and training for Stokvel members on effectively using technology.

5.3.1 Technology tools

The findings of this study are consistent with the findings in the literature review. Members of Stokvel a mainly comprised of older women, who traditionally do not have the resources to buy computers or laptops (Lukwa et al., 2022). All the participants, except Participant(6/F/69), confirmed that they have smartphones. Participant(6/F/69) is the oldest participant in the sample. The rest of the participants confirmed they were comfortable using some of the applications on the cell phone, like WhatsApp and electronic banking apps. However, they did not see their smartphone as a tool to save critical documentation of the stokvel like the minutes of meetings and the joining forms or constitution document. This suggests that the participants did not recognise the ability of the smartphone to be a computer and therefore did not use its document capabilities to the fullest. Thus, the research cast a new light on the use of smartphones in the stokvel industry, as supported by Darko-Adjel (2019), who confirmed that smartphones could process and store these mandatory documents, which are critical for the governance of the stokvels.

5.3.2 The Knowledge and skills

The key to technology adoption is the ability and knowledge to use that technology. This is consistent with Van den Berg and Van Der Linger (2019) in their research on the mobile adoption of enterprise applications. The Technology Acceptance Model, illustrated in Figure 5.1, suggests that the perceived ease of use of technology strongly links with that technology's perceived usefulness (Van Den Berg & Van Der Lingen, 2019; Venkatesh & Davis, 2000). In the case of grocery stokvels, research indicates that their perceived use of technology in the industry and their perceived view on their understanding of technology are linked. Most participants link the use of technology as a possible inconvenience as stokvels participants highlighted the challenge of the ownership of laptops. The stokvels that use the book were comfortable with the traditional way of doing things such as writing information on a stokvel book.

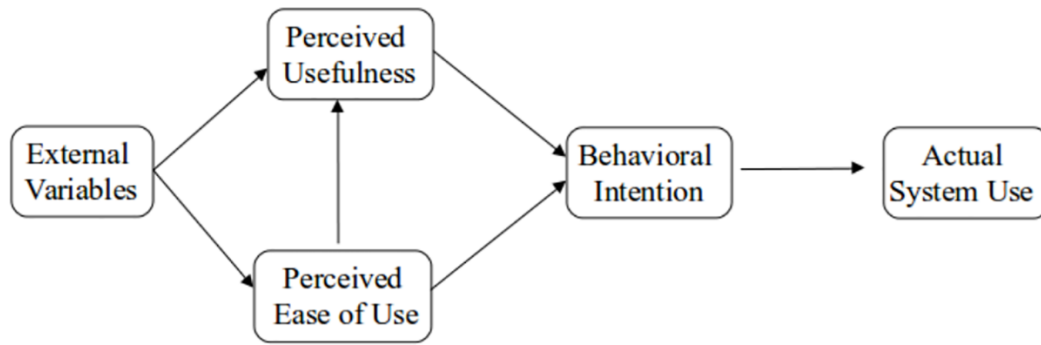


Figure 5.1: Technology Acceptance Model
Source: Chuttur (2009)

Therefore, it is vital to design and provide user-friendly technology solutions specifically tailored to meet the needs of Stokvel members, considering their level of education, language proficiency and access to data and connectivity. “It is understood that use of technology has been found to impact attitudes towards all technologies while other research works have shown the impact of ease of use on attitude towards using technology depends on the specific technology or situation” (Chuttur, 2009, p. 5 cited in Wang et al., 2013). Most participants referred to WhatsApp, which is a possible solution to the lack of technology use among Stokvel members. However, the stokvel member also showed concern about the ease of use of the technology that could assist with document management and technology that could be seen to integrate the whole procurement process, from compiling the demand through the list to the procurement process.

In conclusion, Stokvels have been a traditional way of saving money for groceries. Therefore, members need to embrace the use of technology to improve their financial management, procurement and overall effectiveness

5.3.3 Resistance to change

It emerged in the research that participants indicated they trusted the current way of doing things. Furthermore, it would be uncomfortable to change the status quo. They made statements insinuating they were mainly resistant to adopting new technology (for record-keeping) because they only knew the manual process (the Stokvel book). As part of the research, one conducted a frequency analysis on the code resistance to change. A word

This resistance to technology among Stokvel members is understandable. However, it is essential to recognise that the use of technology can significantly improve the efficiency and effectiveness of Stokvels, making it easier to manage finances, communicate and collaborate. Stokvel members perceived using technology such as a laptop or apps as challenging; thus, they prefer manually capturing information. Therefore, providing education and training on using technology for Stokvels and addressing members' concerns and fears about using technology is crucial.

5.4 Exploring manual process challenges experienced by stokvels in the townships and rural areas in Gauteng

Stokvels in Gauteng face challenges that hinder their prosperity, such as limited technology literacy and a lack of proper governance structures. The current procurement process predominantly uses WhatsApp as a key technology to communicate and manage financial transactions. However, the use of WhatsApp does not form an integrated system that manages the whole process from the identification of needs of the grocery stokvel, the accessing and selection of vendors through quote evaluation and negotiation of reasonable pricing and lastly, the ordering and receiving of groceries that have been purchased from specific retailers.

5.4.1 Vendor selection based on the best value for money

Stokvels have technology challenges in some procurement steps, making the procurement more susceptible to errors and manual processing. The challenges in accessing and selecting vendors through quote evaluation and pricing negotiation are amplified when stokvel members have limited technology literacy. The focus groups indicated that this process is currently done by sending a Stokvel representative to get a quote from retailers they have used before. These results prove that stokvels do not have a tool to evaluate market pricing comprehensively. These results have supported the gap in satisfying the selection of vendors who could provide the much-needed benefits to stokvels by submitting competitive bids. Namin and Dehdashti (2019) affirm that customers are more interested in the price of goods when buying groceries. The lack of competitive goods limits these stokvels from getting the best value for money. Additionally, the selection of suppliers must address the objectives that meet the grocery

stokvels needs and mandate buying in bulk, leading to savings and better value for money.

5.4.2 Price Negotiation

Negotiation of pricing leads to fairness and added advantage for the grocery stokvel in the procurement process. Currently, WhatsApp makes it difficult to negotiate prices with vendors, as communication is often a one-way process. This is consistent with the research by Skenjane (2015), who confirms that retailers do not provide the needed help or interaction with stokvels. Stokvels do not initiate a negotiation with the retailers; they only get quotes from the retailers and do not push back on the quotes received. Stokvels have indicated that they do not have a negotiation with retailers; however, they assume they get the best pricing. This assumption is not validated or confirmed. Grocery Stokvels can benefit from technology that supports negotiation and comparing prices, ultimately leading to better deals for their members. Therefore, implementing technology solutions that facilitate vendor selection, negotiation of pricing, and comparison shopping would improve the procurement process for grocery stokvels by providing a structured and transparent process which ensures that the stokvels receive fair pricing and better value for money.

In conclusion, incorporating technology solutions in the procurement process for grocery stokvels can optimise and streamline vendor selection, pricing negotiation, and comparison shopping.

5.5 How technology can be used to improve the running of stokvels

The result of the research found clear support for Peris-Ortiz et al. (2020) that technology is an enabler to most business models; thus, technology can be considered to improve the procurement of grocery stokvels.

- From the results, the reduction of delay and longtime experienced by stokvels during the procurement process, as discussed by Dube and Pretorius (2020) in their research, can be improved by introducing automation. Automating the ordering process- allowing stokvels to compile the grocery list electronically, sending requests for quoting and price comparing must be done electronically. This will result in reduced procurement time. Furthermore, the effort required to secure quotes will be optimised as there will be no need to send a team of two or

three members to the retailer but instead send an email or request on an online procurement app. The research conforms with previous studies wherein Khan et al. (2013) confirms that order processing automation can give organisations such as stokvels more control and oversight on their procurement process.

- The basic findings of this research are consistent with Oziom's (2019) research on the retail influence on the customer. Participants in the focus groups highlighted the shortage of products and retailers not having sufficient stock during the December period. This can be improved by ensuring accuracy. Stock Management, when having an integrated view of stokvel demand, the retailers can track their inventory availability more effectively. Moreover, ensure items are not out-stocked or that they do not over-stock items that will end up expired.
- Cost Savings: Technology can help identify the best prices and deals for bulk groceries, resulting in cost savings for grocery stores. Using an integrated platform can help stokvels source quotes from different retailers and aggregate them, and compare pricing for the best value for money.
- Notably, customer satisfaction is an essential factor in procuring groceries in a retail environment, and this is confirmed by the research by Lappeman et al. (2019) and Ahluwalia et al. (2013). Focus group 3 from Atteridgeville has highlighted that retailers do not provide adequate service levels during buying day. This can be improved by introducing technology platforms like WhatsApp to give feedback on customer satisfaction, complaints, and retention rates. If the technology has improved customer support, customer service and satisfaction should be improved.

Ensuring the effectiveness of technology in improving the procurement of bulk groceries involves improved efficiency, cost savings, accuracy, and customer satisfaction. Ensuring these key areas are core to introducing technology in the grocery stokvel industry will directly impact the procurement process and result in improvement. Overall, the use of technology in stokvels is still in its infancy, and this sector has much potential for innovation and growth.

5.6 Understanding the technology retail stores use to support stokvels in their procurement process

Stokvels have been a significant part of South African culture for many years. As such, implementing procurement technology at retail facilities that caters specifically to the needs of stokvels has become increasingly important in ensuring effective and efficient management of their purchases. This technology would allow stokvels to easily track their purchases, access discounts and customise orders based on collective preferences. Furthermore, this procurement technology would not only benefit stokvels but also help to stimulate the local economy by supporting small businesses and encouraging the consumption of locally sourced products. The research has confirmed that the retailers that offer bulk groceries to Stokvels have moved to online service offerings to ordinary customers as approved; however, retailers do not promote the same service for group buying clients such as Stokvels. Retailers have programs such as the Izandla Ziyagezana program, buy one of the biggest retailers in the country (Makro, 2023). Stokvels have shown that they have an advanced grasp of WhatsApp, providing an opportunity for retailers to explore the use of WhatsApp for Stokvel procurement.

Furthermore, using an online portal designed explicitly for stokvel procurement could be a valuable addition to the technology landscape for retailers in South Africa. Feedback from the interview with Retailer 1 showed that technology tools such as WhatsApp are already in Gauteng's townships and rural areas. The Retailer currently supports its bulk buying clients for spaza shops in the township through WhatsApp (YeboFresh, 2023). Although the use of technology in stokvel procurement at retail facilities is still in its infancy, it can revolutionise how stokvel.

5.7 Summary

Achieving technology adoption in the procurement process involves creating an online ordering and delivery system that brings together major retail stores to facilitate price comparisons, purchases, deliveries, and returns. Moreover, the system could integrate with current technologies known, trusted, and used by stokvels such as WhatsApp and establish a call centre to offer the human touch. Rather than adopting a full-fledged online

procurement service, it could be in modules, where stokvels can choose to use parts of the system they are most comfortable with.

CHAPTER 6

CONCLUSIONS AND RECOMMENDATIONS

6.1 Introduction

This chapter summarises the research, highlighting each chapter in the report and drawing conclusions based on the findings. As per the Grocery Stokvel Research, the chapters have covered various aspects of stokvels and their behaviours towards grocery shopping. It will further conclude the research and share answers to the research questions. Lastly, it will provide recommendations and possible topics for future research studies.

6.2 Summary of Research

The study investigates the use of technology to improve stokvels' grocery procurement. Chapter one focused on the introduction, contextual details, and background of the Grocery Stokvel in South Africa business model. Furthermore, it outlines the importance of this research in the context of the number of people in Gauteng that are part of the grocery stokvel and their valuable contribution to the FMCG industry based on the amount of money spent annually buying bulk groceries. The research answers the five research questions to explore how technology can improve the procurement of grocery stokvels. The study identified the current use of technology in stokvels, why some stokvels do not use technology, the benefits of using technology, recommendations for improving technology adoption in stokvel grocery procurement and lastly, the use of technology by retailers. Chapter two explores other studies of work done in the Grocery Stokvel research and highlights the latest developments in grocery procurement by customers and the use of technology. The chapter compares the use of technology in bulk buying in countries such as China through a community group buying business model and that of stokvels in South Africa. Furthermore, the link to previously disadvantaged communities, especially elderly black woman, become a base for the traits of stokvel demographics in South Africa. Lastly, its analysis of the current challenges and problems from historical research, such as the retail contribution to the stokvel industry and their customer service levels.

The research methodology was detailed in Chapter 3 based on a qualitative approach to phenomenological methodology. The methodology focuses on understanding the procurement process experience from the stokvel member and getting their point of view. The population and sample were based on the stokvel industry in South Africa, with 17% of the stokvel groups being based in Gauteng and over 2000 of those being grocery stokvels. The data collection method was through interviews with focus groups, and later, the data collected was tested and triangulated through the interviews of two retailers. Ethical consideration was entrenched through collecting the data by getting consent from all participants.

Chapter 4 represents the results. Data were coded into themes through an analytical tool called *Atlas—ti* (Version 22). The results allowed for the views and input of the participants to be well documented and summarised per the research questions. This is followed by chapter five, which discusses the results in depth and confirms the findings to the literature in the chapter. Lastly, the research provides a conclusion and recommissions to key stakeholders that will benefit and be informed about the use of technology to improve the procurement process in the stokvel industry. These stakeholders are not limited to the stokvel members but also the nation's structure and government. The research proposes possible future studies that can provide better knowledge in studying stokvels and their impact on ordinary South African lives and the local township economy.

6.3 Conclusions

6.3.1 Assessing the extent to which stokvels use technology.

The study has provided valuable insight into stokvels' use of technology. The research showed that stokvels use WhatsApp extensively, and all 22 participants confirmed they have smartphones. This is confirmed by a study from multiple researchers (Kariuki & Ofusori, 2017; Lukman, 2020; Malaudzi, 2013; Ntloedibe, 2020). Furthermore, 15 of the 23 participants confirmed they use EFT to deposit their money in the bank. However, even with these current tools used by grocery stokvel, they are gaps in ensuring these technologies improve the procurement process of grocery stokvels. Compiling the grocery list digitally and sharing it with retailers online could streamline the process, resulting in more efficient and accurate purchasing of grocery items, ultimately saving time and reducing costs for the stokvel (Shukla & Sharma, 2018).

Furthermore, this will allow stokvels to send their requirements to retail stores for quotation purposes electronically. The benefits of a consolidated electronic list could also provide valuable data insights to retailers about the purchasing habits and preferences of the stokvel members. For grocery stokvels, it could offer the opportunity to negotiate better prices and discounts from retailers, leading to even more cost savings for the members (Paranikas et al., 2015).

6.3.2 Determined why some stokvels do not use technology.

The reason that some stokvels do not use technology is due to the level of trust that stokvels have in the current technologies that they utilise. In particular, one participant noted the high level of scams that banks experience. This lack of trust is also course by the culture and nature of stokvel, which are social structures and technology that could create a barrier to social cohesion. Based on the feedback from 2 of the 4 stokvels that do not use Google Drive or EFTs, the participants' concern was the own ship of the technology tool and the safekeeping of their information. Furthermore, the older participants realised the issue of skills and knowledge as a barrier as they are old and may have challenges learning how to use these technologies.

6.3.3 The challenges and problems experienced by stokvels in the townships and rural areas in Gauteng because of the manual process

The research identified challenges that stokvels face with the current process:

- Lack of flexibility on brand and quantity preference- The current process does not allow stokvel members to have flexibility on the brands and quantities of groceries they want. Furthermore, it limits the group from being able to conduct data analysis on the brands, grocery types and quantities that are in demand among members.
- Lack of negotiation by different retailers- almost no negotiation occurs between Stokvel and retailers, the stokvels are price takers, and they trust the retailer to offer them the best value for money. All four focus groups confirmed that the physical process of acquiring quotes made it challenging to go to multiple retailers to compare prices. Therefore, they would stick to one specific retailer based on previous experience of buying groceries in the previous year or cycle.

Technology can streamline procurement by providing a more structured way of selecting vendors by accessing online platforms such as websites or apps that consolidate retailer

offerings. Additionally, retailers can create plugs-in on WhatsApp that can share what is being offered to stokvels to evaluate groceries on offer.

6.3.4 Illustrated technology that could be used to improve the running of the stokvel

Technology can revolutionize the procurement of grocery stokvels by increasing efficiency and transparency, reducing costs and errors, and improving the shopping experience for stokvel members. The research on other countries like Kenya indicates that technology can make the lives of stokvels easy. Stanbic in Kenya has provided such technology through its banking app. This platform is the right step in providing integrated technology for group-based saving groups.

6.3.5 Retail stores' technology use to support stokvels in their procurement processes

To improve customer experience, retailers must establish a system for stokvels that will help identify stock on hand and the availability of products and provide real-time updates on pricing, promotions, and discounts. This would not only help Stokvels to make informed purchasing decisions but will also improve the overall shopping experience for Stokvel members.

While implementing stokvel procurement technology at retail facilities would require a significant investment, its long-term benefits for both stokvels and local businesses make it worthwhile for retailers, banking, and technology companies in South Africa.

6.4 Recommendations

6.4.1 Obtain the necessary training on technology that can improve procurement processes

Stokvels must endeavour to introduce more technology tools in their daily running of grocery procuring. Stokvels must invest in training and skills development for their members. The grocery stokvels have older women and members from lower LSM communities. This creates a barrier to the education level of members and thus results in low levels of technology adoption and education. The fear of using technology has

resulted in delayed adoption of available platforms, such as online ordering, which would have reduced time for physically going to the retail store.

Furthermore, the grocery stokvel must adopt technologies to help consolidate their needs and provide a platform to negotiate better pricing from different retailers. Technology will also reduce the risk of information being stored in a book. Technology such as Google platforms can consolidate minutes of meetings and spreadsheets to manage financial contributions while sharing accessibility to all members to have the information at their fingertips.

6.4.2 Develop integrated grocery stokvel technology

The banking sector and the retail sector benefit substantially from this stokvel industry. They have kept their interactions with stokvels at a basic minimum. The banking sector has created stokvel accounts; however, these accounts have limitations, such as online transactions. For stokvels to access their money, they need to go into a branch with more than one member to access services such as transferring funds from the account to the retail stores. Banks have the resource and capabilities to significantly improve the procurement process for grocery stokvels. Both sectors must pump in substantial investment into creating the technology solutions.

6.4.3 Regulation of stokvels

The NASASA, as a recognised institution by the national treasury, must elevate its role as the custodian and the national database of all stokvels, which must be legislated. This will help keep a track record of all stokvels, which will help with the statistics of the stokvel industry. Research by stokvels has been known to contribute to community development, including support for micro-entrepreneurs and employment creation. There are over 11 million Stokvel members in South Africa, representing 20% of the population- Gauteng government must develop a more solid policy framework that will help strengthen stokvels activities and contribute to the township economy. This framework will help stokvels formalise the structure as an economic contributor to small businesses and further ensure food stability in their poor communities.

6.5 Future Research

The impact of wholesalers and retailers is significant in how technology can achieve efficient customer procurement processes. Thus, future studies must be done on retailers' use of technology, the level at which this technology has made the procurement smooth for stokvels and whether stokvels derive the value of competitive prices and discounts from these retailers.

A study could be conducted on how WhatsApp can be adapted for procurement activities. The study must focus on the accessibility of the app and the availability and cost of data for poor communities. Furthermore, the analysis must consider adapting the App to the local native languages to reduce the barrier to entry as a form of technology - considering that stokvel members were not confident about the use of technology in the current process due to a lack of skill and knowledge of technology.

Future studies could also focus on investigating the ability of Stokvel to buy directly from manufacturing companies and the potential to reduce the cost of goods and benefit the Stokvel members.

References

- African Response Research. (2012). *Stokvels - A hidden economy*. African Response Research. Accessed May 12 2022, from <http://www.africanresponse.co.za/assets/press/2012StokvelHiddenEconomy.pdf%0Ahttp://www.africanresponse.co.za/PressReleases/Documents/2012StokvelHiddenEconomy.pdf>
- Ahluwalia, P., Hughes, J., & Midha, V. (2013). Drivers of e-retailer peak sales period price behaviour: An empirical analysis. *International Journal of Accounting and Information Management*, 21(1), 72–90. doi.org/10.1108/18347641311299759
- Aiolfi, S., & Bellini, S. (2019). Using Mobile Applications: A Model of Technology Adoption in the Grocery Setting. *International Journal of Business and Management*, 14(12), 42. <https://doi.org/10.5539/ijbm.v14n12p42>
- Arksey, H., & Knight, P. T. (1999). *Interviewing for social scientists: An introductory resource with examples*. New York: Sage.
- Bhattacharjee, A. (2012). *Social Science Research: principles, methods, and Practices*. Florida: Creative Commons, University of South Florida. Retrieved from http://scholarcommons.usf.edu/cgi/viewcontent.cgi?article=1002&context=oa_textbooks
- Booyesen, J. (2016). *PnP Partners with Stokvel Group*. Accessed May 12 2022, from <https://www.iol.co.za/business-report/companies/pnp-partners-with-stokvel-group-1978633>
- Bophela, M., & Khumalo, N. (2019). The role of stokvels in South Africa: A case of economic transformation of a municipality. *Problems and Perspectives in Management*, 17(4), 26–37. [https://doi.org/10.21511/ppm.17\(4\).2019.03](https://doi.org/10.21511/ppm.17(4).2019.03)
- Burney, S. M., & Saleem, H. (2008). *Inductive & Deductive Research Approach*. Karachi: Faculty of Arts and Science, University of Karachi.
- Cambridge Business English Dictionary. (2022). *Cambridge Dictionary*. Cambridge: Cambridge University Press. Retrieved from <https://dictionary.cambridge.org/dictionary/english/bulk-buying>
- Chuttur, M. (2009). Overview of the Technology Acceptance Model: Origins, Developments and Future Directions. *Association for Information Systems AIS Electronic Library (AISeL)*, 9(37), 1-23. Retrieved from <https://www.researchgate.net/publication/277766395>
- Cooper, D. ., Schindler, P., & Sun, J. (2006). *Business Research Methods* (Vol 9). London: Sage Publications.
- Creswell. (2009). *Research Design Qualitative, Quantitative, and Mixed Methods Approaches* (3rd Ed.). London: Sage Publications.

- Creswell, J. (2007). Five Approaches to Inquiry. In *Qualitative Inquiry & Research Design* (pp. 53–84). Retrieved from http://www.sxf.uevora.pt/wp-content/uploads/2013/03/Creswell_2007.pdf
- Creswell, J. (2014). *Research Design* (4th Ed.). London: Sage Publications.
- Darko-Adjei, N. (2019). The use and effect of smartphones in students' learning activities: Evidence from the University of Ghana, Legon. *Library Philosophy and Practice*, 2851(1), 1-38.
- Dube, N., & Pretorius, E. (2020). The Linkage between Formal and Informal Social Security Systems: The Views of Stokvels in Soweto South Africa. *Liber Amicorum: Essays in Honour of Professor Edwell Kaseke and Dr Mathias Nyenti, December*, 173–185. <https://doi.org/10.18820/9781928480839/13>
- Dudovskiy, J. (2022). The Ultimate Guide to Writing a Dissertation in Business Studies: A Step-by-Step Assistance (6th Ed.). In *Interpretivism (interpretivist) Research Philosophy* (pp. 4–6). Retrieved from <https://research-methodology.net/research-philosophy/interpretivism/>
- Forero, R., Nahidi, S., De Costa, J., Mohsin, M., Fitzgerald, G., Gibson, N., ... & Aboagye-Sarfo, P. (2018). Application of four-dimension criteria to assess the rigour of qualitative research in emergency medicine. *BMC Health Services Research*, 18(1), 1-11.
- Frimpong, J. M., Andoh-Baidoo, F. K., & Asamoah, D. (2020). The association between institutional absorptive capacity, electronic procurement assimilation and procurement process in public sector organizations. *Proceedings of the Annual Hawaii International Conference on System Sciences, 2020-January*, 2208–2217. <https://doi.org/10.24251/hicss.2020.270>
- Gagliardi, A. R., Boyd, J. M., Evans, D., Gerein, L., Nathens, A., & Stelfox, H. T. (2014). Establishing components of high-quality injury care: focus groups with patients and patient families. *Journal of Trauma and Acute Care Surgery*, 77(5), 749-756.
- Groenewald, T. (2004). A Phenomenological Research Design Illustrated. *International Journal of Qualitative Methods*, 3(1), 42–55. <https://doi.org/10.1177/160940690400300104>
- Groenewald, T. (2004). A Phenomenological Research Design Illustrated. *International Journal of Qualitative Methods*, 3(1), 42–55. <https://doi.org/10.1177/160940690400300104>
- Groenewald, Y. (2017). *R49bn stokvel economy could be a powerful investment tool*. Fin24. Accessed July 2 2022, from <https://www.news24.com/fin24/savings/news/r49bn-stokvel-economy-could-be-powerful-investment-tool-20170704>
- Gwagwa, A., Kazim, E., & Hilliard, A. (2022). The role of the African value of Ubuntu in global AI inclusion discourse: A normative ethics perspective. *Patterns*, 3(4), 100462. <https://doi.org/10.1016/j.patter.2022.100462>

- Hallikas, J., Immonen, M., & Brax, S. (2021). Digitalizing procurement: the impact of data analytics on supply chain performance. *Supply Chain Management*, 26(5), 629–646. <https://doi.org/10.1108/SCM-05-2020-0201>
- Hesse-Biber, S. N., & Leavy, P. (2009). Handbook of emergent methods. In *Choice Reviews Online* (Vol. 46, Issue 06). Retrieved from <https://doi.org/10.5860/choice.46-3325>
- Irving, M. (2005). Informal savings groups in South Africa: Investing in social capital. In *CSSR Working Paper* (Issue 112). Cape Town: University of Cape Town.
- Jenkins, A. (2021). What Is Procurement? Types, Processes & Technology. *Pridobljeno*, 12(1), 2022.
- Jones, P., Chalmers, L., Wells, S., Ameratunga, S., Carswell, P., Ashton, T., ... & Tenbenschel, T. (2012). Implementing performance improvement in New Zealand emergency departments: six-hour target policy national research project protocol. *BMC health services research*, 12(1), 1-11. <https://doi.org/10.1186/1472-6963-12-45>
- Kabuya, F. I. (2015). The Rotating Savings and Credit Associations (ROSCAs): Unregistered Sources Of Credit in Local Communities. *IOSR Journal Of Humanities And Social Science*, 20(8), 95–98. <https://doi.org/10.9790/0837-20849598>
- Kariuki, P., & Ofusori, L. O. (2017). WhatsApp-operated stokvels promoting youth entrepreneurship in Durban, South Africa: Experiences of young entrepreneurs. *ACM International Conference Proceeding Series, Part F1280*, 253–259. <https://doi.org/10.1145/3047273.3047397>
- Khan, M. R., Hasan, A., Ray, S. K., Saha, A., & Abdul, A. B. M. (2013). Autonomous Order Processing System for Supply Chain Management-An Initiative to Match Demand and Supply for Processed Food Industries in Bangladesh. *International Journal of Modern Engineering Research (IJMER)*, 3(6), 3348-3358.
- Korstjens, I., & Moser, A. (2018). Series: Practical guidance to qualitative research. Part 4: Trustworthiness and publishing. *European Journal of General Practice*, 24(1), 120–124. <https://doi.org/10.1080/13814788.2017.1375092>
- Lappeman, J., Chigada, J. M., Pillay, P., Lappeman, J., Chigada, J. M., & Pillay, P. (2019). Modifying Monthly Household Expenditure Allocations: an Exploration of South African Bop Consumers. *Journal of Consumer Sciences*, 47(0), 51–70.
- Lappeman, J., Litkie, J., Bramdaw, S., & Quibell, A. (2020). Exploring retail-orientated rotating savings and credit associations: festive season ‘stokvels’ in South Africa. *International Review of Retail, Distribution and Consumer Research*, 30(3), 331–358. <https://doi.org/10.1080/09593969.2019.1667853>
- Leedy, P. D., & Ormrod, J. E. (2015). Defining endoscopic remission in ileocolonic Crohn’s disease: Let’s start from scratch. *Journal of Crohn’s and Colitis*, 12(10), 1245-1248. <https://doi.org/10.1093/ecco-jcc/jjy097>

- Lorentz, H., Aminoff, A., Kaipia, R., & Srai, J. S. (2021). Structuring the phenomenon of procurement digitalisation: contexts, interventions and mechanisms. *International Journal of Operations and Production Management*, 41(2), 157–192. <https://doi.org/10.1108/IJOPM-03-2020-0150>
- Lukman, S. (2020). *Understanding the Importance of WhatsApp Group and How Indonesian Students Utilize the Platform in Australia*. Retrieved from <https://doi.org/10.4108/eai.9-10-2019.2291114>
- Lukwa, A. T., Odunitan-Wayas, F., Lambert, E. V., & Alaba, O. (2022). Can Informal Savings Groups Promote Food Security and Social, Economic and Health Transformations, Especially among Women in Urban Sub-Saharan Africa: A Narrative Systematic Review. *Sustainability (Switzerland)*, 14(6), 1–26. <https://doi.org/10.3390/su14063153>
- Luthuli, S. N. (2017). *Stokvel groups as a poverty reduction strategy in rural communities: A case of uMlalazi Municipality, KwaZulu-Natal*. (Doctoral dissertation). Durban: University of KwaZulu-Natal.
- Makhitha, K. M., Khumalo, N. M., Makhitha, -Prof KM, & Khumalo, -Miss NM. (2019). the Influence of Supermarket Attributes on Consumer Selection of a Supermarket: a South African Perspective. *Journal of Consumer Sciences*, 47(1), 14–27.
- Makro. (2023). *Izandla Ziyagezana- makro Stokvels*. Print and Paper Monthly. Retrieved from https://doi.org/10.1176/pn.46.8.psychnews_46_08_8_4
- Malaudzi, R. (2013). *From Consumers to Investors: an investigation into the Character and Nature of Stokvels in South Africa's Urban, peri-urban and rural centres using a phenomenological approach* (Master's thesis). Cape Town: University of Cape Town.
- Margaret, N., & Ngqinani, P. (2020). *Understanding the Living Standards Measure Segmentation in South Africa*. Accessed June 12 2022, from <https://www.fas.usda.gov/data/south-africa-understanding-living-standards-measure-segmentation-south-africa>
- Marvasti, A. (2018). Research methods. *The Cambridge Handbook of Social Problems*, 1(3), 23–37. <https://doi.org/10.1017/9781108656184.003>
- Maseng, J. O. (2022). Stokvels, Social Cohesion and Cyber Platforms in Post-Apartheid South Africa. *African Renaissance*, 19(1), 297–310. <https://doi.org/10.31920/2516-5305/2022/19n1a14>
- Mashigo, P., & Schoeman, C. (2012). Stokvels as an instrument and channel to extend credit to poor households in South Africa. *Journal of Economic and Financial Sciences*, 5(1), 49–62. <https://doi.org/10.4102/jef.v5i1.305>
- Matuku, S., & Kaseke, E. (2014). The role of stokvels in improving people's lives: The case in orange farm, Johannesburg, South Africa. *Social Work (South Africa)*, 50(4), 504–515. <https://doi.org/10.15270/50-4-388>

- Menze, A., & Tsibolane, P. (2019). Online Stokvels : the Use of Social Media By the Marginalized. *CONF-IRM 2019 Proceedings*, 26(1), 1-13.
- Mfeti, T. (2012). *Stokvels : The power of a collective*. Accessed June 12 2022, from <https://www.cnbcafrica.com/2017/stokvels-power-collective/>
- Mfeti, T. (2017). *Stokvels : The Power of a Collective*. Accessed June 10 2022, from 08/<https://www.glacier.co.za/mediacentre/media-category/media-releases/Stokvels>
- Moliea, H. (2007). *Stokvels as Alternative Microfinance Institutions: Conversations with Women from Venda*. Pretoria: University of Pretoria. Retrieved from <http://www.repository.up.ac.za/bitstream/handle/2263/23463/dissertation.pdf?sequence=1>
- Momani, A. M. (2020). The Unified Theory of Acceptance and Use of Technology. *International Journal of Sociotechnology and Knowledge Development*, 12(3), 79–98. <https://doi.org/10.4018/ijskd.2020070105>
- Naidoo, M. (2021, December). *Stokvels*. Accessed June 10 2022, from <https://finansies.solidariteit.co.za/en/stokvel/>
- Namin, A., & Dehdashti, Y. (2019). A “hidden” side of consumer grocery shopping choice. *Journal of Retailing and Consumer Services*, 48(2), 16–27. <https://doi.org/10.1016/j.jretconser.2019.01.009>
- NASASA. (2020). *Statement on Measures to Prevent COVID-19 Coronavirus Transmission*. Accessed August 9 2022, from Nasasa _ National Stokvel Association of South Africa. <https://nasasa.co.za/>
- Nhamo, L., Rwizi, L., Mpandeli, S.... & Mabhaudhi, T.. (2021). Urban nexus and transformative pathways towards a resilient Gauteng City-Region, South Africa. *Cities*, 116(1). 103266. [10.1016/j.cities.2021.103266](https://doi.org/10.1016/j.cities.2021.103266).
- Nkambule, N., & Mohammed, M. (2019). *Stokvels: An Instrument for Income Generation and Wealth Creation?* Accessed March 19 2022, from <https://www.africaportal.org/publications/stokvels-instrument-income-generation-and-wealth-creation/>
- Ntloedibe, M. (2020). *Food Processing Ingredients Post*. Market Fact Sheet : South Africa. Pretoria: United States Department of Agriculture.
- Nyumba, T., Wilson, K., Derrick, C. J., & Mukherjee, N. (2018). The use of focus group discussion methodology: Insights from two decades of application in conservation. *Methods in Ecology and Evolution*, 9(1), 20–32. <https://doi.org/10.1111/2041-210X.12860>
- Ojah, K., & Mokoaleli-Mokoteli, T. (2010). Possible effective financing models for entrepreneurship in South Africa: Guides from microfinance and venture capital finance. *The African Finance Journal*, 12(1), 1–26. http://reference.sabinet.co.za.ezproxy.uct.ac.za/webx/access/electronic_journals/finj/finj_v12_n1_a1.pdf

- Olivier, M., Kaseke, E., & L, M. (2008). Informal Social Security in Southern Africa. *SASPEN and FES International Conference on Social Protection for Those Working Informally*, September 1–8.
- Oziom, M. C. M. (2019). *Enhancing the in-store grocery shopping experience through a context-aware smartphone application* (Master's Thesis). Wien: Technische Universität Wien.
- Pantano, E., Pizzi, G., Bilotta, E., & Pantano, P. (2021). Enhancing store layout decisions with agent-based simulations of consumers' density. *Expert Systems with Applications*, 182(1), 115231. <https://doi.org/10.1016/j.eswa.2021.115231>
- Peris-Ortiz, M., Devece, C., & Hikkerova, L. (2020). Empirical Analysis. *Dynamic Macroeconomic Models in Emerging Market Economies*, 37(1), 193–265. https://doi.org/10.1007/978-981-15-4588-7_12
- Pogorelova, E. V., Yakhneeva, I. V., Agafonova, A. N., & Prokubovskaya, A. O. (2016). Marketing mix for e-commerce. *International Journal of Environmental and Science Education*, 11(14), 6744–6759.
- Schulze, W. G. (1997). *The Origin and Legal Nature of the Stokvel (Part 1)*. New York: HeinOnline.
- Seretse, M., Chukwuere, J., Lubbe, S., & Klopper, R. (2018). Problems around accessing information in rural communities. *Alternation Journal*, 25(1), 214–244. <https://doi.org/10.29086/2519-5476/2018/v25n1a10>
- Shingirirayi, M., & Robertson, T. K. (2021). Sustaining Grocery Stokvels: the Dynamics and Factors That Influence Their Establishment. *Business Excellence and Management*, 11(2), 69–86. <https://doi.org/10.24818/beman/2021.11.2-05>
- Skenjana, B. (2015). *Tips for stokvels in bulk- grocery-buying season*. Accessed November 19 2022, from <https://www.news24.com/drum/News/tips-for-stokvels-in-the-bulk-grocery-buying-season-20170728>
- Slade, K. (2011). *Stokvels are here to stay: African Response Tells the Story of the Stokvel*. Accessed March 19 2022, from <https://www.insurancechat.co.za/2011-11/research-reveals-stokvels-are-here-to-stay-in-south-africa/>
- Soiferman, L. K. (2010). *Inductive and Deductive Research Approaches*. Manitoba: University of Manitoba.
- Stanbic Bank. (2023). *Stanbic Chama App Guidelines*. Nairobi: Kenya Stanbic Bank.
- Stieglitz, S., & Ross, B. (2022). The Impact of Social Media on Social Activism. *Proceedings of the 2021 International Conference on Social Development and Media Communication (SDMC)*, 631(2), 104–107. <https://doi.org/10.2991/assehr.k.220105.174>
- University of Nottingham. (2023). *Two traditional research paradigms*. Accessed November 19 2022, from <https://www.nottingham.ac.uk/helmopen/rlos/research->

evidence-based-practice/designing-research/types-of-study/understanding-pragmatic-research/section02.html#:~:text=Interpretive approaches rely on questioning, qualitative methods of data collection.

- Van Den Berg, J., & Van Der Lingen, E. (2019). An empirical study of the factors affecting the adoption of mobile enterprise applications. *South African Journal of Industrial Engineering*, 30(1), 124–146. <https://doi.org/10.7166/30-1-1992>
- Venkatesh, V., & Davis, F. D. (2000). A theoretical extension of the technology acceptance model: Four longitudinal field studies. *Management Science*, 46(2), 186-204.
- Venkatesh, V., Thong, J. Y., & Xu, X. (2012). Consumer acceptance and use of information technology: extending the unified theory of acceptance and use of technology. *MIS Quarterly* 36(1), 157-178.
- Verhoef, G. (2001). Informal Financial Service Institutions for Survival: African Women and Stokvels in Urban South Africa, 1930–1998. *Enterprise and Society*, 2(2), 259–296. <https://doi.org/10.1093/es/2.2.259>
- Wang, J. J., Zhao, X., & Li, J. J. (2013). Group buying: A strategic form of consumer collective. *Journal of Retailing*, 89(3), 338–351. <https://doi.org/10.1016/j.jretai.2013.03.001>
- Wani, S. R., & Edu, M. A. (2017). Edu/Research Methodology/Sampling. *Population and Sample*, 1(1), 1-7.
- World Bank Group. (2020). *Poverty & Equity Brief: South Africa*. Accessed October 14 2022, from www.worldbank.org/poverty
- WSBI Scale2Save. (2017). *Saving together in Kenya*. Nairobi: M-Chama.
- YeboFresh. (2023). *Yebo Fresh (“YF”) is an award-winning e-commerce platform*. Accessed November 19 2022, from <https://www.yebofresh.co.za/about>
- Ying, H., Ji, H., Shi, X., & Wang, X. (2022). A trust model for consumer conversion in community-based group buying: the dual roles of group leaders. *Modern Supply Chain Research and Applications*. <https://doi.org/10.1108/mscra-01-2022-0004>
- Zhang, G., Shang, J., & Yildirim, P. (2016). Optimal pricing for group buying with network effects. *Omega (United Kingdom)*, 63(1), 69–82. <https://doi.org/10.1016/j.omega.2015.10.003>
- Zondi, M. D. (2016). *The linkages between informal savings and credit mechanisms (stokvels) and commercial banks*. Accessed July 1 2022, from https://researchspace.ukzn.ac.za/bitstream/handle/10413/15825/Zondi_Meluleki_Derick_2016.pdf?sequence=1&isAllowed=y

Appendix 1: Cover Letter to participating organisations

My name is Ntombimpela Twala Nong, and I am a student at Wits Business School studying Master of Business Administration (MBA). As part of my studies, I seek to investigate **“The use of technology to improve the procurement process of grocery stokvels.”** The research will contribute to the township economy and ensure South African businesses adapt to innovative technologies.

For purposes of study data collection, I will require input and support from representatives of Grocery Stokvels. The survey should take approximately 10 minutes, and your contributions would be highly appreciated. The survey can be accessed using the below link:

There is an available hardcopy survey should you wish to fill in a hard copy. Do not hesitate to get in touch with me for the hard copy survey.: 1145412@students.wits.ac.za _

Information from the survey will be used for academic purposes only. Responses will be completely confidential and anonymous, and completion of the survey will also serve as consent to participate. The survey will comply with the POPIA Act.

Thank you for participating in this online survey, and should you have any queries, please feel free to contact my supervisor and me at the following contacts.

Ntombimpela Twala: 1145412@students.wits.ac.za _

Dr Fanny Saruchera: fanny.saruchera@wits.ac.za

Regards

Ntombimpela Twala Nong

1145412@students.wits.ac.za _

Appendix 2: Interview Questions

Interview Questions	
Focus Group	Denville Stokvel group 2
No of participant	594 Female/ 1 Male)
Register and Consents	Done (Attached Consent forms)
Introduction by researcher	Research introduced herself as Ntombimpela Twala - who is currently conducting a study of the improvement of stokvels through technology with Wits Business School.
Focus group - ground rules	All participants to sign the consent form. As a participant please feel free to share all you views on the topic weather good or bad, please share as much input as possible. This is an open session all views are all welcomed.
Objectives	
• To assess the extent to which stokvels use technology in their day-to-day operations up to procurement. • To determine why some stokvels do not use technology. • To explore the challenges and problems experienced by stokvels in the townships and rural areas in Gauteng because of the manual process. • To explore how technology could be used to improve the running of the stokvel up to the point of procurement. • Understand the technology used by retail stores to support stokvels in their procurement process.	
Q1	Introduction and Demographics
1.1	Please share details of yourself grocery stokvel, how long have you been a member of a stokvel?
	Age, How many years have you been a member of a grocery stokvel? Monthly contribution. No. of Members in stokvel group. Stokvel meetings
1.2	Please share details of your Stokvel, where it's based and which retailer do you buy from?
	Where is your grocery stokvel based ? i.e. rural area/informal settlement/ township? Which retailer do you buy groceries from?
Q2	ELECTRONIC TOOLS USED BY STOKVELS
2.1	How would you describe the use of technology tool in the running of the stokvel day to day operations, such as WhatsApp emails, apps by your stokvel?
	Do you own a smartphone? share information on electronic platforms such as WhatsApp and email. monthly meetings via video or online platforms?
Q3	CURRENT PROCUREMENT PROCESS- Sourcing Stage
3.1	Please share details of how you go about compiling your list for groceries, how do members contribute to the selection of the items on the list?
	Is the compilation (put together) of the grocery list done electronically? IS the feedback from retailers on pricing of the grocery list is done electronically? Are stokvel member able to select bulk grocery on the list electronically?
3.2	How do you communicate with the retailer to send list of groceries, how do you compare prices from different retailers?
	Is the bulk grocery list sent to the retailers for a quote electronically? Do you compare catalogues/electronically for grocery pricing from different retailers? how do you use technology to contact retailer
3.3	Do you believe that the groceries bought in bulk are helping with saving of money on a month to month basis and household expenses?
	Are members able to select specific brands of goods? Are members able to specify the required quantities of groceries? Are the grocery items received by members helping in saving cost on household expenditure? Do some of the grocery items bought by the stokvel go to waste and are not used by the member?
Q4	PROCUREMENT PROCESS- Purchasing Stage
4.1	What has been your experience at the retail facilities when you procure bulk groceries?
	Do retailers provides support for stokvel members on the day of buying groceries? Does the retailer allocate a customer relationship manager on the buying day? Does the retailer allocate separate tills to ensure fast processing of buying groceries? indicate there technology that you have seem been used by the retailer to help grocery stokvels.
4.2	How would you rate the service given by retailers to grocery stokvels on the day of purchasing of groceries?
	Is the time spent in the retail store during the buying day worth it? How much time (hrs) do you spend in the retail store buying your groceries? Are you frustrated by the time spent during the separation of the bulk groceries?
4.3	Share with me your wishes on how retailer can help improve service level with the use of technology?
	Does the retailers use technology to ease the pressure of buying goods bulk? Do you think the use of technology can useful in the stokvel industry?
Q5	PROCUREMENT PROCESS- Payment Stage
5.1	What is the FINANCIAL BENEFIT AND VALUE for being part of a grocery stokvel
	Reasons to be financially better off as a member? Do you share the benefits of the group?

Appendix 3: Clearance Certificate

Graduate School of Business Administration
University of the Witwatersrand, Johannesburg



Wits Business School Ethics Committee
Constituted under the University Human Research Ethics Committee (Non-Medical)

Ethics Clearance Certificate

Ethics protocol number: WBS/BA1145412/116

This certificate is only valid with a legitimate ethics protocol number and signed by the Researcher (below).

This certificate is only valid if accompanied by formal permission from the relevant stakeholder(s).

Project title Improving stokvel grocery procurement through technology

Investigator / Researcher Mrs Ntombimpela Nong

Nature of Project MBA (Research Article)

Decision of the Committee Approved, provided stakeholders and participants are guaranteed anonymity and confidentiality.

Issue Date of Certificate 2022-09-01

Expiry date Date of submission of the project / research report

Chairperson Prof Anthony Stacey
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☎ +27 82 880 4531
✉ anthony.stacey@wits.ac.za

Declaration by Researcher

One copy must be signed by the Researcher and returned to the Chairperson of the Wits Business School Ethics Committee.

I fully understand the conditions under which I am authorized to carry out the abovementioned research and I guarantee to ensure compliance with these conditions. Should any departure to be contemplated from the research procedure as approved I undertake to resubmit the protocol to the Committee.

Signature

10 September 2022

Date:

Appendix 4: Language Editing Confirmation

EDITING CONFIRMATION

To whom it may concern:

This memo serves to confirm that the manuscript/research project detailed below has been language-edited and/or proof-read.

Regards,

-SM001-

S. Mpunz (Cert. Lang. Ed.)
Language Editor

Manuscript Title:

Community Group Buying (CGB): Improving Stokvel Grocery Procurement
through Technology

Author:

Ntombimpela Twala Nong

Issued on:

28/04/2023

Disclaimer:

The editor/proofreader makes no claim as to the accuracy of the manuscript contents nor the objectives of the author. While all possible efforts have been made to ensure the text as edited is readable and grammatically correct, the author(s) have the option to accept or reject suggestions and trackable changes made to the document before submission.


*** Professional Editors ***
sarchcot@gmail.com