

**The behavioural economics of savings groups as model
commitment saving devices**

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ABSTRACT

Although much research has been conducted on saving behaviour, inadequate savings rates continue to be reported for individuals and households across the world. Little is known about the drivers of positive saving behaviour to design saving-promotion interventions and effective commitment saving devices. On the other hand, research evidence suggests that savings groups are effective in mobilising savings from low income populations with limited resources. Thus, in this study, savings groups were explored to gain insights in their saving behaviour; attributes that influence behavioural change; and valued features as commitment saving devices.

Through this multilevel study, semi-structured interviews were conducted with ten savings groups and ten individual members of savings groups, and their perspectives were analysed through a behavioural economic lens. The study found seven characteristics of savings groups that potentially serve as interventions to change its non-standard (irrational) saving behaviour, and seven valued features of this model commitment saving device.

This study contributes towards literature by combining the fields of saving behaviour, savings groups, saving-promotion interventions and commitment saving devices in a single behavioural economic study. As a result, a framework is proposed to product developers for the design of commitment saving devices that are based on behavioural design levers.

KEYWORDS

Behavioural economics; saving behaviour; savings groups; interventions; commitment saving devices.

DECLARATION

I declare that this research project is my own work. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other University. I further declare that I have obtained the necessary authorisation and consent to carry out this research.

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ABBREVIATIONS

BoP:	Base of the Pyramid
GDP:	Gross Domestic Product
GIBS:	Gordon Institute of Business Science
LSM:	Living Standards Measure
NASASA:	National Stokvel Association of South Africa
NGO:	Non-Governmental Organisation
PSO:	Personal Saving Orientation
RCT:	Randomized Control Trials
ROSCA:	Rotating Saving and Credit Association
SARB:	South African Reserve Bank
SSC groups:	SaveAct-initiated Savings and Credit Groups
SMarT:	Save More Tomorrow™ Plan
VSLA:	Village Savings and Loan Associations
WEF:	World Economic Forum

1. INTRODUCTION TO THE RESEARCH PROBLEM

This study explored South African savings groups through a behavioural economic lens as a model for commitment saving devices. The behaviours and characteristics that drive savings groups' propensity to save, combined with those features valued by consumers of savings groups; shaped the proposed behavioural design framework. This framework informs product developers on the behavioural levers required to design effective commitment saving devices.

1.1 Background: the importance of saving

The World Economic Forum [WEF] (2017) reports inadequate retirement savings rates globally and appeals for urgent reforms of saving systems. The retirement savings gap is of particular concern due to increased longevity caused by improved living standards and general healthcare. Longer retirement periods coupled with the fact that financial systems in many countries are currently overextended, means that individuals and households need to save more in general.

The conventional definition of gross savings is disposable income less consumption. At a country level, China has long been commended for its exemplary gross savings record. With gross savings comprising 46% of China's Gross Domestic Product [GDP] at the end of 2016 (World Bank, 2018); South Africa's savings rate of 17% paled in comparison (South African Reserve Bank [SARB], 2017). However, the true differentiation between the saving cultures of these two countries can be found in the comparison of their household savings rates. China boasted a 23% household savings rate at the end of 2016 (International Monetary Fund, 2017), while South African households contributed only 1.2% to the country's GDP at the time (SARB, 2017). The tenets of the Chinese savings culture are based on frugality, avoiding debt, precautionary saving and wealth creation. This is in stark contrast to the culture of consumerism prevailing in South Africa, however complex the reasons for this may be.

Further evidence of South Africa's poor saving culture can be found in the results of the Investec GIBS Savings Index that measures South Africa's overall savings rate and saving behaviour. The headline index figure of 60.5 points reported at the end of 2017, marks the lowest score in South Africa's saving track record of 27 years. Figure 1 reflects the downward trend of index points reported at each year-end during this period. A benchmark score of 100 would have indicated that South Africa's savings

are sufficient to support its economic growth objectives. Current gross savings are inadequate to fund an investment rate in excess of 30%, which will be required to achieve elevated and inclusive economic growth (Investec, 2018).

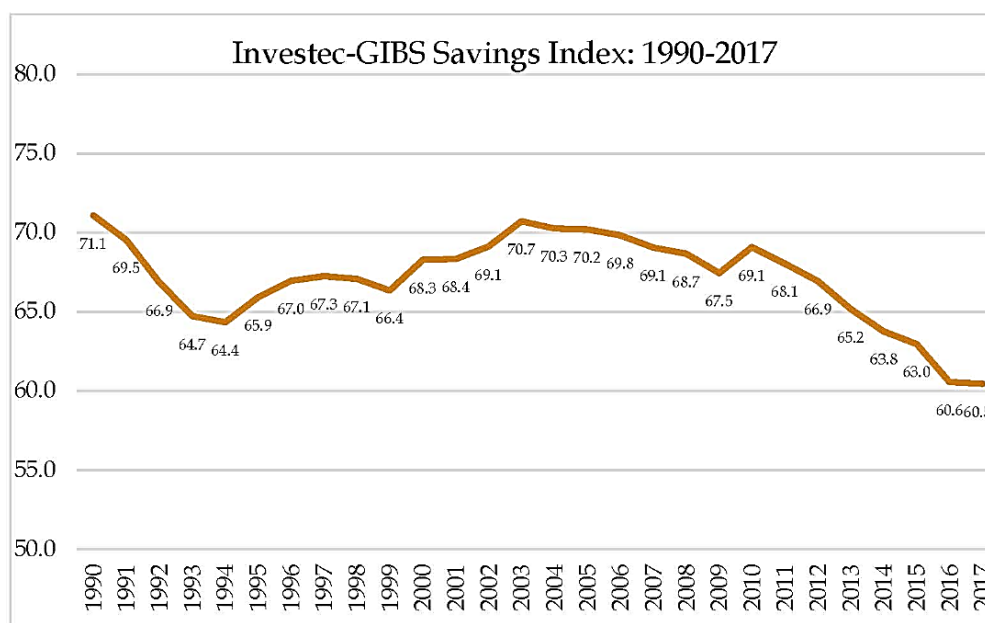


Figure 1: Investec GIBS Savings Index for the Period 1990 to 2017

Source: Investec, 2018

Funds saved by individuals, corporate organisations and government form the financial base from where investments can be made towards macroeconomic growth. Even though investments are funded through savings, both are required for a country's sustainable economic growth or individuals' long-term wealth creation (Investec, 2018). Individual- and household savings lead to asset accumulation and wealth building, which can reduce poverty in the long run (Karlán, Ratan & Zinman, 2014) and ensure subsistence in retirement. Karlán et al. (2014) also state that saving reduces the risk of unexpected financial burdens on individuals and households through their life-cycle and therefore increases resilience. This is of particular importance in low income groups that are sensitive to income shocks and need to save to smooth consumption (Martin & Hill, 2015). Savings groups are popular saving mechanisms through which this can be achieved.

1.1.1 The Role of Savings Groups in Saving

Savings groups are unregulated saving mechanisms that serve those excluded from traditional banking and formal financial products in developing countries particularly well (Burlando & Canidio, 2017; Dupas & Robinson, 2013). These groups are informal, self-managed institutions that provide flexible saving and credit services which are

needed especially in poor communities (Le Polain, Sterck, & Nyssens, 2018). The role of savings groups in mobilising savings from all income populations, including the poor, is therefore of importance to improve gross savings rates, especially in developing countries.

In South Africa, savings groups are often referred to as “*stokvels*” (African Response, 2012), but alternative types of savings groups such as SaveAct Savings and Credit Groups (SSC Groups) also exist (SaveAct, 2018). These groups closely resembles Rotating Savings and Credit Associations [ROSCAs] (Prina, 2015), Accumulating Savings and Credit Associations (Africa) (Le Polain et al., 2018), Village Savings and Loan Associations [VSLAs] (Africa) (Ksoll, Lilleør, Lønborg, & Rasmussen, 2016), as well as Bishi (India), Tandas (Latin America), Hui (Asia) and Gam’eya (Middle East) (Low, 1995); to name but a few. For the purposes of this study, “savings groups” therefore refer not only to *stokvels*, but also to any similar institutions known by different contextual names worldwide. Savings groups may have a global reach (Low, 1995), but its popularity in Africa is undeniable with an increasing number of international NGOs facilitating savings groups as part of their economic development programmes (Le Polain et al., 2018).

According to the National Stokvel Association of South Africa (NASASA), the *stokvel* community saves approximately R49 billion per annum, with 11.5 million people participating in more than 800 000 operating *stokvels*. (NASASA, 2018). SaveAct, on the other hand, reports a member base of 70 000 in 3 109 savings groups who saved R330 million in 2017 (SaveAct, 2018). The true extent of funds circulating through savings groups in South Africa per annum is a mere estimate due to the fact that these savings groups operate in the informal economy and a lack of data prevents holistic and comprehensive statistics. The goals of these savings groups vary from regular savings to savings for burial costs; to buy groceries in bulk at reduced prices; for special purposes and even for investments in more affluent groups (Van Wyk, 2017). In a country that is characterised by poverty, inequality and unemployment; savings groups serve as an important self-help initiative to ensure subsistence for many (Van Wyk, 2017).

A sizeable amount of research to date provides evidence on the benefits of savings group participation and its positive impacts on individuals and households. For instance, it leads to increased household welfare and economic activities (Ksoll et al., 2016); accumulation of funds to smooth consumption (Le Polain et al., 2018) and to

overcoming behavioural constraints to saving (Steinert, Zenker, Filipiak, Movsisyan, Cluver & Shenderovich, 2018).

However, despite their impact and popularity, savings groups as a social construct is not well understood by financial institutions, because the psyche of savings groups as a collective has not yet been explored to explain their saving behaviours (African Response, 2012). This lack of understanding seems to stem from the trend of recent research studies to focus only on assessing the impact of savings groups and savings group programmes through Randomised Control Trials [RCTs] (Kast et al., 2018; Ksoll et al., 2016; Le Polain et al., 2018).

Cronqvist and Siegel (2015) also identified the need for research to explore the characteristics of social networks such as savings groups, to identify the drivers of their saving behaviour. This study, therefore, addresses the research gap as identified, by exploring the saving behaviour of savings groups through a behavioural economic lens.

1.1.2 Behavioural Perspectives on Saving

In general terms, low personal savings rates can be the result of many factors such as a lack of financial literacy; high transaction fees; limited trust in financial institutions and regulatory barriers; a lack of access to saving products (in developing countries) and behavioural biases (Dupas & Robinson, 2013; Karlan et al., 2014; O'Donoghue & Rabin, 2015). Since the need for further research on the saving behaviour of savings groups was specifically identified (cf. section 1.1.1); the presence or lack of behavioural biases in their decision-making was of particular interest to this study. Since savings groups are successful saving mechanisms as discussed in the previous section, the literature therefore suggests that behavioural biases should not be present in their decision-making.

Behavioural biases are cognitive errors in decision-making and behaviours which can be predicted in certain circumstances (Tversky & Kahneman, 1974). Tversky and Kahneman were the first to diagnose and name various biases, which makes it easier to anticipate and address to avoid errors in saving behaviour, for example. Thaler (2016) supports this literature by stating that optimal economic choices are based on unbiased beliefs. Economic literature therefore also suggests that behavioural biases may result in sub-optimal or erroneous saving decisions reflected in low savings rates.

Although ample evidence exists for various influences on saving behaviour, less is known on how to drive saving behaviour towards increased savings. Methods to improve savings rates are therefore increasingly becoming a topic of examination by economists and policy makers (Cronqvist & Siegel, 2015). Dholakia, Tam, Yoon, and Wong (2016) confirmed this, asserting that, together with financial counsellors, these parties are all eager to understand the factors responsible for consistent saving behaviours in order to design effective behavioural interventions and economic and social policies.

A greater understanding of the behaviour that leads to increased savings is also of value in the design of saving products or commitment saving devices. Steinert et al. (2018) describe savings groups as self-established regulatory frameworks that function as commitment saving devices and are saving-promotion interventions in itself. Through this study, savings groups were regarded as model commitment saving devices due to their proven success, and a design framework for commitment saving devices was therefore derived as a result.

1.2 Research Problem

The research problem is concerned with the inadequate savings rates of individuals and households. Savings groups are commitment saving devices that have proven to increase these savings rates (Le Polain et al., 2018; Steinert et al., 2018), but this social construct is still not well understood (African Response, 2012), and limited knowledge on drivers of such groups' saving behaviour exists (Cronqvist & Siegel, 2015). Furthermore, knowledge on the design of effective behavioural interventions, policies and savings products is also lacking (Cronqvist & Siegel, 2015; Dholakia et al., 2016).

In order to address this research need, this study aimed at obtaining a comprehensive understanding of savings groups' saving behaviour. Firstly, the drivers of savings groups' standard and non-standard saving behaviour were identified and explained (Cronqvist and Siegel, 2015). Secondly, the ability of savings groups to change saving behaviour through interventions (Steinert et al., 2018) was explored as this adds to their propensity to save. Finally, the features of savings groups that make them successful as a commitment saving device were identified (Le Polain et al., 2018). Figure 2 below provides a generic conceptual framework, mapping the sequential flow of steps followed to solve the research problem. It is suggested that an increased

propensity to save, together with a commitment saving device as a tool to drive positive behaviours effectively (Giné, Goldberg, Silverman, & Yang, 2018), could lead to increased savings. Behavioural economic theory provided the lens through which savings groups were explored to develop a design framework for effective commitment saving devices.

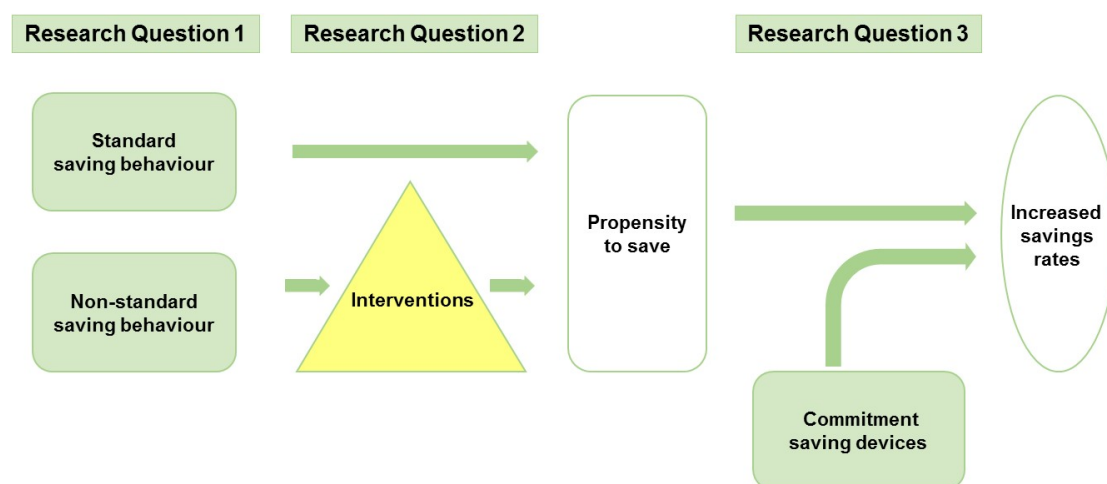


Figure 2: Conceptual Framework of the Study

1.3 Research Purpose

The purpose of the study is to answer the following overarching research question:

What behavioural economic attributes of savings groups explain their positive saving behaviour as a model for the design of effective commitment saving devices?

Underlying questions that will be answered are for example: Are the saving behaviour and decisions of savings groups rational? Can the field of behavioural economics explain the saving behaviours of saving groups? What inherent features of savings groups function as natural saving-promotion interventions? What can be learned from savings groups that can be incorporated into the design of commitment saving devices that drive improved saving outcomes?

1.4 Significance of Research for Business and Theory

Conventional wisdom dictates that margins are low and profits are driven by volumes of customers at the “Base of the Pyramid” [BoP] in developing countries. A greater up-take of saving devices could not only improve savings rates, financial wellbeing and financial inclusion (Dupas & Robinson, 2013), but also lead to a competitive

advantage, increased market share and revenue for a particular financial institution. The informal savings-group segment of the financial services industry also presents opportunities that are still not fully exploited due to a lack of understanding of this traditional saving scheme (African Response, 2012). Financial service providers therefore stand to profit from a better understanding of how the design of commitment saving devices can be improved to ensure a greater up-take and retention by individuals and households (Dupas, Keats, & Robinson, 2017).

The academic discourse around the improvement of savings outcomes covers the following themes that are of relevance to this particular study: saving behaviour; saving-promotion interventions to address negative behaviours; and commitment saving devices or products designed with those aspects in mind. Cronqvist and Siegel (2015) stated that low savings rates can only be addressed once saving behaviours are properly understood. Following this, saving-promotion interventions that drive improved saving behaviours and outcomes need to be identified and implemented (Beshears, Choi, Laibson, Madrian, & Milkman, 2015; Karlan et al., 2016). Finally, commitment saving devices are the mechanisms through which these interventions can be implemented, and savings goals can be achieved (Afzal, d'Adda, Fafchamps, Quinn, & Said, 2017; Benartzi & Thaler, 2004; Dupas et al., 2017). This study contributes to the conversation by exploring savings groups to identify those saving behaviours and interventions that should be incorporated into commitment saving devices to drive improved savings outcomes.

A number of prior studies have applied specific behavioural economic concepts to explain saving behaviours in general terms. However, behavioural economic theory has not yet been used to explore the saving behaviour of savings groups comprehensively. Furthermore, the majority of prior behavioural economic studies followed an experimental research methodology through RCTs; whereas this qualitative study was performed specifically to obtain an in-depth understanding of savings groups. More specifically, this study explored their saving behaviour, characteristics that act as interventions to change behaviour, and features valued by members. This study, therefore, endeavoured to present a methodological contribution to the literature on savings groups, by combining the fields of saving behaviour, savings groups, saving-promotion interventions and commitment saving devices in a single behavioural economic study.

1.5 Research Scope

An exploratory study was carried out to identify and understand the behavioural economic attributes of savings groups that explain their positive savings outcomes. While many studies to date have identified constraints and impediments that lead to under-saving (Bernheim, Ray, & Yeltekin, 2015; Burlando & Canidio, 2017; Karlan et al., 2014; Martin & Hill, 2015; Thaler & Benartzi, 2004) and drivers of saving behaviour (Afzal et al, 2017; De Mel, McIntosh, & Woodruff, 2013; Dholakia et al., 2016; Karlan, McConnell, Mullainathan, & Zinman, 2016); this study explored savings groups as a model for positive saving behaviours and saving outcomes. The results formed the basis of a proposed behavioural design framework for effective commitment saving devices.

Savings groups across the world have been studied, but evidence from African savings groups and more specifically from East-African countries (Burlando & Canidio, 2017; Greaney, Kaboski, & Van Leemput, 2016; Ksoll et al., 2016), outweighs that from other regions. South African savings groups (*stokvels* in particular) historically developed out of necessity due to the political environment of exclusion, and differ from other African savings groups as a result. Savings groups in Africa are often facilitated by international aid organisations (NGOs) as part of economic development programmes, even though the main objective of all these savings groups is similar (Le Polain et al., 2018). SaveAct, a South African NGO, has also modelled its Savings and Credit Groups [SSC groups] on VSLAs which have been widely adopted in Africa (SaveAct, 2018). The scope of this research is limited to South African savings groups and members only, but it has been designed with broader applicability and replication in mind.

The research was conducted on two levels to collect data from multiple sources with different perspectives for richer research outcomes. Focus group interviews were first conducted with South African savings groups, followed by in-depth interviews with individual members of other, non-related savings groups to develop a behavioural design framework for effective commitment saving devices.

The following chapter reviews recent academic literature that underpins this study. Insights into the relevant theories, academic discourse and research gaps that shaped the research questions are presented in sequence.

2. LITERATURE REVIEW

2.1 Introduction

The importance of a deeper understanding of saving behaviour to address inadequate savings rates was discussed in the previous section. Savings groups as a popular savings device in the South African context, were defined and identified as a proxy for positive saving behaviours. However, no evidence of a comprehensive study on the behavioural economics of savings groups to provide such insights could be found.

In this chapter, the existing literature on saving behaviour is discussed in general, as well as in the context of savings groups. Economic theories are linked to saving behaviour as a basis for this study and possible interventions for improved saving behaviour, in general, are identified. Commitment saving devices as a mechanism to support positive saving behaviours are also explained through available literature. Finally, research opportunities to expand existing knowledge on these constructs are identified. Figure 3 below provides an overview of the literature review's sequential flow.

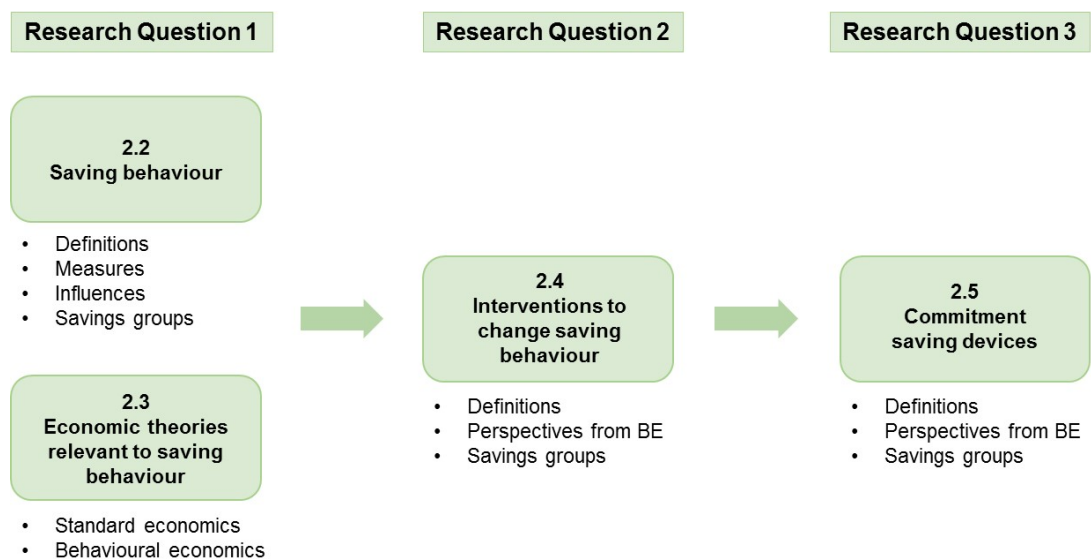


Figure 3: Conceptual Framework for the Literature Review

2.2 Saving Behaviour

2.2.1 General Definitions and Measures of Saving Behaviour

Conventional wisdom asserts that “saving” is the action of spending less money than income received, thereby accumulating funds for future consumption. “Savings” on the other hand, is measured as the change in the net worth of an individual’s assets over a period of time (Cronqvist & Siegel, 2015). The concept of “saving behaviour” encompasses more than just the financial dimensions of saving; it includes psychological dimensions such as habits and intentions as well (Ranyard, 2017).

Most contributions to the literature on saving behaviour have been through studies performed by economists. The focus of these studies was therefore skewed towards finding similarities in saving behaviours in order to measure, model and predict the behaviours of economic actors, not on finding reasons why individuals make the saving decisions that they do. One of the baseline models that economists use to predict individuals’ saving- and consumption choices, is the standard life-cycle model (Modigliani, 1966). In a standard life-cycle model, an optimal consumption path is computed to implement a plan of saving and investing to maximise lifetime utility (Thaler, 2016). Cronqvist and Siegel (2015) further state that the standard life-cycle savings model shows that saving behaviour varies among individuals due to differences in their time- and risk preferences and economic conditions such as income volatility. This standard life-cycle model is a very complex computation for ordinary individuals trying to create a savings plan, and its use is therefore mostly restricted to professional financial planners and advisors. Furthermore, this empirical model does not account for uncertainty and self-control issues to execute saving plans (Thaler, 2016) and provides only a partial explanation of what drives individuals’ savings propensities (Cronqvist & Siegel, 2015). Non-standard models and behavioural concepts should, therefore, be studied to find explanations for the variation of saving behaviour between individuals.

Dholakia et al. (2016) performed such a study to understand individuals’ propensity to save and developed a psychometric personal savings orientation (PSO) model to measure saving-behaviour tendencies. The PSO model is based on evidence that a saving orientation requires goal-directed and habitual behaviours which need to be cultivated and sustained to make saving an ingrained part of one’s lifestyle (Dholakia et al., 2016). One of the most popular theoretical lenses on saving money indicates that it is driven by goal-directed behaviour, which requires setting saving goals as the

first step towards improved savings outcomes. However, this PSO model offers a unique perspective as it proposes the routine enactment of saving as a habit to overcome saving impediments, in addition to just setting saving goals. Dholakia et al. (2016), therefore define saving behaviour as “a personal orientation analogous to maintaining good health, which leads to a lifestyle that promotes saving activities on a regular basis” (p.135).

Even though it was determined that individuals have different propensities to save and these differences can be measured, the question still remains as to why these differences occur in the first place. The next section provides examples of concepts that influence saving decisions and behaviour from the literature reviewed.

2.2.2 Influences on Saving Behaviour

The importance of understanding the influences on saving behaviour is mainly to develop interventions and saving products which can counteract negative influences or enhance positive influences towards increased savings outcomes. A comprehensive review of the literature provided many varied propositions for influences on saving behaviour, although no single study could test all. Table 1 provides a summary of the concepts identified as having a positive, negative or simply *an* influence on saving behaviour.

It is evident from this overview that saving behaviour is complex to understand and open to various influences which will surely differ from one individual to the next. Giné et al. (2018) confirms the importance of understanding these drivers of behavioural change as it will affect the design of commitment saving devices and their eventual impact on welfare. However, it seems impossible for financial service providers to know which of these aspects to address in the design of their saving products that will change behaviour and most effectively increase savings as a result. This study does not aspire to explore all these influences, but focuses on those that are relevant to savings groups only and can be explained by behavioural economic theory. Saving behaviour in the context of savings groups will be discussed in the next section, followed by the economic theories that form the basis of this study.

Table 1: Summary of Influences on Saving Behaviour

No.	Concept	Saving Behaviour			Reference
		Positive Effect	Negative Effect	Influence	
1	Anticipation of exceptional expenses	X			Karlan et al., 2014
2	Reminders to save	X			Karlan et al., 2014; Karlan et al., 2016
3	Basic saving accounts / secure storage	X			Afzal et al., 2017; Dupas & Robinson, 2013; Prina, 2015
4	Low personal discount rates	X			Cronqvist & Siegel, 2015
5	High risk aversion	X			Cronqvist & Siegel, 2015
6	Income growth	X			Cronqvist & Siegel, 2015
7	Mental accounting / Earmarking	X			Dupas & Robinson, 2013
8	Social commitment	X			Dupas & Robinson, 2013
9	Commitment devices	X			Afzal et al., 2017; Dupas & Robinson, 2013; Karlan et al., 2014
10	Savings groups	X			Dupas et al., 2017
11	Saving goals	X			Dholakia et al., 2016
12	Saving habits	X			De Mel et al., 2013; Dholakia et al., 2016
13	Poverty	X			Martin & Hill, 2015
14	Peer pressure	X			Kast, Meier & Pomeranz, 2018
15	Social learning	X			Bursztyn, Ederer, Ferman, & Yuchtman, 2014
1	Social constraints		X		Giné et al., 2018; Karlan et al., 2014
2	Financial literacy gaps		X		Karlan et al., 2014
3	Behavioural biases		X		Karlan et al., 2014
4	Transaction fees		X		Karlan et al., 2014
5	Lack of trust in financial institutions		X		Burlando & Canidio, 2017; Karlan et al., 2014
6	Regulatory barriers, i.e. KYC Rules		X		Karlan et al., 2014
7	Bounded rationality		X		Thaler & Benartzi, 2004
8	Present-bias		X		Dupas & Robinson, 2013; O'Donoghue & Rabin, 2015
9	Lack of self-control		X		Dupas & Robinson, 2013; Bernheim et al., 2015; Thaler & Benartzi, 2004
10	Limited attention to saving		X		Karlan et al., 2016
11	Planning fallacy		X		Karlan et al., 2016

Table 1 (Continued): Summary of Influences on Saving Behaviour

		Saving Behaviour			
No.	Concept	Positive Effect	Negative Effect	Influence	Reference
12	Lack of access to saving products		X		Dupas & Robinson, 2013; Giné et al., 2018; Martin & Hill, 2015
13	Liquidity cost of earmarking		X		Dupas & Robinson, 2013
14	Complexity of saving plans, products		X		Thaler, 2016
15	Reliance on support from others		X		Dupas et al., 2017
16	Underestimating compounding effect		X		Dholakia et al., 2016
17	Difficulty in maintaining savings		X		Dholakia et al., 2016
18	Economic conditions / income volatility		X		Cronqvist & Siegel, 2015
1	Genetic predisposition			X	Cronqvist & Siegel, 2015
2	Parenting			X	Cronqvist & Siegel, 2015
3	Time and risk preferences			X	Cronqvist & Siegel, 2015
4	Environmental factors			X	Cronqvist & Siegel, 2015
5	Observation of others' saving behaviour			X	Dupas & Robinson, 2013
6	Personal Savings Orientation (PSO)			X	Dholakia et al., 2016
7	Social context			X	Hoff & Stiglitz, 2016
8	Culture			X	Hoff & Stiglitz, 2016
9	Social capital			X	Newman, Tarp & Van Den Broeck, 2014
10	Network effects			X	Newman et al., 2014

2.2.3 Saving Behaviour in the Context of Savings Groups

According to Dupas and Robinson (2013), studies on reasons for low savings rates in developing countries mainly emphasise a lack of self-control as the problem. For this reason, they embarked on a study of saving behaviour among the poor in Kenya and included local savings groups (ROSCAs) in their research. Dupas and Robinson (2013) experimented with interventions and found that those interventions embedded with the following three characteristics improved saving behaviour: secure storage for funds; earmarking of funds towards a goal, and social commitment.

Savings groups are self-selected groups of individuals who periodically contribute towards a shared goal of the group. Funds collected are generally kept aside in secure storage or in bank accounts and are distributed to members (partially or in full) on a rotational basis. Commitment to the group and the common goal positively influences saving behaviour, and there are generally low instances of default. It is, therefore, evident that the savings-group mechanism exemplifies the three characteristics that can improve saving behaviour as identified by Dupas and Robinson (2013).

Newman et al. (2014) describe social capital as a social structure or social network for the sharing of information that can influence individual financial behaviour. Social learning from peers is of importance for financial decisions and may even increase welfare in some instances (Bursztyn et al., 2014). Societies or groups that sustainably cooperate to increase collective welfare have high levels of social capital, according to Hoff and Stiglitz (2016). The field of development economics encourages repeat interactions between individuals in communities to build and maintain social capital and to increase economic gains. Feigenberg, Field, and Pande (2013) set out to test the economic returns to repeat social interactions in microfinance groups and found that they strengthened social ties and enhanced social capital in a very short space of time. From the abovementioned literature, it can be inferred that savings groups that share information and common savings goals through regular meetings will have high levels of social capital that can influence saving behaviours.

Several prior studies on savings groups tried to determine the impact of savings groups and their ability to alter the saving behaviour of their members. Over a two-year period, Ksoll et al. (2016) investigated the impact of introducing village-level savings groups on the welfare of households in Malawi. Positive impacts were measured on four variables which all increased over the period, namely, food security, household savings, household expenditures and the average number of rooms per dwelling.

Encouraging results were also found when Greaney et al. (2016) executed a RCT in Kenya, Tanzania and Uganda to measure the village level impact of self-help groups created by Private Service Providers or agents for a fee. This intervention resulted in significantly higher business-oriented savings in households and at village level despite the extra administrative charge. In a field experiment performed in Uganda, Burlando and Canidio (2017) found that savings groups improve members' saving behaviour, but the extent depends on the composition of the group. The less ultra-poor or vulnerable members in the group, the more the group is able to accumulate funds and to save at a faster rate (Burlando & Canidio, 2017). They also posit that the length of time it takes to build trust and social cohesion to save more depends on the social network structure of a group (Burlando & Canidio, 2017). An individual, but mutually shared savings goal, is easier to achieve in a group setting as proven through a Savings Group Treatment conducted in Chile (Kast, Meier, & Pomeranz, 2018). Regular savings group meetings where feedback is shared publicly, also provides motivation to increase savings (Kast et al., 2018).

Despite its impact and effectiveness in mobilizing savings, savings groups are not without risks or shortcomings. Some types of savings groups offer loans to members at high interest rates, which expose vulnerable borrowers to indebtedness and the group's collective savings to defaults on repayments (Le Polain et al., 2018). If managed poorly, offering debt to members can be counter-productive and result in individuals ending up in net-debt situations. Afzal et al. (2017) offers a reason why this debt-trap may occur, by stating that both saving and borrowing behaviours in poor communities are driven by the same demand for acquiring a lump-sum at a specific point in time. Savings groups that offer loans to members can, therefore, be regarded as microfinance institutions that meet demands for microcredit and micro-saving at the same time (Afzal et al., 2017). To ensure proper functioning, most savings groups also have an administrative burden to comply with their agreed constitution, ensure safe storage of funds and strict record-keeping. Records need to be kept of members' savings, credits granted, payments due, meeting procedures and so forth; which may require assistance from trained external parties in certain types of savings groups (Greaney et al., 2016).

Based on the abovementioned evidence, savings groups, despite their shortcomings, seem to be successful in mobilising savings and therefore warrant further investigation to determine if this construct can be considered a model saving device. Le Polain et al. (2018) suggests that future research should not just assess if savings groups are

successful or not; but rather why savings groups function well and which qualities of savings groups make them effective in driving savings. Cronqvist and Siegel (2015) also suggested that the characteristics of social networks such as savings groups need to be explored to identify the drivers of their saving behaviour. These suggestions for future research contributed to the formulation of the first research question for this study.

2.3 Economic Theories relevant to Saving Behaviour

2.3.1 Standard Economic Theory

Milton Friedman's well-known permanent income hypothesis asserts that individual saving behaviour is driven by the need to balance current versus anticipated future consumption (Friedman, 1954). Individuals accumulate savings while earning an income with the expectation to dissave once retired, for instance. While this traditional economic model may be applicable to medium- and high-income societies, it is less so in poor communities where saving behaviour is much more complex and meets with unique constraints (Steinert et al., 2018). For example, Bernheim et al. (2015) found that the poor's self-control to save is constrained by low initial assets or wealth. It was also found that liquidity constraints experienced by the poor affects monetary intertemporal choices which can lead to irrational economic decision-making (Carvalho, Meier, & Wang, 2016).

If standard economic theory were to explain saving behaviour, it would imply that individuals always make rational saving decisions. Ok, Ortoleva, and Riella (2015) explain rational choice as the ability to rank alternatives according to preferences and to then choose the highest-ranking item amongst all the alternatives. These preferences are also assumed to be well-defined and fixed over time (Thaler, 2016) and cannot be swayed by temptations. In the context of savings decisions, once the preferred choice was made to save; funds will not be withdrawn for consumption of consumer goods, for instance.

The foundation of standard economic theory rests on the assumption that all economic participants optimise, meaning that, among all available choices, the best one will always be chosen (Thaler, 2017). Funds are always saved when and where the optimal return (for example, interest) can be earned. Furthermore, economic agents have fixed preferences, unbiased beliefs, limitless willpower to choose what is best, and primarily selfish motivations on which their optimal choices are based (Thaler, 2016). Individuals

therefore always make rational decisions which are not affected by social influences (Hoff & Stiglitz, 2016).

However, Hoff and Stiglitz (2016) argue that this standard economic model provides only a limited view of the determinants of decisions and behaviour. They propose an expansion of standard economic theory to include social determinants of behaviour (Hoff & Stiglitz, 2016) which is, in fact, a move towards behavioural economic theory as discussed in the next section.

2.3.2 Behavioural Economic Theory

Individuals and institutions make errors in their saving decisions because they are not always rational as standard economic theory suggests. Behavioural Economic theory developed from this basis and helps to explain anomalies in decision-making behaviours in order to avoid making the same mistakes again in future (Thaler, 2016). This burgeoning field of interest serves to expand and amend economic assumptions on decision-making; not to replace standard economic theory (Laibson & List, 2015). The sciences of Economics and Psychology combine in this field to explain irrational or non-standard economic decisions by taking behavioural aspects into account.

Behavioural Economic theory has been linked to saving behaviours along a number of repeated themes which emerged from prior studies. Table 1 as presented and discussed in section 2.2.2, provided a summary of both behavioural and non-behavioural concepts with possible positive, negative or simply *an* influence on saving behaviour. This illustrates the depth of research that has been conducted on saving behaviour in general, but also the complexity faced in determining which influences apply in a particular context. In an attempt to narrow this down, this research study applied behavioural economics as a theoretical base to explore positive saving behaviours in the context of savings groups (Dupas et al., 2017). The research question therefore combined the identified needs for a better understanding of drivers of positive saving behaviour (Dholakia et al., 2016), and the saving behaviour of savings groups in general (Cronqvist & Siegel, 2015).

The main behavioural economic concepts identified as having an influence on saving behaviours in general, are loss aversion; mental accounting; commitment; peer pressure; present bias; self-control and status quo bias. Table 2 presents conflicting evidence with regards to some of these concepts, which suggests that it can be a positive or a negative influence on saving behaviour, depending on the context. Hoff

and Stiglitz (2016) also propose that two new social determinants of behaviour: social context and culture, may influence saving decisions, but evidence about the effects is still lacking. Interactions with others are at the centre of this theory which aims to explain how influences at the moment of decision making (social context) and more durable influences (culture), influences economic decisions and behaviour (Hoff & Stiglitz, 2016).

Table 2: Behavioural Economics and Saving Behaviour

Concept	Saving Behaviour		Reference
	Positive Effect	Negative Effect	
1 Loss aversion	X	X	Cronqvist & Siegel, 2015; Imas, Sadoff, & Samek, 2016; Thaler & Benartzi, 2004
2 Mental accounting	X		Karlan et al., 2016; Steinert et al., 2018
3 Commitment	X	X	Laibson, 2015; O'Donoghue & Rabin, 2015
4 Peer pressure	X	X	Beshears et al., 2015; Bursztyn et al., 2014; Jakiela & Ozier, 2015; Kast et al., 2018; Laibson & List, 2015
5 Present bias		X	Dupas & Robinson, 2013; Jackson & Yariv, 2014; Laibson & List, 2015; O'Donoghue & Rabin, 2015
6 Self-control		X	Bernheim et al., 2015; Galperti, 2015; Giné et al., 2018
7 Status-quo bias		X	Dean, Kibris, & Masatlioglu, 2017; De Haan & Linde, 2018
8 Social determinants	X	X	Hoff & Stiglitz, 2016

According to Richard Thaler, widely considered to be the father of Behavioural Economics and the 2017 Nobel laureate in this field; “losses hurt about twice as much as gains make you feel good” (Thaler, 2015, p.34). This refers to the concept of loss aversion which was first introduced by the psychologists Daniel Kahneman and Amos Tversky in 1974 as part of their Prospect Theory. Imas, Sadoff, and Samek, (2016) explain that gains and losses are compared based on a reference point, which is usually the status quo. They conducted a series of experiments and proved empirically that individuals anticipate loss aversion and base decisions on this expectation (Imas et al., 2016). Individuals who are highly loss averse will be encouraged to save more (Cronqvist & Siegel, 2015) as a precautionary measure against future economic shocks. To the contrary, loss aversion influences savings negatively if a household

gets used to a certain level of disposable income and regards reductions in that level as a loss (Thaler & Benartzi, 2004).

Mental accounting refers to the mental earmarking of money for a specific purpose, such as saving. By mentally allocating money to savings, it is considered to be less available for other expenses and would cause feelings of guilt or failure if spent instead of saved (Steinert et al., 2018). Karlan et al. (2016) describe this concept as a mental label that provides a strong connection between current saving behaviour and specific future saving goals. Evidence from field experiments in Bolivia, Peru and the Philippines indicates that reminder messages sent to bank customers mitigated limited attention to saving and increased salience, with increased commitment to saving reported (Karlan et al., 2016). Mental accounting towards future saving goals is only possible if saving is top-of-mind and reminders can serve as an intervention to achieve this.

Commitment is generally understood to be the act of binding oneself to a specific course of action, while Laibson (2015) describes commitment as a restriction on one's choices. A commitment to save is, therefore, an action or restriction of choice that follows from mental accounting towards saving. Economists and researchers frequently attribute observed commitment to present-bias: the pursuit of immediate gratification (O'Donoghue & Rabin, 2015). However, O'Donoghue and Rabin (2015) warns against these quick assumptions as there may be other reasons why people make commitments such as belief-based utility. Laibson (2015) asserts that very little commitment has arisen in the marketplace without the direct involvement of behavioural economists. His quantitative study explored the reasons for this and found that commitment carries costs in the form of loss of flexibility as well as direct commitment product costs, which often exceed its benefits (Laibson, 2015). The impact of these costs on commitment to save is therefore worth exploring.

Liabson and List (2015) explain peer or social pressure as a set of social preferences that respond to incentives, similar to other economic decisions. Humans are not solely motivated by self-interest as standard economic theory predicts, but also consider the behaviour, actions and intentions of others in their decision-making (Liabson & List, 2015). Conventional wisdom indicates that peer pressure moves behaviour towards the norm; the majority wish to conform, to adopt a fashion, for instance, and behave in this manner for a variety of personal reasons. Bursztyn et al. (2014) set out to understand the mechanisms underlying peer pressure in financial decision-making.

Two reasons why peer pressure positively influences saving behaviour were identified; namely social learning and social utility (Bursztyn et al., 2014). In short, individuals are motivated to save when they learn from peers who are saving and when their value of a saving product or asset depends directly on a peer's ownership of it (Bursztyn et al., 2014). Kast et al. (2018) performed field experiments on self-help savings groups in Chile and also found that savings can be significantly increased if peers set goals, monitor the goals and award compliance to the goals, in public.

However, peer pressure does not yield positive effects on saving behaviour in all instances. In a controlled laboratory experiment conducted on peer pressure to share income in rural villages in Kenya, subjects were given the choice between a private, risk-free savings account and a profitable but risky public investment. The results were surprising as women were willing to sacrifice profitable investment returns or even to pay a fee to keep their income a secret from neighbours and family (Jakiela & Ozier, 2015). Observability of income and investment returns resulted in women saving an estimated 22.1% less than when it was hidden (Jakiela & Ozier, 2015). Beshears et al. (2015) performed peer-pressure information interventions in the USA and found similar effects of sharing retirement savings information between peers on saving behaviour. Participants who observed higher savings rates of peers were discouraged and saved less by comparison (Beshears et al., 2015).

Rational behaviour according to standard economic theory implies that there is no difference between an individual's intentions and their eventual actions. On the contrary, humans often plan to act in a certain way, but then renege at the last minute (Laibson & List, 2015) due to their pursuit of immediate gratification (O'Donoghue & Rabin, 2015). The concept of present bias is valuable in gaining an understanding of saving behaviour. Individuals may save less if money at hand in the present is considered to be certain, while benefits of available funds in the future are viewed as uncertain. O'Donoghue and Rabin (2015) explain that present bias is a discounting-model that functions on the timing of utility; it involves a trade-off between immediate and future utility. Individuals also vary in their time preferences and therefore discount the value of savings at significantly different rates (Jackson & Yariv, 2014). According to O'Donoghue and Rabin (2015), economists often ascribe the reason why individuals make commitments to the recognition of present bias in their decision-making. The value of commitment and commitment devices as saving-promotion interventions is addressed in the sections to follow.

A lack of willpower or self-control to save can be considered an example of non-optimizing or irrational behaviour according to standard economic theory. The consequences of self-control problems to save among the poor can be severe and a number of prior studies were conducted in developing countries in this respect. Berheim et al. (2015) explored whether difficult economic circumstances exacerbated self-control problems and confirmed that self-control towards saving is limited by low initial assets. Poverty can, therefore, perpetuate itself as it impedes self-control, while high initial wealth allows for asset accumulation with fewer constraints (Berheim et al., 2015). A field experiment performed by Giné et al. (2018) among farmers in rural Malawi also found that commitments to save are revised due to a lack of self-control over present biases. Commitment saving devices that are designed to address these problems, therefore, have the ability to improve the lives of the very poor (Giné et al., 2018). Galperti (2015) also stated that individuals are often aware that they lack the self-control to follow a saving plan, which creates a demand for commitment saving devices to limit their choices.

Status quo bias is a choice phenomenon which refers to decision makers' propensity to select a default option, which is also referred to as the default bias (De Haan & Linde, 2018). De Haan and Linde (2018) warn against unintended, negative consequences if good default options are followed by inferior ones. Enrolling into a savings scheme at the default rate allows at least for some savings to be accumulated, but there is heterogeneity in how much people are supposed to save (De Haan & Linde, 2018). The default option can, therefore, lead to under-saving in some instances. The default option is also the result a decision-maker will end up with if no choice is actively made (Dean, Kibris & Masatlioglu, 2017). The Limited Attention Status Quo Bias model as developed by Dean et al. (2017), provided experimental evidence of two status quo patterns which affect decision-making, namely, increasing status quo prevalence and status quo dependence. The first pattern means that the status quo option is chosen more often when many options are available (Dean et al., 2017). General status quo dependence, in turn, refers to the status quo option diverting choice away from other options when introduced as an additional alternative (Dean et al., 2017). This choice behaviour can have detrimental economic implications for individuals who are under-saving and continue to choose their status quo above opportunities to increase their savings for future consumption.

Confirmation bias is another cognitive mistake recognised in economics. This bias typically arises when external facts become known or events occur which are

consistent with beliefs; thereby reinforcing these beliefs. According to Bénabou and Tirole (2016), this confirmation of beliefs increases confidence and creates an anticipatory utility that future events will not deviate, even in the presence of contradictory information. In the context of saving behaviour, confirmation bias can lead an individual to disregard current risks in favour of saving in mechanisms that had proven success in the past and are perceived to be effective.

It is evident that some conflicting results emerged from previous studies on the various influences on saving behaviours. While most of the literature discussed focused on individual behaviours, this particular study will explore these behavioural economic concepts in the context of savings groups. According to Cronqvist and Siegel (2015), future research should explore the characteristics of social networks such as savings groups, to identify the drivers of their saving behaviour. An opportunity to study the saving behaviour of savings groups has therefore been included in the first research question.

2.4 Interventions to Change Saving Behaviour

2.4.1 Definitions and Perspectives

Interventions are based on the assumption that economic participants act irrationally and nudges are needed to change behaviour to a desired state. According to Thaler (2015), nudges should influence decisions in a way that will make the decision-maker better off according to their own judgement. Interventions to change saving behaviour are therefore expected to increase saving rates and savings balances in the long run without removing the freedom of choice.

Possibly the most well-known example of a successful saving promotion intervention in the literature is the Save More Tomorrow™ [SMarT] plan by Thaler and Benartzi (2004). Workers in the USA were offered an option to increase their retirement savings rate sometime in the future, but ideally with their following salary increase (Thaler & Benartzi, 2004). The effectiveness of this plan as an intervention stems from the fact that it addressed present biases by delaying increased savings to the future; mitigated loss aversion by linking savings to salary increases; while leveraging off status quo biases by making the default option, the option to remain in the plan (Thaler & Benartzi, 2004). This prescribed plan was designed around employees' behavioural constraints to saving, with targeted features that changed behaviours towards increased savings outcomes.

A number of studies that experimented with interventions towards behavioural change followed. The simple act of completing a survey on household saving behaviour had the effect of bringing the importance of saving top-of-mind for participants and altered their saving behaviours, according to a study performed by Crossley, Bresser, Delaney, and Winter (2017). Providing peer information on others' retirement-saving decisions has also been found to serve as a powerful intervention that relies on peer pressure to drive increased savings (Beshears et al., 2015). Berg and Zia (2017) conducted an experiment to test the effect of financial education messages through a popular soap opera in South Africa. Financial messages delivered through this medium had positive effects on financial behaviours due to participants' emotional connections to the actors who delivered the messages (Berg & Zia, 2017). This intervention exploited participants' emotions of admiration as an intervention to positively change financial behaviours.

De Haan and Linde (2018) conducted an experiment specifically to determine whether the status quo bias is reinforced by providing good initial default options that are in participants' best interests. Participants indeed exhibited a stronger status quo bias in later choices, which carried the risk of inferior subsequent choices if default options were no longer in their best interest. Beshears et al. (2015) found that sharing peer information on retirement saving behaviours as an intervention, can also have unintended consequences. Even though the intervention was effective in increasing saving, it also demotivated participants to save if information from an incorrect reference group (with unattainable savings rates) was shared. Interventions, therefore, need to be considered with care and from all perspectives before adoption in the design of commitment saving devices.

Incentives can be effective as interventions to change saving behaviours for the better. The effectiveness of monetary versus "social" (non-monetary) incentives has become a popular topic in recent literature discussions. Kast et al. (2018) conducted an experiment on savings groups in Chile to test these types of incentives and found that higher interest offered as a monetary incentive was less effective than stickers awarded for achieving savings goals. The possibility that interest rates do not play a significant role in savings decisions was offered as a reason for these results (Kast et al., 2018). No assumptions on the effectiveness of monetary incentives as interventions to change saving behaviour should, therefore, be made.

The idea that institutions or governments have the power to change the behaviour of individuals through interventions seem intrusive and paternalistic. However, if no infringements of choice or coercion are involved in an intervention towards improved saving behaviours, individuals seem to accept it as “libertarian paternalism” (Thaler & Benartzi, 2004, S185).

Several prior studies identified the need for further research on interventions to improve saving behaviours. A model that incorporates limited attention, present-bias and a lack of self-control, for example, to predict the effects of reminders as an intervention to increase savings, should be studied (Karlan et al., 2016). Opportunities also exist for theory testing on innovations and interventions that drive saving behaviour in terms of how to match different people, households and businesses with different types of saving devices (Karlan et al., 2014).

2.4.2 Interventions in the Context of Savings Groups

The success of savings groups in mobilising savings from low-income groups has been discussed in earlier parts of the literature review. Cronqvist and Siegel (2015) suggested that future research should explore and identify the specific characteristics of social constructs or groups that are important nudges for saving decisions. No prior studies to this effect could be located and for this reason, savings groups are explored in this study to identify which of their characteristics operate as interventions to positively influence the saving behaviour of its members. Whether savings groups have similar design elements or attributes compared to the SMarT plan (Thaler & Benartzi, 2004) in changing behavioural constraints into increased savings outcomes, seems to require further investigation. The second research question was formulated as a result.

2.5 Commitment Saving Devices as a Vehicle for Interventions

2.5.1 Definitions and Perspectives

The main purpose of commitment saving devices is to mediate a lack of self-control which can lead to inadequate saving or early withdrawal of savings (Karlan et al., 2016). A formal commitment saving device such as a goal-based savings bank account requires either a committed amount to be saved by a set deadline or regular deposits of a selected amount until the commitment ends (Karlan et al., 2016). Bernheim et al. (2015) state that these devices are effective because they require a savings goal,

restrict access to funds until the goal is achieved, and provide access to funds (liquidity) once the goal is achieved.

In the opinion of Giné et al. (2018), commitment saving devices provide opportunities for the lives of the poor in developing countries as these devices could be a cost-effective solution to drive saving behaviours. Flexible saving devices that allow for small, frequent deposits which match the periodicity of income of the poor are particularly suitable in the context of developing countries (Afzal et al., 2017). Smaller, frequent deposits seem to be more affordable where income is low, infrequent and variable. Unsophisticated, easily-accessible saving devices such as lock boxes have been found to be better suited for small, frequent savings in this market (Dupas & Robinson, 2013). Dupas et al. (2017) found that access to accounts in rural areas leads to positive spill-over effects in their communities where savings are kept and spent; confirming that greater financial access has the ability to improve community welfare.

Commitment saving devices signal financial responsibility and if observed by peers, increase demand for these devices and drive increased savings as a result (Exley & Naecker, 2017). Socially desirable outcomes can even be achieved when individuals declare their commitment decisions publicly to peers, who are then motivated to follow suit (Exley & Naecker, 2017). Observability of commitment can, therefore, serve as a behavioural intervention to promote saving behaviours.

The main constraints to the up-take of formal commitment saving devices are the need for flexibility and liquidity. The trade-off between preferences for commitment and features that provide flexibility and liquidity, therefore, need to be considered in product design to ensure up-take of the device (Galperti, 2015). Other constraints identified by Dupas et al. (2017) from a study conducted in rural Kenya, are high transaction fees and a lack of trust in financial institutions.

2.5.2 Savings Groups as Commitment Saving Devices

Savings groups can be regarded as commitment saving devices because they share similar features to formal, commercial savings products. However, what mainly distinguishes this saving mechanism is the fact that it is informal, accessible and effective in mobilising savings from very low-income groups in developing countries. Literature dictates that for savings groups to be regarded as model commitment saving devices, they should offer flexibility, liquidity, low transaction fees and be a trustworthy

place to store funds for its members. This will be explored via a third research question to determine the features of savings groups most valued by customers and replicable in the design of alternative formal or informal commitment saving devices.

2.6 Conclusion

In conclusion, the research problem to determine what behavioural economic features of saving groups can be modelled in alternative commitment saving devices, was addressed through the three research questions broadly discussed in this chapter. Figure 4 presents the research framework with reference to the research questions which are discussed in the next chapter.

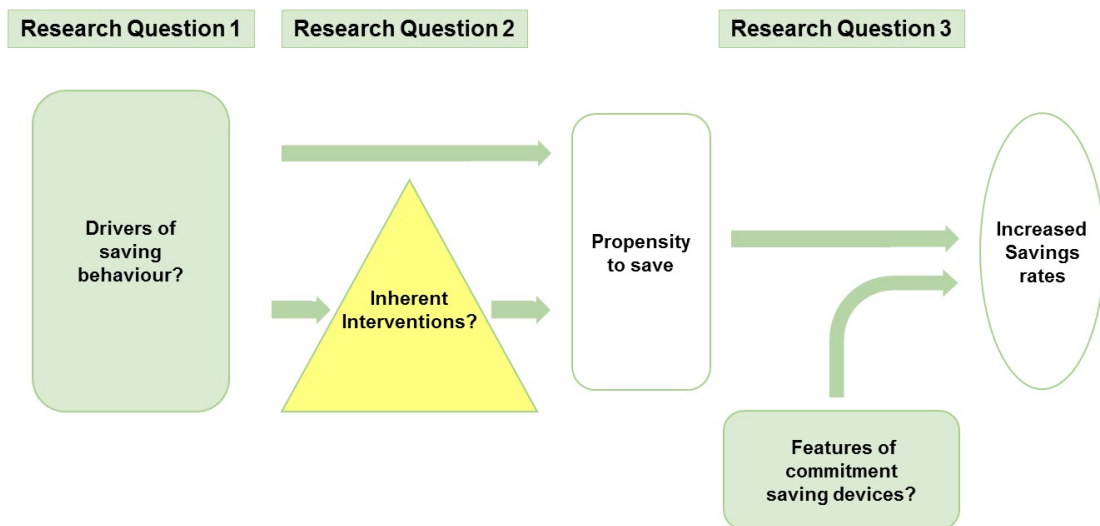


Figure 4: Framework of the Study

3. RESEARCH QUESTIONS

The literature on saving behaviour, behavioural economic theory that relates to saving behaviour, interventions and saving commitment devices were reviewed in the previous chapter. While a variety of potential concepts were noted to affect saving behaviour, only those concepts that intersect with the field of behavioural economics are explored for the purposes of this study.

Saving behaviour is considered to be irrational or non-standard when it does not comply with standard economic theory, which is based on the principle of rationality through optimisation, for example (Ok et al., 2015; Thaler, 2017). The popularity of savings groups as a saving mechanism despite its shortcomings (Afzal et al., 2017; Greaney et al., 2016) and the availability of alternative saving products that yield higher returns, may be an example of such irrational behaviour. The field of behavioural economics provides theories and models with the scope of explaining these behaviours more aptly (Hoff & Stiglitz, 2016). The saving behaviour of savings groups was, therefore, explored through a behavioural economic lens to answer the first research question:

Research Question 1:

What drives the saving behaviour of savings groups?

Savings groups' propensity to save depends on positive saving behaviour. However, saving behaviour in general, is open to a variety of positive, negative or undetermined influences; as illustrated in Table 1 of the previous chapter. As an informal saving mechanism that has proven to be successful in mobilising savings (Burlando & Canidio, 2017; Greaney et al., 2016; Kast et al., 2018; Ksoll et al., 2016), savings groups seem to have the ability to influence members' saving behaviour positively (Dupas et al., 2017).

Whereas a number of studies to date have evaluated interventions for improving saving behaviour (Berg & Zia, 2017; Beshears et al., 2015; Crossley et al., 2017; Thaler & Benartzi, 2004), this research considered whether savings groups have such interventions already naturally embedded in their design. The second research question to be answered is therefore as follows:

Research Question 2:

What inherent characteristics of savings groups serve as natural saving-behaviour interventions?

A better understanding of the drivers of behavioural change is important for the design of commitment saving devices with impact (Giné et al., 2018). For this reason, Research Questions 1 and 2 addressed the drivers of savings groups' saving behaviour and its inherent interventions that realise behavioural change. What remained to be answered was whether savings groups had any valued features for replication in alternative commitment saving devices.

The up-take and success of commitment saving devices are also dependent on features such as flexibility and liquidity (Galperti, 2015) and whether they meet the demand of customers. The popularity of savings groups (Le Polain et al., 2018) indicates that they possess features that are valued by customers which should be replicated to improve up-take of other commitment saving devices. Answers to Research Question 3 as presented below provided insights into the development of a behavioural design framework for effective commitment saving devices.

Research Question 3:

What features of savings groups can be replicated in alternative commitment saving devices?

The next chapter explains the research design and methodology to answer the three research questions.

4. RESEARCH METHODOLOGY

4.1. Introduction

This chapter outlines the methodology and design applied to answer the research questions posed in Chapter 3. A qualitative approach was used to explore savings groups in South Africa to obtain rich insights into the behavioural economics that drive their saving decisions. Data were collected through semi-structured interviews conducted on two levels: firstly, at the savings group level and secondly, at the consumer or individual savings group member level. The data were then analysed and categorised according to themes identified in the literature review as presented in Chapter 2.

Potential concerns around reliability and validity of data were considered while designing the research methodology, data collection and data analysis. Strategies to mitigate these concerns were formulated and executed with cognisance of time and resources available to the researcher. Ethical considerations were also addressed and presented with identified limitations of the study at the end of this chapter.

4.2 Choice of Research Methodology and Design

The main research question focused on determining what an appropriate behavioural economic model for saving behaviours could be. This question was explored in the context of saving groups and through a philosophy of interpretivism, since the researcher adopted an empathetic stance towards the research participants' points of view (Saunders, Lewis, & Thornhill, 2009), and considered their socially constructed reality (context) (Myers, 2013). Through this philosophical lens, the researcher gained an understanding of deeper meanings and the intentions of the participants (Myers, 2013) which were of particular importance in analysing saving behaviours. The researcher remained open to new knowledge throughout the study and allowed for development through the information shared by informants.

This in-depth understanding was obtained through an exploratory, qualitative study which was conducted on two levels: Level One focused on gathering information from saving groups, while Level Two focused on collecting data from individual members of saving groups. Qualitative research was appropriate for this study that explored a social phenomenon such as a saving group from participants' viewpoints (Williams, 2007), and how participants operated in their everyday life settings, with the context of

these settings taken into consideration (Yin, 2016). Furthermore, according to Gordon (2011), behavioural economics challenges the nature of qualitative thinking, and qualitative research can provide behavioural economic practitioners with skills and useful application techniques (Gordon, 2011). Behavioural economics- and qualitative ways of thinking therefore seem to complement each other, which further motivated the choice of a qualitative research methodology for this particular study.

The majority of prior behavioural economic studies on saving behaviour followed an experimental research methodology through RCTs (Kast et al., 2018; Ksoll et al, 2016; Le Polain et al., 2018). However, this qualitative study was conducted specifically to obtain an in-depth understanding of savings groups' saving behaviour, characteristics that act as interventions to change their behaviour, and features valued by members. This study, therefore, contributes to the literature on savings groups with a methodological approach that combined the fields of saving behaviour, savings groups, saving-promotion interventions and commitment saving devices in a single behavioural economic study.

Both deductive and inductive approaches were followed during the course of this study. Peer reviewed academic literature was first used to identify relevant, existing theoretical concepts from the field of behavioural economics that were subsequently investigated in the context of saving groups. The researcher was cognisant of these concepts during the preparation of the data collection tools for the Level One and Level Two semi-structured interviews. According to Yin (2016), this is a deductive research approach as theoretical concepts determined the data that were collected on both Level One and Level Two of the study. The study then followed an inductive approach to identify themes that emerged during the course of the qualitative data analysis. An analysis procedure that is more flexible and allows for a deeper understanding of the research context and meaning of actions in the field, is considered to be an inductive approach (Yin, 2016). Saunders and Lewis (2012) also promoted combining both inductive and deductive approaches in a single study. Concepts derived from existing literature and new themes that emerged were incorporated in the behavioural design framework proposed at the conclusion of the study.

Data were collected and analysed from semi-structured focus-group interviews with saving groups and in-depth interviews with individual members of saving groups. This multi-method approach to data collection was taken to compensate for each interview type's limitations and to exploit their respective benefits (Brewer & Hunter, 2006). This

is therefore a form of triangulation to improve the trustworthiness of the data collected. Participants were interviewed according to a list of themes and questions (Annexure 3), although the semi-structured approach allowed for the phrasing of questions to be adapted according to the context and circumstances during the interview - which followed a conversational tone (Yin, 2016). The purpose of this approach was to allow a controlled amount of freedom for spontaneous narratives from informants that may have harboured important new insights. The interviewer recorded interviews for transcription with the permission of participants and took detailed notes at the time to increase the transparency and trustworthiness of data collected.

Due to the time constraints of the proposed research project, interviews with participants were conducted only once during 2018. The research results are therefore only representative of this particular period in 2018, and no inferences based on these results were therefore made for past or future periods. According to Saunders and Lewis (2012), this snapshot of participants' views at a specific point in time is termed a cross-sectional study.

The research questions listed in the previous chapter were answered on two levels. Level One focus-group interviews with savings groups answered the first two research questions, while Level Two interviews with individual members of savings groups addressed Research Questions 2 and 3. The data collection overlap on Research Question 2 was designed in this way to corroborate data from two independent sources with different perspectives (Myers, 2013). This informant triangulation was performed in order to increase the trustworthiness of the research findings.

4.3 Population

Savings groups operate in the informal economy and holistic and comprehensive statistics on the exact size of the total population in South Africa are therefore not available. NASASA estimates 11.5 million members participate in excess of 800 000 *stokvels* in South Africa (NASASA, 2018), but organisations such as SaveAct and BSK Marketing also have their own databases of savings groups and their members which add to the numbers reported.

The estimated population for Level One of this research project was all savings groups in operation in South Africa, while the population for Level Two was all individual members of savings groups within the South African context.

4.4 Unit of Analysis

The unit of analysis for Level One of this study was saving groups, and the unit of analysis for Level 2 was individual members of saving groups as consumers of commitment saving devices.

4.5 Sampling Method and Size

Saunders et al. (2009) posit that a sampling frame is a complete list of all the cases in the population from which your sample can be selected. Savings groups are informal savings vehicles in South Africa and unregulated as such. For this reason, no complete list exists for either all savings groups or for members of all savings groups in South Africa. Even if such lists were available; limitations on resources and time would not have allowed for the entire sampling frame to be investigated. However, the researcher identified independent organisations that offer services to this market and maintain databases from which samples were selected.

Since there are no set rules for a sample size in qualitative research (Patton, 2002), the researcher set the boundaries for both Level One and Level Two sample sizes at ten interviews each. These boundaries were set with the caveat that interviews would come to an end once data saturation had been reached for the particular sample. According to O'Reilly and Parker (2013), the appropriateness of data collected is as important as the number of participants to determine the adequacy of a sample. Since the aim was not to conduct a set number of interviews, but rather to gather data with adequate depth to answer the research questions, the researcher remained flexible in terms of the size of the samples. Table 3 reflects the sample size per level selected from each database or source:

Table 3: Sample Size – Level One and Two Interviews

Type of savings group	BSK Marketing	SaveAct	Contacts
Level 1:			
<i>Stokvel</i>	5	-	-
SSC Group	-	5	-
Level 2:			
<i>Stokvel</i>	-	-	8
SSC Group	-	2	-

Obtaining access to interview savings groups and members of savings groups proved to some extent to be time-consuming and complicated. Due to the constraints of time and resources, the researcher had to place reliance on the abovementioned organisations to schedule interviews on her behalf. These organisations hold trust relationships with the savings groups and their members and were able to explain the research aims and process clearly to all parties concerned.

4.5.1 Research Level One: Savings Groups

A number of different types of savings groups exist in South Africa, namely: general-, burial-, grocery-, birthday-, investment- and other special-purpose saving groups (African Response, 2012). Savings groups with general saving goals are the second most popular type, generally with a membership of 18 members at most (African Response, 2014). The Level One sample was selected from a combination of grocery- and general-type savings groups as a triangulation strategy per the discussion in section 4.9 below.

The selection of specific savings groups was purposive in order to maximise variation within the sample and to allow for a diverse combination of typical cases, extraordinary cases and cases that meet predetermined qualities of importance (Patton, 2002). According to Patton (2002), common themes that emerge from such a diverse sample “cut through the noise of variation” (p.243) and aid the researcher with greater insights on behavioural economic concepts through the varied perspectives obtained. For this reason, the ten interviews were divided between traditional *stokvel* savings groups and SSC groups located in different provinces, from different cultures and speaking different languages.

Data should be gathered until no new patterns emerge from the data and thematic saturation is achieved (Gaskell, 2000). However, according to O’Reilly and Parker (2013), the sufficiency of a sample size in qualitative research should be measured by depth of data and not by frequencies. Data collection from savings-group interviews approached thematic saturation after ten interviews indicated in the trend shown in Figure 5 below. By the tenth interview, only three new unique responses were identified and coded for further analysis. Due to the limitations of time and resources, the decision was made to cease data collection at this time.

This particular study first followed a deductive approach whereby 13 themes were pre-selected from literature before the first group interview was conducted. Figure 5 illustrates the additional themes identified from the inductive analysis approach that followed.

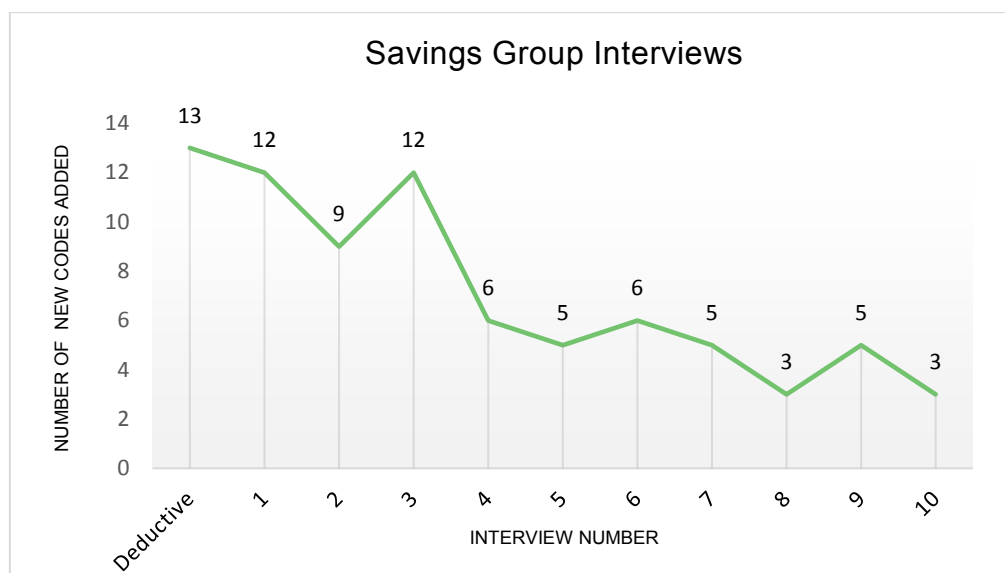


Figure 5: Data Saturation: Savings Group Interviews

It is important to note the trend post interview number five. Whilst interviews one to five represent *stokvel* groups; interviews six to ten reflect SSC group interviews. Despite the fact that the type of savings group interviewed changed post interview five, the trend in new insights identified remained more-or-less flat at first and then continued the downward trend. This means that the majority of insights had already been shared before the SSC group interviews started. A spike in the trend after interview five would have been an indication that these two types of savings groups differed significantly in terms of their responses.

4.5.2 Research Level Two: Members of Savings Groups

Level Two informants were selected from the researcher's own contacts, from onward recommendations from contacts towards other individuals and from the organisational databases identified. Sampling for interviews with individuals was, therefore, a combination of purposive and snowball sampling. Mixed method sampling is a form of triangulation to strengthen the study by obtaining different, information-rich perspectives (Patton, 2002).

Neither of the two samples selected for levels one and two of the study was considered to be representative of their respective populations due to the subjectivity of their sample selections. No generalisations from the results of this study were therefore made to the same extent as probability sampling would allow (Maxwell, 2013).

Data collection from interviews with individual members of saving groups approached saturation after ten interviews as is evident in Figure 6 below. The tenth interview offered only a single new and unique response for further analysis. The researcher assessed the depth of data collected (O'Reilly & Parker, 2013) at this point and considered it to be appropriate to answer the research question. The decision was therefore made to cease data collection at this time.

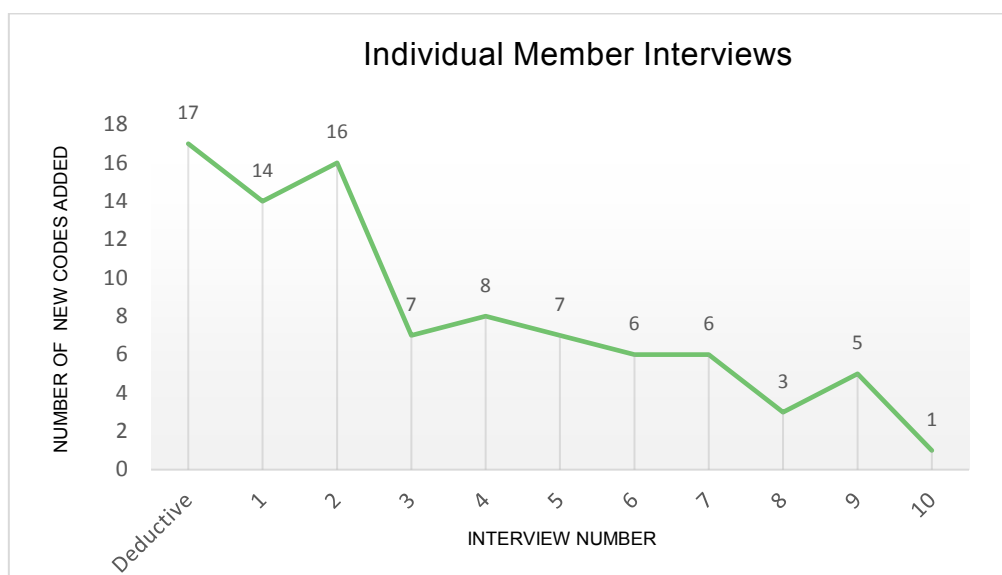


Figure 6: Data Saturation: Individual Member Interviews

Interviews one to eight represent interviews with individual members of *stokvel* savings groups, while the last two interviews were conducted with SSC group members. The decision to extend the Level Two interviews to SSC groups was made once the researcher realised that data saturation was drawing closer. The trend post interview eight indicates only a minor increase in new insights from interview nine, with data saturation almost reached during the final interview. From this trend, it is apparent that individual informants' insights from different types of savings groups did not differ significantly since no material upswing in insights was identified post interview eight.

4.6 Measurement Instrument and Data Collection Tool

The researcher or interviewer serves as the measurement instrument in a qualitative study, as she uses her senses to gather information and to interpret the interview context, according to Maxwell (2013). For this reason, interview guides were used as a practical tool to ensure data were collected consistently between various participants in each sample.

4.6.1 Research Level One: Savings Groups

Annexure 3.1 provides a guide to the interview questions that were posed to savings groups. These questions are based on key behavioural economic concepts that may influence saving behaviour as identified in the literature review. The proposed questions per the interview guide collected data to investigate if the saving behaviour of savings groups could be explained by these select theoretical concepts.

To strengthen the effectiveness and credibility of the interview guide, two pilot interviews were performed in advance with groups similar to the planned participants, and by the researcher in person. The results of these pilot tests were compared in terms of comprehension, and irregular responses were investigated to remove ambiguity in the questions. Due to the quality of data collected during pilot interviews, these interviews were included in the data analysis and findings reported.

4.6.2 Research Level Two: Members of Savings Groups

A draft guide for interviewing individual members of saving groups can be found in Annexure 3.2. These interview questions were pre-tested in two pilot interviews and adapted to reduce misinterpretation and to ensure the research objectives were met by the data gathered. Research Question 2 as presented in Chapter 3 was addressed in both the Level One and Level Two interviews as a form of informant triangulation between two independent sources (Myers, 2003).

4.7 Data Gathering Process and Collection Method

Interviews with savings groups and members of savings groups located in the Gauteng Province were conducted in person, while groups and members situated in the province of KwaZulu-Natal were interviewed by SaveAct's field agents. The reasons for this interview allocation were as follows: firstly, due to convenience as the researcher is based in Gauteng, and secondly, due to the cultural and language differences between the researcher and the informants. Thirdly, the decision to

interview two individual informants in KwaZulu-Natal was made when it became evident during interviews conducted in Gauteng, that data saturation was drawing closer. Finally, fieldworkers conducted interviews in isiZulu as a strategy to obtain rich data in informants' home language and to reduce interviewer biases to ensure increased trustworthiness of the data collected.

4.7.1 Research Level One: Savings Groups

Individuals who shared common views and circumstances were gathered together to answer interview questions collectively, which constitutes a focus group, according to Yin (2016). General-type savings groups have a maximum of 18 members (African Response, 2014), which was considered controllable for the semi-structured focus-group interviews conducted.

Each interview commenced with an explanation of the purpose of the study and an assurance that all responses would be treated confidentially. Permission to audio-record the interviews was obtained. The expectations for the interview and the estimated time to complete the questions were also explained to the group. The interviewer then commenced with asking the questions according to the interview guide, allowing for interaction and adaptation according to circumstances. The interviewer acted as moderator for the group; guiding all members to answer interview questions but with minimum interference.

The following step-by-step approach was followed for data collection from each focus group interview:

1. Conduct the interview; take notes and audio-record the interviews.
2. Transcribe the interview from notes and recordings verbatim.
3. Analyse the results from the interviews and take note of insights for use in subsequent interviews.
4. Consider if the interview guide needed to be adjusted in accordance with emerging themes.

The researcher acknowledges that personal biases and influences on the participants may have impacted the trustworthiness of the data collected (Maxwell, 2013). Biases that have been formed through education, lived experiences and personal values might have influenced how interviews were conducted and what data were collected. In order to mitigate this risk, the researcher was aware of biases and applied an objective mind-set and neutral demeanour during data collection done in person and

during transcription. Field agents who conducted interviews on the researcher's behalf were also briefed on the same practices. Notes were taken meticulously, and only verbatim transcriptions from notes and audio-recordings were used for the data analysis to improve transparency. The services of an independent translator were also sourced where needed to ensure that meanings were correctly conveyed in research results.

Interviews were as far as possible conducted at a setting local to the participants, such as a member's house or a community space, to further promote the neutrality of the environment. In the event that the interviewer needed clarification to correctly interpret the meaning of responses during the interviews, questions were posed to the group for clarification to avoid any misunderstandings. Groups were also invited to prompt for clarification in the event that a question was not well understood. Where needed, a local language speaker moderated the question and responses to ensure the accuracy of data recorded.

4.7.2 Research Level Two: Members of Savings Groups

Semi-structured face-to-face interviews were held with individual saving group members as consumers of commitment saving devices. Each interview commenced with an explanation of the purpose of the study and that all responses would be treated confidentially. Permission to audio-record the interview was obtained. The expectations for the interview and the estimated time to complete the questions were also shared. The interviewer then commenced with the questions according to an interview guide, allowing for interaction and adaptation according to circumstances.

The following step-by-step approach was followed for data collection from each interview:

1. Conduct the interview; take notes and audio-record the interviews.
2. Transcribe the interview from notes and recordings verbatim.
3. Analyse the results from the interviews and take note of insights for use in subsequent interviews.
4. Consider if the interview guide needed to be adjusted in accordance with emerging themes.

The researcher once again acknowledges that personal biases and influences on the participants may have posed a threat to the trustworthiness of the data collected (Maxwell, 2013). Biases that have been formed through education, lived experiences

and personal values may have influenced how interviews were conducted and what data was collected. In order to mitigate this risk, the researcher was aware of biases and applied an objective mind-set and neutral demeanour during data collection and transcription. Field agents who conducted interviews on the researcher's behalf were also briefed on the same practices. Notes were taken meticulously and only verbatim transcriptions from notes and audio were used for the data analysis to improve transparency. Interviews were as far as possible conducted in a setting local to the participants to further promote the neutrality of the environment.

In the event that the interviewer needed clarification to correctly interpret the meaning of responses during the interviews, questions were posed to obtain clarity and to avoid any misunderstandings. Individual informants were also invited to prompt for clarification in the event that a question was not well understood. The services of an independent translator were also sourced where needed to ensure that meanings were correctly conveyed in research results.

4.8 Data Analysis Approach

Data retrieved from both Level One and Level Two interviews were analysed in a similar fashion. Braun and Clarke (2006) identified the following phases to conduct a thematic analysis of qualitative data obtained across all interviews:

- Step 1: Familiarisation with data to gain an understanding of deeper meanings in accordance with the philosophy of interpretivism (Saunders et al., 2009) applied throughout the study
- Step 2: Generate initial codes and code interview data
- Step 3: Search for themes emerging from the initial codes allocated to data
- Step 4: Review themes and create a thematic map of the analysis, using Atlas.Ti.
- Step 5: Refine the specifics of each theme through an ongoing analysis
- Step 6: Produce a design framework for commitment saving devices for the purpose of this study.

Thematic analysis is considered to be a useful and flexible method for qualitative research in the behavioural sciences (Braun & Clarke, 2006). A 15-point checklist of criteria for trustworthy thematic analysis as proposed by Braun and Clarke (2006), was used to ensure accuracy of the analysis. Furthermore, all codes, categories and themes were reviewed and refined during a second round of analysis to ensure consistency across the data set (Braun & Clarke, 2006). The final thematic map is

presented in Annexure 4. Concepts that emerged as themes were, therefore, compared and contrasted across data collected from all the interviews, findings were interpreted and conclusions drawn (Yin, 2016) in order to propose a behavioural design framework for commitment saving devices.

4.9 Strategies to ensure quality of data

Yin (2016) describes triangulation as a mind-set to be adopted not only during the design of a study, but also during fieldwork and data analysis. The researcher attempted to find at least three ways to substantiate data or procedures throughout the study. Figure 7 represents a matrix of the strategies applied to ensure the quality of data collected:

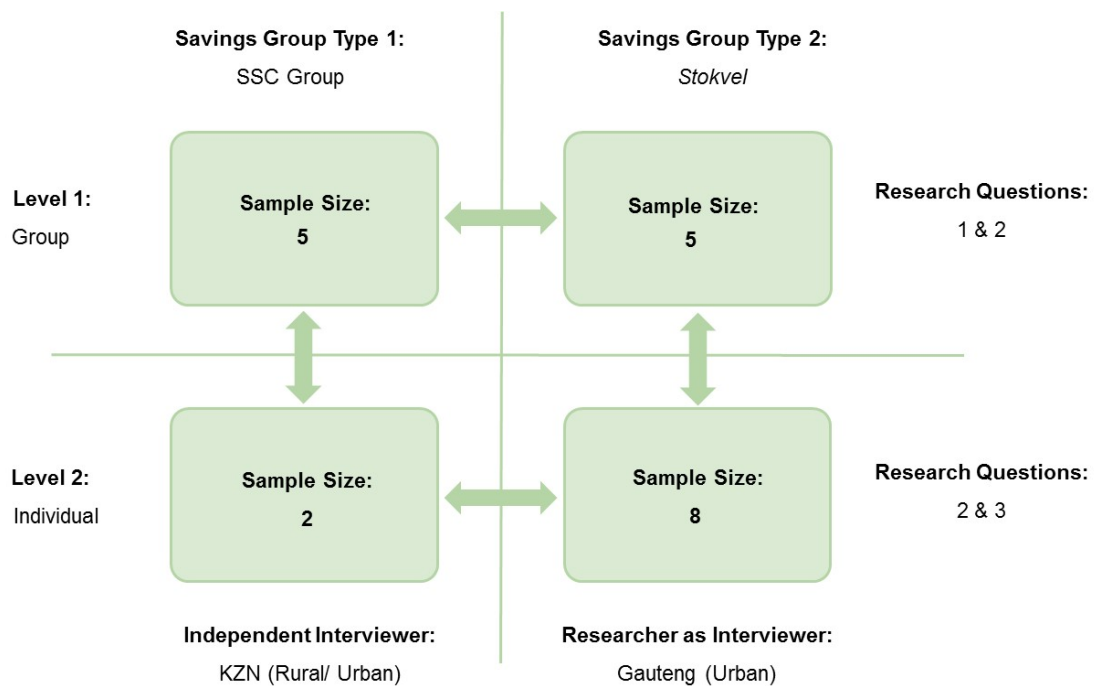


Figure 7: Triangulation Matrix

The strategies employed and reflected in the matrix can be explained as follows:

Strategy 1: Methodological triangulation

Individuals respond differently to questions in a group setting as opposed to when they are interviewed on their own. Peer-pressure (Beshears et al., 2015; Jakiela & Ozier, 2015) and social influences (Laibson & List, 2015) could influence or inhibit participant responses. For this reason, the researcher designed the study to gather data using two methodologies: from both focus group and in-depth individual interviews. Shenton

(2004) states that both methods have their shortcomings, but also have distinct characteristics that give each its individual strength. By using two different interview methods, the volume and range of data collected was expanded as individual informants shared their thoughts more freely when interviewed on their own.

Strategy 2: Informant triangulation

Research Question 2: “What inherent characteristics of savings groups serve as natural saving behaviour interventions?” was posed to both savings groups and individual members as per strategy 1 mentioned above. This question was deemed to be at the centre of this study and the researcher, therefore, gathered perspectives from two independent data sources (Shenton, 2004) to increase the richness of data collected and to validate data accuracy.

Strategy 3: Triangulation between types of savings groups

Stokvels and SSC groups share some characteristics in terms of how these mechanisms mobilise savings, create social capital and operate. Both mechanisms also offer credit to members, but in significantly different ways. SaveAct trains and facilitates groups to save and borrow in accordance with a predetermined model, which is more structured than typical *stokvels*' processes. *Stokvels* are more prevalent in urban areas, especially the Gauteng province (African Response, 2012), while the focus of SSC groups is on economic development in rural areas (SafeAct, 2018). The researcher believed that the quality of the findings would be enriched by data from both types of savings groups, providing a more holistic result that caters for different group structures and dynamics.

Strategy 4: Interviewer triangulation

Five SSC group interviews and two individual interviews were conducted by SaveAct field workers for practical reasons and to reduce interviewer bias. The benefits of having a selection of interviews conducted by locally-based field workers were clear: they had experience in conducting research; they had the linguistic ability to ask the interview questions in isiZulu; they understood the context; and they evoked trust from the participants. The researcher expected to gain valuable insights and quality data based on these benefits.

4.10 Research Ethics

The researcher obtained ethical clearance from the Ethics Committee of the Gordon Institute of Business Science (GIBS) prior to starting the data collection (Appendix 2). All participants were asked to complete a Consent Form (Appendix 3) after the proceedings had been explained and they had been assured of their confidentiality. Anonymity was maintained through the reporting of the findings, with names of all participants being changed to pseudonyms.

4.11 Research Limitations

The following limitations to the study were identified:

4.11.1 Researcher Biases

One of the main risks of qualitative research is the biases and assumptions introduced by the researcher, which may affect the results. The researcher's assumptions on the outcome of the study were twofold: firstly, that behavioural economic theories would explain the non-standard saving behaviours of savings groups; and secondly, that the inherent interventions and valued features of savings groups could be applied in the design of alternative formal and informal saving products.

To address this limitation, the researcher commenced the study by exploring whether standard economic theory could explain the saving behaviours of saving groups. The findings later confirmed the first assumption. The second assumption was addressed through the research questions and interviews conducted and a framework was proposed in the concluding chapter.

4.11.2 Time Horizon

A cross-sectional study was performed due to time constraints. Interviews were performed at one point in time during 2018. However, behaviours are subject to change and no inferences were therefore made on the transference of identified behaviours into future periods (Williams, 2007).

4.11.3 Cultural and Language Differences

Due to the cultural and language diversity in South Africa, English is not the home language of the informants to this study. Half of the Level One interviews and eight out of the ten Level Two interviews were conducted in English; which was therefore considered a limitation to the study. This was mitigated by simple, unambiguous

phrasing of questions to prevent true meanings being lost in translation, as well as pilot-testing of interview questions to ensure clarity.

Interview guides were translated into isiZulu for field guides who conducted interviews in the Kwazulu-Natal province. Interview recordings were then translated and transcribed by an organisation with native isiZulu speakers; experienced and skilled in this process.

4.11.4 Access to the Informal Market

Data collection in the informal market presents unique challenges as relationships and connections need to be built to gain access to informants for data collection. For this reason, and due to time constraints as mentioned before, the researcher had to rely on external assistance to arrange face-to-face group interviews, which limited the diversity of the sample selection to some extent.

4.11.5 Gender bias

Linking to the limitation of access to the informal market; the limitation of gender bias in the sample selection was mostly due to access constraints. All respondents apart from one individual informant, were women.

The next chapter presents the findings from the data collection along the lines of what was discussed earlier in this chapter.

5. RESULTS

5.1. Introduction

Chapter 5 presents the key findings of interviews conducted with ten savings groups (Level One), representing 296 members with an average of 14 participants per interview. Level Two interviews were conducted with ten individual members of separate saving groups; all with the aim to answer the three research questions posed in Chapter 3.

This section begins with details of the interviewed participants (informants) and provides information towards a better understanding of the background and context of the interviews conducted. This is followed by a qualitative analysis of the results of each research question where key themes that emerged from the informants' responses were identified and supported by insightful quotations.

5.2 Interview Participants and Context

5.2.1 Level One: Savings Group Informants

Names of all informant groups were changed to pseudonyms as presented in Table 4, in order to protect their identities as promised during the interview introduction. Two types of savings groups, *stokvels* and SSC Groups, were selected in an attempt to create a heterogeneous sample with diversity across their constitutions, saving purpose, locations, language and culture.

Table 4: Level One – Savings Group Informants

No	Group Pseudonym	Group Type	Saving Purpose	Geographic Location	Group Existence	Number of Members
1	Build Up	<i>Stokvel</i>	Groceries, Burial	<i>Gauteng</i> : Diepkloof, Soweto	15 yrs.	35 members, 14 participants
2	Givers	<i>Stokvel</i>	Groceries	<i>Gauteng</i> : Diepkloof, Soweto	5 yrs.	29 members, 21 participants
3	Hope	<i>Stokvel</i>	Groceries, Education, Helping Hand	<i>Gauteng</i> : Esselen Park, Tembisa	10 yrs.	64 members, 14 participants

Table 4 (Continued): Level One – Savings Group Informants

No	Group Pseudonym	Group Type	Saving Purpose	Geographic Location	Group Existence	Number of Members
4	Helping Hand	<i>Stokvel</i>	Groceries	<i>Gauteng:</i> Orlando-West, Soweto	9 yrs.	35 members, 20 participants
5	Ariel	<i>Stokvel</i>	Groceries	<i>Gauteng:</i> Brixton, Johannesburg	7 yrs.	68 members, 9 participants
6	We Do	SSC Group	General Saving	<i>Kwa-Zulu Natal:</i> Gamalakhe, Margate	5 yrs.	11 members 11 participants
7	Builders	SSC Group	General Saving	<i>Kwa-Zulu Natal:</i> KwaMavundla, Margate	4 yrs.	11 members 11 participants
8	We Are Working	SSC Group	General Saving	<i>Kwa-Zulu Natal:</i> KwaNzimakwe, Margate	2 yrs.	17 members 17 participants
9	We Are Doing	SSC Group	General Saving	<i>Kwa-Zulu Natal:</i> Msinga	4 yrs.	15 members 15 participants
10	She	SSC Group	General Saving	<i>Kwa-Zulu Natal:</i> Msinga	5 yrs.	11 members 11 participants

Stokvels are considered to be the most popular and well-known type of savings group in South Africa. As mentioned in Chapter 4, *stokvels* vary greatly in terms of their saving purpose. Access to five *stokvel* groups was arranged with the assistance of BSK Marketing and the researcher accompanied the representatives on their marketing campaigns during which the interviews were conducted. For this reason, members of the savings groups selected were not in full attendance – which would have been the case if interviews were conducted at the groups’ savings meetings. The CEO of BSK Marketing, an organisation with 25 years’ experience in market research on *stokvels*, explained that the monthly savings group meetings are sacred (Skenjana, personal communication, 21 August 2018). Visitors are generally not welcomed at these meetings or are treated with distrust, unless the visitor has received a specific invitation or has built a relationship with the group over a period of time (Skenjana, personal communication, 21 August 2018). Savings meetings are also considered to be private, since money is generally exchanged at these meetings and matters of a personal nature are tabled for discussion.

Stokvel focus-group interviews were conducted face-to-face and at one of the group members' houses, and in English. In the few instances where a group did not understand a question posed, the BSK representative was able to translate the question into Tswana or Sesotho for greater clarity. Conducting the interviews in English was not considered to be a material constraint to the informants' ability to respond and share information. However, as will be evident from the supporting quotations presented later in this chapter; the use of English will not always be grammatically correct.

Interviews with SSC groups were conducted in isiZulu in Kwa-Zulu Natal. Due to the constraints of access, time and resources; fieldworkers in the employment of SaveAct conducted five group interviews divided between the Margate and Makhethi districts. SSC groups differ from *stokvels* in that they are facilitated by SaveAct, a Non-Governmental Organisation based in KwaZulu-Natal and is based on a very specific, replicable savings and credit model. Interviews with these five groups were conducted on location and at their monthly savings meetings. The fact that these five interviews were conducted by trusted and experienced fieldworkers in the home language of these groups, was considered to contribute to the richness of data collection. An organisation named MICTERT assisted with the translation and transcription of the interview data.

5.2.2 Level Two: Individual Informants

All eight *stokvel* interviews per Table 5, were conducted face-to-face either at the individual informant's home or workplace. Members of general savings *stokvels* were selected for interviews as these individuals were considered to be slightly more knowledgeable, focused and with an elevated propensity to save as opposed to members of *stokvel* groups with specific consumption-led saving purposes. After eight *stokvel* interviews, data saturation was drawing closer, and the decision was made to extend the individual interviews to individual members of SSC groups. Two interviews were therefore conducted with individual members of SSC groups in isiZulu by SaveAct in Kwa-Zulu Natal.

Table 5: Level Two – Individual Informants

No	Pseudonym	Group Type	Saving Purpose	Geographic Location	Number of Members	Membership Period
1	Individual One [I1]	<i>Stokvel</i>	General Saving	Gauteng: Fourways, Johannesburg	10	2 years
2	Individual Two [I2]	<i>Stokvel</i>	General Saving	Gauteng: Bedfordview, Johannesburg	7	1.5 years
3	Individual Three [I3]	<i>Stokvel</i>	General Saving	Gauteng: Randburg, Johannesburg	10	3 years
4	Individual Four [I4]	<i>Stokvel</i>	General Saving	Gauteng: Tembisa, Johannesburg	6	10 years
5	Individual Five [I5]	<i>Stokvel</i>	General Saving	Gauteng: Alexandra, Johannesburg	8	1.5 years
6	Individual Six [I6]	<i>Stokvel</i>	General Saving, Groceries	Gauteng: Edenvale, Johannesburg	10	11 years
7	Individual Seven [I7]	<i>Stokvel</i>	General Saving	Gauteng: Ferndale, Johannesburg	7	4 months
8	Individual Eight [I8]	<i>Stokvel</i>	General Saving	North-West: Rustenburg	6	2 years
9	Individual Nine [I9]	SSC Group	General Saving	Kwa-Zulu Natal: Margate	11	4 years
10	Individual Ten [I10]	SSC Group	General Saving	Kwa-Zulu Natal: Makhethi	15	4 years

5.3 Results: Research Question 1

Research Question 1:

What drives the saving behaviour of savings groups?

Saving behaviours are considered to be irrational or non-standard when they do not comply with standard economic theory. The popularity of savings groups as a saving mechanism despite the availability of commercial saving products that yield higher

returns, is a possible example of such non-standard behaviour. The first research question, therefore, aimed to identify the key drivers of savings groups' saving behaviour, with a special focus on those drivers that can be explained by behavioural economic theories and models.

The field of behavioural economics is an extension of standard economic theory and can therefore not be applied without taking the concepts of rationality into consideration. For this reason, Research Question 1 was answered by firstly identifying the drivers of standard (rational) saving behaviours and then the drivers of non-standard saving behaviours. This research question was addressed to savings groups (Level One informants) only. A high-level overview of the results can be found in Figure 8 below:

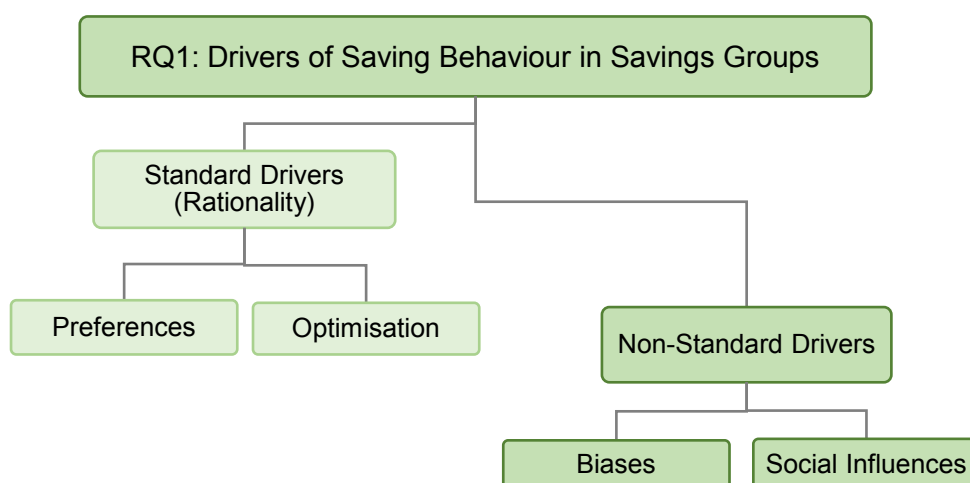


Figure 8: Overview of Results – Research Question 1

It emerged from the savings group informants that a well-defined saving purpose and the need for optimisation drive their rational decisions to save in the first place. However, additional drivers that mobilise savings into savings groups emerged. Biases and social capital, in particular, were identified by savings-group informants as of significant relevance in driving their saving decisions.

5.3.1 Standard Drivers of Saving Behaviours

5.3.1.1 Preferences

Every savings group interviewed expressed their existential purpose and one or more clearly defined saving goals to fulfil this purpose. Even though all these groups were created with the overarching purpose of saving; they revealed clear preferences in

terms of what they were saving for. These preferences are also specifically recorded in the constitutions or rules in the case of the five *stokvel* groups that were created for a predetermined purpose, for example saving for groceries. SSC groups were saving for “money” or otherwise for members to receive a lump sum of money at some point in future to use as they see fit.

“Our group is saving for many things. First thing: we save to buy the groceries. The second thing, we save the money to help our children to go to school in January. Other thing...let’s say if somebody want to do their...build their house or want to do their own business, whatever she wants to do. We help people to doing that stuff.” (Hope).

“The main reasons for savings was for us to save money to be able to achieve our goals, so that every person can be able to buy the things that they need, like a table, a TV, sofas and any other thing that you need in your life.” (We Are Doing).

Preferences around how the groups organise themselves, who they allow as members, when they meet, how the sharing takes place and so forth, varied between all the groups. The internal controls and rules that guide these operational activities were always clearly defined, communicated and understood by all members.

“We do not prefer the bank way, we prefer to do things the way we do, see each other’s transactions, count our money ourselves because we are not even educated the most of us.” (We Do).

“We have a finance person, we have a secretary, a overseer or chairperson. We balance the money with the book. We give proof of payment to each member. We balance this with the bank statements...” (Ariel).

“And everybody knows the time. We start the club at eight o’clock...from half-past-eight, you’re late. And we don’t allow men to come to our club because we are a group of women. We are not a society to develop MEN in our club.” (Hope).

Groups interviewed by the researcher were never hesitant to express their preferences in any respect and did not require much time to think before responding. These groups

(and their members) knew exactly what they want and expect from their savings institution.

5.3.1.2 Optimisation

With well-defined purposes and savings goals, the economic man would consequently be interested in determining whether savings groups optimised their savings. Saving for a better life, as many informants phrased it, can in itself be regarded as a form of optimisation. Saving as part of a savings group was considered to be the pathway to achieve this.

“The reason for us to save this way is to upgrade each other, to help each other and to see each and every one of us having nice things especially on what they said our main focus is to build houses and we will, our homes will be nice if I can put it in [save] that way.” (She).

“We have children and we have homes; that is why we always think of saving to give them a better life.” (We are Working).

Examples of how savings amounts can be optimised would be to source the best savings product offering the highest return in the form of interest and low transaction fees; price savings on purchases; and so forth. The ten group interviews delivered mixed results in this respect. While bulk buying was widely recognised as a method to optimise group savings amounts; efforts to optimise where the funds were stored, produced different results between *stokvel*- and SSC groups.

“We save and then we go to Makro and see the prices. We negotiate with people at Makro and check the specials before December. We take the specials... We contribute every month and then the food last at least 6 months, like 3kg. rice etc. Because as a group you can buy more than on your own. The interest is also better.” (Ariel).

“The reason why we decided to form this group is that we can’t do things on our own as people but if you team up with the others and put together our money you are even able to borrow money and a sizeable amount and do big things that you would not have been able to do yourself.” (We Are Doing).

All five *stokvel* groups kept their funds in bank accounts where interest was earned, while none of the SSC groups owned bank accounts. However, the concept of earning interest on savings amounts was well understood by all ten groups. Due to the number of members in some of the *stokvel* groups, substantial amounts accumulated in their bank accounts over the period of a year – the typical savings cycle. The standard practice is for the treasurer to announce the amount of interest earned at monthly meetings to ensure full transparency. On the other hand, it emerged that all SSC groups store their savings in a tin at one of the member's homes.

Optimisation in terms of finding and storing savings in the safest savings product that offers the best possible interest rate did not seem to be a priority in any of the informant groups. The *stokvel* groups were questioned about the interest rates they earned and whether they pursued alternative banking options offering better interest rates on deposited amounts. Two *stokvel* groups moved their funds to banks offering higher interest rates, but have never considered or investigated other financial product options to grow their funds. Some responses that reflect the view of three out of five groups were as follows:

“No, we don't know any better rate. Think it is the best interest because we've used it [bank account] for quite a while now. We've never tried the other banks.”
(Build Up).

“It [interest earned] is not the same every year. Other years it is going down, some year it is going up. We know the bank knows how it is working.” (Hope).

SSC Groups on the other hand, did not seem to prioritise earning interest on a bank account, and were more focussed on the potential charges they could avoid by storing the savings there. However, the groups did earn interest from lending money to members who repaid their borrowings with interest and it was considered to be more than a bank account would offer.

“The reason why we could not keep it there was that we thought the bank will have a lot of charges which could reduce our money and to find that it is not the same amount that we were aiming for.” (We Are Doing).

“Because here we see our money and we count it, unlike at the bank where we do not see it, here we see our interests which I don’t think they have the same amount as what we get here.” (Builders).

The themes of preference and optimisation emerged as drivers of standard saving behaviour from the research findings. Table 6 provides a summary of the number of groups (per type) that responded positively with respect to these themes and their related categories, as presented in this section.

Table 6: Overview of Standard Drivers of Saving Behaviour

Drivers	Categories	Stokvels	SSC Groups
Preference	Saving purpose	5	5
	Operations	5	5
Optimisation	Saving	5	5
	Bulk buying	5	n/a
	Interest earnings	2	5
	Saving on charges	-	5

5.3.2 Non-Standard Drivers of Saving Behaviours

Rationality underpins standard saving behaviour, whereas various behavioural aspects could influence economic decisions and result in non-standard saving behaviour. With contradictory results reported in terms of optimisation in the previous section, Research Question 1 continued to probe whether behavioural aspects influenced the saving behaviour of savings groups.

From the research, two themes emerged that seemed to consolidate key drivers of savings decisions in saving groups: firstly, biases towards the current state (status quo bias); matters that confirm beliefs (confirmation bias); and to avoid losses at all costs (loss aversion) were evident from informant’s responses; and secondly, the social influences present in savings groups, were arguably the most important drivers of decisions within the group context.

5.3.2.1 Biases

A preference towards maintaining the current state of affairs (status quo) seems to be prevalent from most of the savings groups interviewed. It is apparent that changing the rules, constitution, purpose and saving goals of savings groups are only done as an

exception. Most of the groups stated that contribution amounts are revised once a year (if needed) and only if group consensus is achieved.

“Because we can’t change things in the middle of the year. It creates a lot of chaos and confusion.” (Helping Hand).

“No we have not made any changes. There are no disturbances so far”. (Builders).

“Not yet. Everything is going well, there are no problems so far.” (We Do).

Saving as part of a savings group is not risk-free and safe storage of funds is therefore important to members. However, group informants seem to discount the risks of fraud and theft due to a history of successful saving and their belief in the safety of the funds held by their groups. Receiving their groceries or lump sums at the end of a cycle or seeing money stored in a tin, also provided visual proof that confirmed their belief that this saving mechanism is safe and operates effectively.

“Yes, it [safety] does concern us because we are in the rural areas. Here it would be better if there was someone guarding our money for us where we keep our tin...because we have been witnessing the money all along and we know that it is there, that is the assurance.” (We Are Doing).

“Because it is safe. And we just record it in the book so that it can be safe. It is not safe anywhere else. Because it is too risky. We rather keep our money in the bank. We know the bank is safe.” (Hope).

“They say the proof is in the pudding. So we’ve seen the pudding a couple of times. So it is proving that it works.” (Helping Hand).

A hypothetical question was posed to all groups in an attempt to determine their risk appetite for entering into a transaction with the potential for a high gain, but with the potential cost of a relative smaller loss. Being risk aware, savings groups consistently expressed their aversion to incur any losses whatsoever, or to attract any risk that could potentially lead to losses – even if the said risk could yield attractive returns.

“We are running away from losing. Our main purpose is to gain, not lose our money.” (She).

“It’s like a gamble [risk], so we can’t take chances with our money like that. We are not gambling, we are saving, and we will never go into that aeroplane”. (We Are Working).

During three of the five interviews the researcher conducted face-to-face, the researcher interrogated the groups’ risk appetite in more depth. The members of the groups were asked to vote in favour, or against, the hypothetical “risky” transaction. In all three instances, the majority vote was against the transaction but did indicate that not all members were equally risk averse.

Across the board, bank charges were referred to as a loss, rather than an expense that was paid for services rendered. One of the rural SSC groups was asked whether it would not be better to take their savings stored in a tin to the bank instead of running the risk of losing it all. The group’s response was as follows:

“Yes, that is true, but we do not want to lose any of it. Yes it is true, but it is the same because we will also lose some at the bank...” (We Are Doing).

Groups were asked if and when they would increase their saving contributions, should every member suddenly have slightly more disposable income. They responded that they were prepared to increase their savings immediately or in the following month, only due to practical reasons.

“Right now, we can put [save] it immediately.” (Build Up).

“Next month. Because we have already saved for this month.” (Givers).

“We would use it for the next month because the shares will be full for this month, although we would have liked to, so we have to wait ‘till the following month.” (We Are Working).

Not one of the group informants expressed a wish to spend the hypothetical windfall on instant gratification, but rather to contribute it towards increased savings. Only the timing of when the contributions would start, varied. No definitive evidence of present-

bias could therefore be found in the groups' decisions to save, rather than spend, the funds.

5.3.2.2 Social Influences

Interpersonal relationships, unity (working together) and lending a “helping hand” among members were most often cited as essential to the success of savings groups. In the case of savings groups, social influences and group dynamics were only ever praised and supported with positive reflections.

“We communicate with each other, we have a relationship. We console each other, we are together and we are helping each other. We are family.” (Ariel).

“What I have noticed in this group what made it a success is that we work well together even though we can have little mistakes...The first thing is that we are united, we work well together, and number two is that our money is safe, we save well and share it very well. No one complains that my money is short or my money is this and that, if anyone has a problem they put it on the table and it gets sorted at the same time.” (We Are Doing).

One of the savings group interviews was conducted on the day that the group met to make arrangements for the burial of one of the members who had passed away. Being part of this savings group seemed to offer social capital and more than just access to a mechanism to save for burial costs:

“You know, in our culture, you know, just like music brings people together...burials, funerals, weddings, stuff like that bring us all together. So that is when we must show unity. That is why we formed it. Yes, Ubuntu, togetherness and a helping hand.” (Build Up).

Drivers of non-standard saving behaviour that emerged from the research findings were biases and social influences. Table 7 provides a summary of the number of groups (per type), that responded positively with respect to these themes and the specific sub categories associated therewith.

Table 7: Overview of Non-Standard Drivers of Saving Behaviour

Drivers	Categories	Stokvels	SSC Groups
Biases	Status-quo bias	4	5
	Confirmation bias	5	5
	Loss aversion	5	5
	Present-bias	-	-
Social Influences	Relationships	5	5
	Culture	5	5

5.3.3 Summary of the Findings of Research Question 1

The findings from Research Question 1 seem to indicate that savings groups make standard, rational decisions in terms of their purpose, saving goals and how to optimise around consumption for the benefit of the group. However, the findings also indicated that savings groups sometimes make non-standard (irrational) decisions in respect of the safest place to store their funds; where to earn the highest return on savings; are potentially biased in their decision-making, and are also driven towards certain savings decisions through the social influences in the group dynamic.

5.4 Results: Research Question 2

Research Question 2:

What inherent characteristics of savings groups serve as natural saving behaviour interventions?

Savings groups, as an informal saving mechanism, have proven to be successful in mobilising savings from all income groups as was discussed in the previous chapters. However, what is of particular interest, is the ability of this mechanism to work effectively in low-income groups where socio-economic circumstances create more hindrances to saving. For this reason, Research Question 2 explored savings groups to identify those characteristics embedded in this mechanism that serve as saving-promotion interventions that positively influence members' saving behaviour.

Research Question 2 was posed to both saving groups (Level One informants) and to individual members of saving groups (Level Two informants). Answers to this question are considered to be the epicentre of this study and an in-depth analysis of the perspectives of savings groups as well as individual members was required. Figure 9

below lists those characteristics that serve as saving-behaviour interventions as identified from the interviews conducted at each level. These characteristics are compared and contrasted against literature in Chapter 6, while the remainder of this section presents the findings for each item listed here.

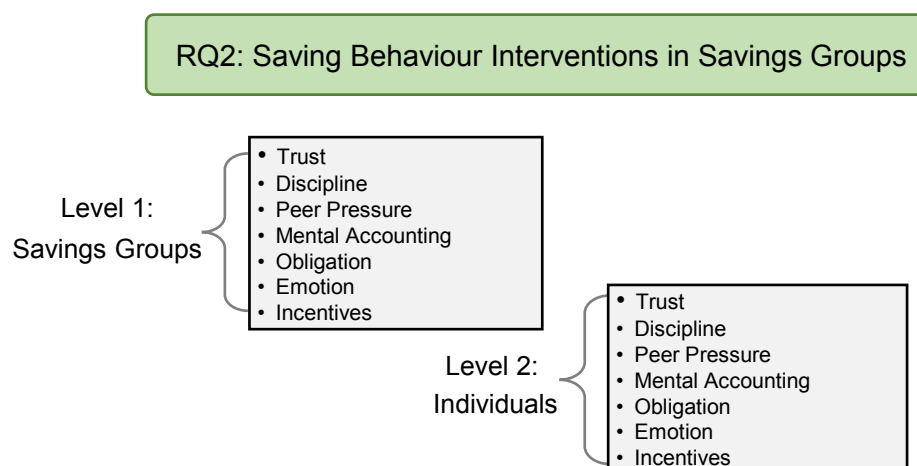


Figure 9: Overview of Results – Research Question 2

5.4.1 Trust

5.4.1.1 Level One: Savings Groups

The ten group informants ascribed either the success of their savings groups or the assurance that their savings will be returned to them, to trust. However, the concept of trust was never mentioned in isolation; it seems as if trust in the savings mechanism is supported by transparency, rules and controls.

“What makes our group to move forward is trusting each other, setting goals for ourselves on what we want, that is what made us to be together today and following our own code of conduct in the group.” (She).

“Because we trust each other. And we record it in the books. And we know how much the interest is. Because each and every one, she sees, right, that we are keeping the money in front of us, in front of the meeting. That is why we trust each other.” (Hope).

“We have transparency and trust and planning. And experience. Experience is a good teacher.” (Helping Hand).

The adage of: “seeing is believing” best describes how observing others save and adhere to rules, money being counted at a meeting; bank statements and recordkeeping, all seem to reinforce the trust within savings groups. Trust in the context of savings groups, therefore, seems to be complex and possible relationships or dependencies on other factors warrant further exploration beyond this study.

5.4.1.2 Level Two: Individual Members

The complete sample of individuals was selected from general savings groups, which were saving for “money”. The eight members selected from *stokvel* groups participate in rotational saving schemes where every member receives a bulk amount of cash when their turn comes. Upon receipt of the lump sum of money, the member is free to use it for any purpose and is not restricted by group rules. Dealing with larger amounts of personal savings compared to other types of savings groups, members seemed to be more risk-aware and the concept of trust featured even more often in individual informants’ responses. In their reflections on trust, informants seem to place emphasis on knowing other members and on being in close proximity to them, for instance family and colleagues.

“Because of I trust them. You know sometimes...there is money involved. When there is money involved, you have to do it with people that you trust. So my cousins, I know that, you know what, this is my family, I trust them.” (18).

“The ones that I do know, I won’t speak for the new members, but the ones that I do know...so far; they are quite “stand-up” people, even outside of the stokvel. So I think that is one of the reasons, so that made me comfortable in joining. You know, outside of the stokvel, during work, I can see that they are quite dependable people.” (17).

5.4.2 Discipline

5.4.2.1 Level One: Savings Groups

The constitutions and rules of savings groups featured favourably in savings groups’ responses in general. Members know the rules and support the strict enforcement thereof and accept penalties or fines imposed on them for minor misconducts. Group rules and controls are associated with discipline; helping members to save when they unanimously declared they lack the self-discipline to save on their own.

“That is why we love our rules because it makes us to save the little we have. There are other ways of saving out there but this one is different, it is discipline, it has respect.” (She).

“This group is not something like a charity case or insurance. If you can’t pay you have to speak to others so they can help you how to pay. I mean, we build each other.” (Hope).

“We know that every month we save, we borrow and pay back the money during the time that is specified by the constitution, we make sure that we pay the money back on time.” (We Are Working).

5.4.2.2 Level Two: Individual Members

Saving on their own has proven to be problematic for all the individual informants. They ascribed this to a lack of self-discipline, which they manage to circumvent by saving through a savings group where they are held accountable.

“So it has brought about some form of discipline in my life. I realise that saving by myself wasn’t going to work because of discipline issues. Like I am more disciplined towards reaching my goal...because if I don’t “pop-out” the money I have to account...” (17).

“Yes, there is discipline for that. So now you know you are saving well with some people. So if, like my friends, we are saving the money with my friend who makes a stokvel, I need to follow his rules.” (11).

Through the savings group, they are reminded and held accountable by fellow members and formally disciplined with fines for transgressions. Discipline, similar to trust as mentioned in the previous section, seems to be supported by the rules and controls of the saving groups.

“Because we trust each other, we give you our money, you have to pay it back. That is the rule. You don’t have to tell us stories. Uh-uh, we want our money. It has never happened.” (14).

“...the money that we pay a fine for is for late coming and not paying off your debt at the end of the third month that was stipulated to pay your debt...” (19).

5.4.3 Peer Pressure

5.4.3.1 Level One: Savings Groups

The group dynamic in itself seems to be a force that drives saving behaviour and decisions in savings groups. This intangible pressure seem to be further enhanced by the fact that no decisions are made without group consensus or a majority vote, which is considered to be fair and all members abide by this rule.

“So if I am with other women, so that we can push each other and persuade each other. So it help me so much.” (Hope).

“Discipline. That is what they said. The fact that when you’re doing it [saving] with others, you know you are forced to do it. Yes, forced to do it.” (Helping Hand).

“Yes we are sure [that their savings will be returned] because all the decisions are made here. We discuss about everything here in the group, if it does not come from the group how we will do things, we will not share. If we do not let everyone go and splash the money and not pay here, we will definitely share at the end of the year.” (We Are Working).

5.4.3.2 Level Two: Individual Members

Individual members of saving groups framed the impact of the group dynamic on their saving decisions as a push or a debt towards the group. The need to not be worse off compared to other members also indicates that the group context affects individual saving decisions.

“Ye, they have to force me because now I am owing the money for the group. Once I put that money inside, it is not for me anymore. It is for us. I have to pay the stokvel now.” (I1).

“It is like the group push. We do agree, but I think that person will be in pressure also that people are doing money; I am not doing money. And if you put little on groceries, you know it is going to be bad if others share more and you share little. It is going to be bad.” (I6).

5.4.4 Mental Accounting

5.4.4.1 Level One: Savings Groups

When groups were asked about the monthly collection of saving contributions from members, the group informants spoke mostly about their own, individual mind-sets on saving. Earmarking funds and budgeting for the contribution amounts required by their savings group, seem to make it easier for members to save consistently every month. They seemed to experience a mental allocation of funds to their savings groups, which was clearly separated from other pressing uses of their income.

“R350 goes to groceries, R200 goes to school fees, then 150 goes to if you want to do the house or to start a business. That is inside in my mind. ‘Cause every time I knows about the stokvel. During the month I plan to keep the money for the stokvel. Not to use, but for the stokvel. I HAVE to.” (Hope).

“I know when it is month end that if I get this much money, this much is for this and this much is for this, I do not mix the savings one with my other problems.” (We Do).

5.4.4.2 Level Two: Individual Members

Individual informants consistently stated that they don't need reminders to remember to save in their savings groups. Saving seems to be ingrained in their behaviour and top-of-mind. Nevertheless, members still continued to remind one another through electronic communication – mostly by the individual who was due to receive the lump sum in a particular month.

“Well it is top-of-mind first of all. You just know. But more than anything it is just one of those things that you know that you have to do. No one has to really remind you every second of the day.” (12).

“I know it is on my mind. I know and then the people that I work with will remind me. They are reminding me that “Remember we are going to do that thing”, but it is on me. I know, that with my salary, there must be this money that goes out to the stokvel.” (16).

“I know. Like it’s in me now. I know that there is a certain portion of amount that doesn’t belong to me every month; that I have to send it off. So I don’t need to be reminded.” (18).

5.4.5 Obligation

5.4.5.1 Level One: Savings Groups

Commitment to the group seems to be reflected in the low turnover of members in the savings groups included in this study. The two main reasons offered for members exiting from savings groups, were due to circumstantial changes: loss of income or relocation.

“People trust SSC groups a lot and they always see how it helps, even those who struggle...it is because of other problems not because they are running away. So they try by all means not to disappoint, because they really want to come back the following year. As we have said that here no one has left the group since we started, we are all here.” (We Are Doing).

If for no other reason, members wishing to leave a savings group, will do so only at the end of a savings cycle as the rules generally prohibit savers to leave or enforce penalties for early extraction of funds. In the short term, members’ commitment to saving were, therefore, also governed by their savings groups’ rules.

“You want to leave the group...you have to wait until the end of the year then you get your stuff...not to lose. Otherwise you lose.” (Hope).

The abovementioned quotation from the We Are Doing group, also demonstrates how informants frequently considered their saving performance in the context of how it would impact (disappoint) others. Savings groups included in this study did not consider it to be difficult to save on a monthly basis, because of their sense of obligation (often expressed as “have to”) and mental commitment. This “have to mentality” is once again supported by the rules and controls of the group.

“It’s easy. It is very easy. Because each and every month we have to. The first Sunday we have to go there. I know if I didn’t go there I have to keep the money for a fine because we have strict rules.” (Hope).

“It’s not that difficult because we have committed ourselves to save the money and we are not forced to borrow, you save what you can and you do not borrow an amount that you know you cannot be able to pay back...” (We Are Working).

5.4.5.2 Level Two: Individual Members

Individual members of saving groups also framed their monthly savings contributions as obligations or insurance payments which simply have to be done. They compared this monthly savings contribution to an expense or a liability where they had no choice but to pay.

“I wouldn’t say an expense, but I view it sort of as an expense. It is just something that HAS to come out of my account. You don’t have a choice...It is like your rent...you just have to pay your rent.” (17).

“It’s like paying maybe an insurance to know that I get my money back.” (16).

What makes this obligation different from an obligation to pay rent, seems to be that it is fuelled by a sense of responsibility and commitment towards others in the group. Saving contributions are framed as a liability to others and the implications of not honouring this arrangement is considered in the same context.

“So when you know that you owe someone money every month, that you have to deposit into someone’s account...it DRIVES you. But now, because you are part of a group, you HAVE to do it every single month, because someone is waiting for your contribution.” (12).

“You know you owe this person who didn’t get the full amount because of you. And so THAT makes me more focussed and goal-driven to know that other people’s lives are affected by my decisions. It is not just my own life.” (17).

5.4.6 Emotion

A wide range of emotions emerged from both the savings group and individual informants’ interview responses. The results presented here reflect only the most frequently mentioned emotions.

5.4.6.1 Level One: Savings Groups

Feelings of love, respect and encouragement expressed in the savings group setting featured most frequently as reasons why members continue to save through this mechanism. Members may join savings groups for many reasons, but the research findings revealed that emotion may be a key contributor to member retention.

“Cause we love each other, we are together, and we respect each other.”
(Hope).

“Another reason is that it is good to do things together, there is a lot you learn from each other and encourage each other, support each other and give each other tips on the things to do.” (We Are Doing).

5.4.6.2 Level Two: Individual Members

Individuals referred to feelings of excitement when their turn arrived to receive the lump sum; satisfaction when they achieved their savings goals and motivation when they witnessed others saving. These positive emotions associated with savings groups were offered as reasons why these members appreciate their groups and have no intention of leaving. This finding corresponds to the group level responses around emotion as a motivation to remain part of a savings group.

“When you also see other people saving, it motivates you to save as well.” (17).

“I mean the FEELING that you get when it is your turn, is actually quite nice... because you have been waiting seven months. So it is a great feeling when you get it, and also now you have planned all these things that you’re going to do with the money.” (12).

“And also the satisfaction that you get once you’ve gotten those things, that’s great. I remember once when we were done with my mom’s 60th birthday, it was just such a nice feeling to have done that for her. To know that somehow the stokvel money contributed toward it.” (12).

5.4.7 Incentives

5.4.7.1 Level One: Savings Groups

Belonging to a savings group seemed to offer more benefits to members than the ability to save. The most popular benefits according to Level One informants were help in need, women empowerment and independence. Group informants offered the following responses as examples of how savings groups incentivise members in mostly non-financial terms:

“It is because we are united, we help each other and we work together if a certain member has a financial problem they can speak to one member aside to help them if they have extra money, we help each other if a member is struggling.” (We Are Doing).

“We come from different...societies, so we decided for to build each other as a women. To build each other as a women so that we can build our mind, not depend on men and whatever, whatever. So it help us be independent.” (Hope).

“We are happy, we are special because we are a powerful group, powerful women – we know what we are doing. Clever women.” (Givers).

5.4.7.2 Level Two: Individual Members

Individual informants' responses were more personal as they shared insights on the benefits they derive from saving as part of a savings group. The most popular non-financial incentives were sharing (and solving) of problems, emotions and advice.

“Then as it come to the end of the year, we have some a social day. We went out and sit as a women and we talk and we have a solution whatever you have a problem then we try to sort that out. That is why you learn more when you're out with women and talking problems.” (15).

“We there with each other. So we are benefitting because of we manage to pour out whatever is hindering us inside... we get to understand each other's problems and then you get healed because of...even me, I've got my own problems of which I don't prefer telling people.” (18).

“I can also get love from the ladies and advice, you know. Advice on how to handle life, how to raise children...as I say we are women. How to spend whatever money that we are saving.” (I3).

5.4.8 Summary of the Findings of Research Question 2

The findings for Research Question 2 highlight seven characteristics of savings groups that serve as saving-promotion interventions for its members. According to both savings-group and individual informants, savings groups leverage off the trust between members to mobilise savings; increase disciplined saving; enforce peer pressure towards saving; bring saving top-of-mind; create an obligation to save; evoke emotional attachments to saving and lastly; offer additional incentives of a non-financial nature. All of this is considered to enhance members’ propensity to save.

The seven characteristics of savings groups that possibly serve as saving behaviour interventions are summarised in Table 8. This table compares the different nuances between Level One and Level Two informants’ responses in terms of the characteristics collectively identified as interventions. Responses that aligned between Level One and Level Two informants, are indicated with stars (“**”) in Table 8.

Table 8: Comparison of Level One and Two Responses – Research Question 2

Intervention	Level One: Savings Groups	Level Two: Individuals
Trust	1. Rules and controls 2. Transparency	1. Proximity of members
Discipline	1. Rules and controls ** 2. Enforcement **	1. Rules and controls ** 2. Enforcement ** 3. Accountability
Peer Pressure	1. Force/ Push ** 2. Group consensus	1. Force/ Push ** 2. Comparison to others
Mental Accounting	1. Budgeting and planning	1. Top-of-mind 2. Reminders
Obligation	1. “Have to” mentality ** 2. Commitment 3. Rules and controls	1. “Have to” mentality ** 2. Expense / Insurance
Emotion	1. Love 2. Respect 3. Encouragement	1. Motivation 2. Excitement 3. Satisfaction
Incentives	1. Help in need 2. Women empowerment 3. Independence	1. Problem solving 2. Emotional sharing 3. Advice

This summary seems to bring an overall pattern of “force” to the fore, as the relative importance of rules and their enforcement, force from the group dynamic and a “have to” mentality or obligation in the minds of the members, are highlighted. For this reason, it is suggested that the seven interventions should be categorised as either “hard” or “soft”, less forceful, interventions as presented in Table 9 below.

Table 9: Intervention Categories

Hard Interventions	Soft Interventions
Discipline Peer Pressure Obligation	Trust Mental Accounting Emotion Incentives

5.5 Results: Research Question 3

Research question 3:

What features of savings groups can be replicated in alternative commitment saving devices?

Research Question 3 was designed to determine the features that members of savings groups prefer and value in a savings mechanism. As customers using savings groups as a savings device, individual members had experience with and opinions on features that facilitate successful saving. For this reason, research question three was addressed to individual members of saving groups (Level Two informants) only.

The up-take and success of formal, commercial commitment saving devices are largely dependent on its features and whether it meets the demand of customers. The popularity of savings groups indicates that this mechanism possesses features that are valued, which could potentially be replicated in alternative commitment saving devices. Answers to Research Question 3 as presented in Table 10 below, provided insights towards the features required for effective commitment saving devices.

Table 10: Overview of Results – Research Question 3

RQ3: Features of Savings Groups as Commitment Saving Devices

Soft Features	Hard Features
<ul style="list-style-type: none"> • Flexibility <ul style="list-style-type: none"> - Affordability - Freedom of choice • Effectivity 	<ul style="list-style-type: none"> • Access to savings device • Restricted access to savings • Liquid funds • Low transaction fees <ul style="list-style-type: none"> - Charges and fees - Compliance • Interest

Conversations with individual informants revealed two types of features present in savings groups, which are valued by members and retain them even with alternative saving products available in the market. “Soft” features are inherent qualities of the saving device, while “hard” features rely on rules or terms and conditions to function effectively.

5.5.1 Soft Features

5.5.1.1 Flexibility

Affordability was identified as a feature of savings groups that individual informants appreciate. In this context, affordability refers to members’ ability to consistently pay the monthly savings contribution amount from their monthly, and often variable, income. While the SSC groups allowed for more flexibility on an individual member basis, all savings groups consulted with members and relied on group consensus to determine a contribution amount that members could afford.

“No I don’t find it difficult [to save] because I save what I can afford; I am not obligated to save a certain amount every month.” (I10).

“I prefer, like I wish I can make it [contribution] to be double the amount, so for now I can’t because the amount that I am earning.” (I3).

Flexibility was valued not only in terms of the determination of the monthly contribution amount, but also in terms of the use of funds saved. South Africa, in particular, offers a variety of choice in terms of the types of savings groups. Every savings group interviewed or to which individual informants belonged, differed in terms of their rules,

controls, operations and general dynamics. These groups generally evolved according to the changing needs and wants of the majority of its members. Members understood that they needed to accept group decisions or otherwise leave the group to find another with aligned savings goals, values, and so forth. For this reason, freedom of choice in terms of saving purpose and use of funds emerged as an important feature to informants.

“No, we have different needs. We must have freedom of your choice when it comes to your money.” (I4).

“For me a person must be free to do anything they want, what they want to do, because as we are here in the groups some of us are older and have passed the stages of younger people...so I prefer that we are all free the way we are doing it.” (I9).

“Cause we are all different. We all have our own different views on what to save, how many and...we are all saving in different ways. We prefer different things.” (I8).

5.5.1.2 Effectivity

Individual informants responded in unison that saving through a savings group had proven to be effective; offering visible evidence that “it works”. Even though informants mostly used their savings for short-term consumption, saving through this mechanism at the very least, resulted in members’ ability to “make ends meet”.

“Stokvel for me, it works. It’s the best thing.” (I5).

“I think maybe it’s my mentality or my opinion that it is better to save on the stokvel because we save in a group and it becomes like a little bit more money than myself saving, maybe 300 or 600, you see. I think it is more: the more that we can contribute, the more we can save.” (I6).

“[SSC group] has helped me a lot, with my savings from [SSC group] I was able to buy a cow for a ceremony and I’m currently building myself a house. I also have a garden at home where I am growing crops, so now I can be able to hire a tractor because I save with [SSC group].” (I10).

The three soft features: affordability, freedom of choice and effectivity, are by no means the only reasons why members continue to save in a savings group rather than alternative savings mechanisms. They are merely themes that emerged from the individual informants' responses as valued features of this savings device.

5.5.2 Hard Features

5.5.2.1 Access to the Savings Device

Members of savings groups had access to this social construct through monthly meetings and also through electronic communication (WhatsApp groups) in the case of urban *stokvel* groups. Communication and proximity to peers were highlighted as it was important to know each other and to resolve problems (financially or non-financially).

“Because we don’t want problems that someone didn’t get their money in the right time, or someone borrow someone money. We feel it is better for us to chat and know each other.” (I5).

“At the meeting we sit and then at the meeting basically it is like getting to know each other better. Maybe if you have ideas for the stokvel...if maybe we have some queries that: “you know what guys, I got my money late...can you please try to transfer the money early in the morning, first thing”. You know, things like that.” (I3).

5.5.2.2 Restricted Access to Funds

The most frequently cited reason why informants believed that they were unable to save on their own, was due to unrestricted access to savings in bank products. Due to a lack of self-discipline or emergencies, savings held in commercial saving products were easily withdrawn and never replaced. Within the savings group dynamic, access to funds contributed was restricted, and they could not be withdrawn. Short-term loans were offered by most savings groups, albeit at steep interest rates (in the case of *stokvels*) that served as a deterrent to enter into debt. This feature was recognised as the most effective means of ensuring that informants' savings goals were achieved.

“Once I put [save] the money I can’t reach it anymore. Once I put it there I don’t have access to use it. (I1).

“You know when you have your savings account and your check account you can transfer. So with a Stokvel there is no transfer.” (14).

“But when we’re doing a Stokvel, if I give you a R1 000, I can’t come to you and say “give me my R1 000 back”. I must wait for the date we agree with.” (15).

5.5.2.3 Liquid Funds

Some of the *stokvel* savings groups included in this study provide short-term solutions for members who are in financial difficulty. Short-term loans are offered at an interest rate of 30% and need to be repaid within 30 days; before or at the next monthly meeting. Members are therefore discouraged from taking these loans. Alternatively, the schedule of the rotational savings groups could be re-arranged to accommodate a member in need, or members lend funds amongst each other. All this was possible, provided the arrangement was transparent and all members approve it beforehand.

“No, we don’t offer loans. If you are really in need in a particular month, or you have an emergency, you can ask whoever is next, to swap with you.” (12).

“Actually, two people lended me; the other one gave me a half and then the other one gave me a half. It is like two ladies that I am very close with.” (13).

SSC groups offer loans to members in accordance with a predetermined savings and credit model, which is structured and affordable. It is based on the principle of “savings first” and restricts loans to a portion of amounts saved in prior months.

In a group they are able to borrow me money if I have an emergency. I do not need to fill in some application forms and to find that time is running and I am told that I do not qualify to get a loan. But here I do know how much money I qualify for and it is enough for my problem to be sorted out, and the interest is low unlike at a bank. When I am told that I can’t borrow, it is not nice. (19).

5.5.2.5 Transaction fees

Transaction fees charged on commercial products seems to deter individuals from these products – especially in a market where every Rand is of importance. The transaction cost theme presented here includes costs associated with transactions where money is exchanged, as well as the cost of compliance with rules and regulations. Savings groups on the other hand, do not charge transaction fees; the

only charges a member could potentially incur are penalties or fines for minor transgressions.

“Firstly, there is no bank charges ... and when I give you a R1 000, it will come with a R1 000. You know when you put your R1 000 in your account, when you go withdraw, it won’t come out R1 000. It will be maybe nine-hundred- and-something.” (14).

“It’s good. It’s very good honestly, ‘cause there (Bank) you pay for administration. Here there’s...we are administering our own things, so there are no costs to that.” (18).

Compliance requirements to access commercial products seemed to be problematic for members whose only source of income was government grants. Financial institutions generally require proof of earnings, proof of address and personal identification documents to adhere to their internal controls and regulatory requirements. Without these requirements, savings groups are considered to have low barriers to entry and are often the only option available for saving or loans.

“The bank has a long process when I need a loan; they want to know how much I have in the account and even documents like pay slips which I do not have.” (19).

5.5.2.6 Interest

Responses from individual informants with regards to interest presented varied results. Only three informants reported that their savings groups charge interest on funds lent to members, and the interest returns are then shared between all members at the end of the savings cycle. Informants from six savings groups earned no interest; they received only the lump sum on a rotational basis. One informant explained that interest paid on borrowings during the year, was returned to the borrower as interest earnings at the end of the year. This perceived interest is in essence only increased savings as a “penalty” for borrowing. It was explained as follows:

“So it is how we make money. You don’t have to go somewhere and borrow like the bank and stuff. If you know there is money in the group, I can go and borrow for me and I will return it with interest, and the interest will be counted back to me.” (16).

The six informants who earned no interest, seemed to disregard the importance of interest because of the short term nature of their savings. To the contrary, the three informants who earned interest on other members' borrowings from the group, seemed to value the interest as a feature of their savings groups.

"If we were saving THOUSANDS and THOUSANDS over a long term, THEN maybe we could consider, the interest would be much higher. But not for the short term, it doesn't really make a difference." (18)

"Another thing that makes me like to save as a group is that the interest at the bank is smaller than the interest that we earn when we save together as a group..." (19).

The fact that the informants seem to recognise and value only the existing features of their savings groups with regards to interest, seems to indicate a strong reference point in the default status or status quo. This reinforces the earlier findings of a possible status quo bias in the saving behaviour of savings groups.

5.5.3 Summary of the findings of Research Question 3

Preferred features of savings groups that may lead to customer retention in this savings device, emerged from the results of individual interviews. These features were grouped in two categories: "soft" features and "hard", or more regulated features. Soft features could be difficult to implement in savings-product design due to the fact that they are mostly based on beliefs and perceptions, which can differ greatly from one customer to the next. Affordability, freedom of choice and effectivity were revealed as attractive soft features of savings groups. Hard features of savings groups identified by informants are: access to the savings device; restricted access to savings; liquid funds; low transaction fees and interest. Conceptually, these features should be replicable in commercial products with greater ease than soft features.

5.6 Conclusion

The research findings from the three research questions posed in Chapter 3 were presented in this chapter. The findings suggest that savings groups make both standard (rational) and non-standard (irrational) savings decisions. Savings groups have well-defined saving purposes and optimise the use of savings when it comes to

consumption spending for the benefit of the group. However, optimisation in terms of where savings funds are stored and the amount of interest earned, seems to be lacking. Drivers of additional non-standard savings decisions involve behavioural biases and social influences on decisions within the group setting.

Despite the non-standard saving behaviour of savings groups, a number of saving-promotion interventions inherent in the savings-group mechanism were identified. These interventions facilitate behavioural change towards increased saving rates for individuals participating in group saving. The use of trust, discipline, peer pressure, mental accounting, obligations, emotion and incentives within this savings mechanism emerged as catalysts for increased saving rates.

The results of the first two research questions provided insights on the drivers of saving behaviour within the savings group context and identified the interventions that promote positive savings outcomes. The findings of Research Question 3 then revealed the features that attract and retain customers of savings groups as commitment saving devices. Together, the results informed a framework for the design of alternative commitment saving devices as presented in Chapter 7.

The following chapter provides a discussion of these findings with reference to theory.

6. DISCUSSION

6.1. Introduction

The results from the analysis of data collected from semi-structured interviews as presented in the previous chapter are discussed in detail here, and summarised in Appendix 5. The discussion proceeds according to the sequence of the research questions posed and collectively provides insights into savings groups as model commitment saving devices.

Results are compared and contrasted to existing literature in order to extend the body of knowledge on saving behaviour, savings groups and commitment saving devices.

6.2 Discussion: Research Question 1

Research Question 1:

What drives the saving behaviour of savings groups?

The first research question explored the drivers of saving behaviour in the context of savings groups. According to extant literature, savings groups have proven to be effective mechanisms to mobilise savings in spite of identified non-standard behaviours. Literature suggested that the characteristics of social networks such as savings groups, need to be explored to identify drivers of their saving behaviour (Cronqvist & Siegel, 2015). Dholakia et al. (2016) also expressed the need for a greater understanding of the factors responsible for consistent saving behaviours in order to design effective behavioural interventions and economic and social policies.

The discussion of this research question commences with details on savings groups' standard saving behaviour, to provide the background for a greater understanding of their non-standard behaviours. Both standard and non-standard behaviours are grounded in economic theories, which provide the theoretical lens through which this research study was conducted.

6.2.1 Standard Drivers of Saving Behaviour

In order to identify drivers of non-standard saving behaviour; standard saving behaviour and decisions first needed to be investigated. Standard saving behaviour is

grounded in standard economic theory which suggests rationality as the main motivation of economic decisions.

6.2.1.1 Preferences

According to Thaler (2016), standard economic theory assumes that economic agents have fixed, well-defined preferences and make rational decisions based on these preferences. The highest-ranking preference between a number of alternatives will then be chosen to optimise (Carvalho et al., 2016).

This study found that savings groups' preferences on what to save for, were always clearly defined and known by all members. In the case of *stokvel* savings groups, these preferences were fixed and specifically included in their constitutions or rules. If an individual member's preferences in terms of the saving purpose changed, they would have to leave the group at the end of the cycle. These groups kept their saving purposes stable over a range of five to fifteen years – the groups' years of existence (cf. Table 4). SSC groups, on the other hand, saved for “money” or general purposes, which allowed members flexibility on how to use their savings lump sums when they became available. This flexibility in itself indicated the group's preference over a specific saving purpose such as groceries.

Every group's preferences in terms of operational activities; members allowed to join the groups; proceedings at meetings and so forth, were also easily identifiable from the data collected. The researcher conducted five face-to-face group interviews and observed that these groups were discerning and knew exactly what their purpose, goals and expectations were. Since a research philosophy of interpretivism was adopted for this study, this observation is worth noting as it adds trustworthiness to the responses.

These findings indicate that savings groups have stable, well-defined preferences (Thaler (2016) on which they base their savings decisions. However, whether each group selected their optimal preferences (Carvalho et al., 2016) in every choice about their purpose, rules and so forth, links to the next driver of saving behaviour: optimisation, which is discussed in the next sub-section.

6.2.1.2 Optimisation

Economic participants are said to optimise when they always choose the best option amongst alternatives (Thaler, 2017). From an economic perspective, the “best” option

will be the one that offers the best return or benefits. In the realm of saving, this implies at a minimum, that funds will be saved when and where the best possible return (interest) will be earned and saved funds will not be extracted prior to maturity. Examples of other factors to consider in optimal saving decisions are: risks, inflation, time-value of money and transaction fees. Optimal choices are generally based on fixed preferences (as discussed in the previous sub-section), unbiased beliefs, limitless willpower and selfish motivations, according to Thaler (2016).

A number of prior research studies provide evidence that savings group participation have positive impacts on individuals, households and communities. For example, it allows individuals to accumulate funds to smooth consumption (Le Polain et al., 2018); it increases household welfare, food security and economic activities (Ksoll et al., 2016); and leads to significantly higher business-related savings in households and at community level (Greaney et al., 2016). Based on the empirical evidence of these research studies, it seems that participation in a savings group is one method for individuals, households and communities to optimise scarce resources.

The savings group informants expressed their aspirations for a better life, to build houses, to buy nice things and to help each other to do the same and more. They regarded saving through a savings group as the means to achieve these goals. Informants, therefore, supported the evidence from prior research studies (Greaney et al., 2016; Ksoll et al., 2016; Le Polain et al., 2018) that the act of saving through a savings group yields economic benefits and can be regarded as a way to optimise these benefits.

The five *stokvel* groups included in this study saved for bulk-buying of groceries during the month of December. December is regarded as the holiday month for most South Africans and, for this reason, members want to have plenty of food to enjoy the festive season and to last them through the months that follow. All five informants were well aware that it was more beneficial to save in a group, as the collective savings allowed for opportunities to negotiate and leverage off bulk discounts for greater purchasing power. These saving groups, therefore, optimised the use of their saved amounts at the time of consumption in accordance with standard economic theory.

All five *stokvel* savings groups kept their savings in a bank account and earned interest on deposits during the saving cycle. However, three out of the five groups had not tried to find alternative banking options with higher interest rates. Within this type of savings

group, optimisation in terms of interest earnings was therefore not pursued which may be an indication of non-standard behaviour from an economic point of view.

SSC groups differ from *stokvel* groups in a number of ways. Apart from the fact that they are mostly located in peri-urban to rural areas; they also differ in terms of their saving purpose and saving operations. All five SSC groups kept their savings in a tin in one member's house and therefore forfeited the benefit of earning interest from a commercial saving product. The reason offered for this decision was to save on transaction fees charged on bank accounts; which could be regarded as a cost-saving initiative to optimise their savings balance. However, the SSC group model allows members to borrow from the group which is then repaid with interest. This interest increases the groups' pool of savings and is shared between the members at the end of the saving cycle. Members responded with the belief that their interest earnings were optimal compared to what banks offered.

Collectively, the findings suggest that savings groups optimise by saving in the first place, buying bulk (grocery *stokvels*), earning interest, and saving costs on bank charges (SSC groups). Optimisation in terms of earning the highest possible interest and storing funds in the safest place, seem to be lacking.

6.2.2 Non-Standard Drivers of Saving Behaviour

Non-standard saving behaviour implies all saving behaviour that does not comply with standard economic theory as presented in the previous section. A lack of optimisation, as was discussed earlier, is an indication that savings groups do not always act rationally and there are anomalies in their saving decision-making. Since the field of Behavioural Economics expands and amends certain standard economic assumptions on decision-making (Laibson & List, 2015); this field provided the theoretical lens for the remainder of this study.

6.2.2.1 Biases

Tversky and Kahneman (1974) were the first to describe biases as cognitive errors in decision-making and behaviours. Biases that featured in the group informants' responses were status quo bias, confirmation bias and loss aversion. Present-bias was also identified, but only when members of the group referred to their individual saving behaviour. A discussion of the findings relating to each of these biases as per behavioural economic theory, follows.

It is often the case that choice sets include a default or status quo option. The alternative that a decision-maker will end up with if they do not make an active choice or change will be the status quo option (Dean et al., 2017). In the context of saving decisions, De Haan et al. (2018) warn that the status quo option can lead to under-saving where the decision-maker has the ability or need to save more, but continues to select a lower, default option. It seems to be standard practice for savings groups to consider revising saving contribution amounts only once a year, at the commencement of a new saving cycle. The monthly amount is only adjusted if group consensus is achieved through a majority vote, and is driven by what members can afford. A general propensity towards keeping the groups' purposes, goals and rules consistent over time was also apparent from the findings. The most popular reasons offered for a keeping the status quo were that intermittent changes cause chaos and confusion, and that no problems were experienced in keeping the current status. What this indicates, is that groups could be making erroneous savings decisions due to a status quo bias by, for instance, enforcing a stable and uniform contribution amount for all members of the group. This begs the question of whether the group (and individuals) could collectively save larger amounts if greater flexibility were allowed for those members who could afford, or wished to, save more.

When information becomes known, or events occur that confirms a decision-maker's beliefs, these beliefs are reinforced. This confirmation increases the decision-maker's confidence and expectations that future events will follow the same pattern, in spite of available contradictory facts (Bénabou & Tirole, 2016). Even though the savings groups expressed concerns around the safe storage of their funds, members continued to contribute and entrust their savings to the group treasurer. The fact that groceries were bought and distributed in the previous year and bank statements were shared (*stokvel* groups), or the money in the tin was counted during the last meeting (SSC groups), reinforced members' beliefs that the saved amounts were safe. This belief, therefore, gave members the confidence to continue placing their savings with the group. Based on this research finding, it seems that a confirmation bias was present in the saving behaviour of savings groups.

The behavioural economic concept of loss aversion suggests that losses hurt decision-makers about twice as much as what they stand to benefit from gains (Thaler, 2015). With the status quo as the reference point, decision-makers can compare whether a particular choice will result in a gain or a loss (Imas et al., 2016). Cronqvist and Siegel (2015) predicted that highly loss-averse decision makers would therefore be motivated

to save more in order to mitigate these losses. Responses from the ten savings groups indicated a strong loss (and risk) aversion as any losses were considered counter-effective to their existential purpose. Whether this reason is the only possible explanation for the groups' loss aversion was not evident from the results of this study. The fact that all savings groups decisions are made via a majority vote may possibly adjust the collective risk appetite downward, but no concrete evidence was found to support this assertion. However, what is clear from the results, is that savings groups are highly risk and loss averse; which could be a significant driving force behind the groups' propensity to save in accordance with Cronqvist and Siegel's (2015) prediction.

During the review of the literature on biases that were most prevalent in the context of saving behaviour; present-bias was cited frequently. This behavioural economic concept refers to the decision-makers' trade-off between immediate gratification and future utility (O'Donoghue & Rabin, 2015). Due to inconsistencies in time preferences, decision-makers may plan to take a certain action but swing at the last minute towards instant gratification (Jackson & Yariv, 2014; Laibson & List, 2015). This bias, therefore, relates to self-control problems and cannot be explained by standard economic theory where intentions and actions are always aligned. Responses from the savings groups presented surprising results. Whereas the researcher was expecting groups to indicate the need to spend, or delay saving, a hypothetical increase in disposable income, they revealed the opposite. Within the group context, members were prepared to save the windfall of money immediately or as soon as practically possible. They expressed no desire to spend the extra funds for immediate gratification as present-biased theory predicts. Whilst a present-bias could influence saving behaviour negatively (Dupas & Robinson, 2013; (O'Donoghue & Rabin, 2015), it seems that the possible lack thereof in savings groups responses might be a contributor to the mechanism's success in saving.

6.2.2.2 Social Influences

Phrases that were commonly used and grouped together across most of the interviews (Level One and Level Two) were unity or "togetherness" and "helping hand", which is akin to the African philosophy of "Ubuntu". Ubuntu can be translated to humanity or "I am because we are" and essentially means that society gives human beings their humanity. Furthermore, relationships within the savings group settings were often referred to as family, implying deep social bonds in the spirit of Ubuntu.

According to Hoff and Stiglitz (2016), standard economic theory can only explain saving behaviour to a limited extent and propose that it should be expanded to include two social determinants of behaviour: social context and culture. The decision maker's interactions and relationships with others are at the core of these two strands of behavioural economics (Hoff & Stiglitz, 2016). Social capital, or otherwise social networks for the sharing of information that can influence saving behaviour (Newman et al., 2014), are enhanced by frequent social interactions (Feigenberg et al., 2013).

The results indicate that social influences such as relationships and culture play a significant role in the collective mind-sets of the savings groups interviewed. According to the literature reviewed here, these social influences have the ability to drive saving behaviour. Since savings groups also share information and meet regularly (as is discussed later in this chapter), a virtuous cycle seem to be created which continuously reinforces social capital and saving behaviour.

6.2.3 Summary of the Discussion of Research Question 1

Although preferences were well-defined in all groups interviewed, this study did not provide insights on optimal preference selection within the groups. Optimisation was pursued in some respects by saving in the first place, buying bulk (*stokvels*), cost-saving on bank charges (SSC Groups) and by earning interest in some way or form.

For this reason, some saving behaviour of savings groups seem to be non-standard and the analysis of the results was continued by using behavioural economic theory. Two main drivers of non-standard saving behaviour were identified as biases and social influences. The findings indicated a presence of status quo bias, confirmation bias and loss aversion in savings groups in support of behaviour economic theory. A surprising result was that this research study did not provide any support that present-biases influence the saving behaviour of the savings groups included in the study. However, individual members reported that their personal present-biases were mitigated by saving through a group. Social influences such as relationships and culture were also identified as important drivers of savings groups' saving behaviour.

6.3 Discussion: Research Question 2

Research Question 2:

What inherent characteristics of savings groups serve as natural saving behaviour interventions?

Le Polain et al. (2018) expressed the need to identify and understand characteristics of savings groups that make this mechanism effective in driving savings. The characteristics of social constructs or groups that serve as interventions for saving decisions were also suggested as a topic for future research by Cronqvist and Siegel (2015). Research Question 2 was formulated around these research needs and with the aim of contributing to the literature on savings groups and saving promotion interventions.

The findings of this research study revealed seven saving-promotion interventions embedded in the design of savings groups as a saving device: trust; discipline; peer pressure; mental accounting; obligation; emotion, and incentives. The order in which these interventions are presented, reflects their frequency of use on both research levels and linkage to other interventions. This chapter proceeds with a discussion of these interventions from the perspective of savings groups (Level One) and individual members (Level Two), with reference to relevant academic literature.

6.3.1 Trust

6.3.1.1 Level One: Savings Groups

Trust, from the perspective of savings group informants, seems to be a determinant of the groups' success. However, the tendency to mention rules and controls in the same breath as trust emerged from the extracts from the interviews presented in the previous chapter. Rules and controls in these groups seem to increase transparency, which increases trust in the savings group institution.

A lack of trust in financial institutions has been linked to low uptake of commercial savings products and therefore has a negative effect on the saving behaviour in savings groups (Burlando & Canidio, 2017; Karlan et al., 2014). Trust can, therefore, affect the willingness of members to store their money in a particular savings mechanism. However, trust, supported by rules, controls and transparency, seem to

abound in the savings groups included in this research study which may offer a reason why these savings groups are effective in mobilising savings.

6.3.1.2 Level Two: Individuals

Individual informants seem to associate the proximity of the other members of their saving group with trust. Since all eight informants were members of general savings groups, they belonged to smaller, more intimate groups and exchanged funds on a rotational basis. Informants seem to be selective about whom they wished to save with and knew the other members either from work, family or very close friendships.

Members of these groups remained in close contact, either by seeing each other often or through electronic communication. Feigenberg et al. (2013) found evidence that repeated social interactions strengthened social networks and increased social capital in microfinance groups in a very short space of time. Social cohesion and trust in savings groups take time to develop according to evidence from Burlando and Canidio's (2017) experiments in Uganda, unless the initial social connections in the group are strong.

The informants' responses, therefore, support this literature in that the close social connections and regular contact seem to reinforce the levels of trust in their savings groups.

6.3.1.3 Summary

Both Level One and Two informants strongly emphasised the importance of the trust they had in savings groups and its contribution to the mechanism's success. In the case of savings groups, trust is reinforced by rules; controls and transparency; whilst proximity of other members seems to increase trust the most on an individual member level.

6.3.2 Discipline

6.3.2.1 Level One: Savings Groups

As was mentioned in the previous section on trust, savings groups value their rules and controls. However, rules and controls are of no meaning if they are not enforced. Group informants stated their belief that the rules gave them the discipline to save; whilst it was most likely the rules together with the enforcement thereof, that were

actually effective. Members accepted the fines for minor misconduct as part of the rules and tried to prevent these extra expenses through compliance.

The matter of self-discipline or rather a lack thereof is closely related to saving behaviour in behavioural economic literature. Giné et al. (2018) found empirical evidence through experiments conducted in Malawi that a lack of self-control over present-biases leads to revisions of commitments to save. However, saving devices that are designed around these self-control problems can be very effective (Giné et al., 2018). The findings suggest that savings groups address members' lack of self-discipline effectively, through enforcing rules that do not allow for transgressions without penalty.

6.3.2.2 Level Two: Individuals

Individual informants declared their own inability to save due to a lack of self-discipline, which was the main motivation for joining a saving group in the first place. The research findings from their responses indicate that they were held accountable for saving through the enforcement of the saving groups' rules.

6.3.2.3 Summary

The findings suggest that the enforcement of savings groups' rules serves to counteract members' lack of self-discipline towards savings. For this reason, discipline is improving saving behaviour and considered a saving promotion intervention.

6.3.3 Peer Pressure

6.3.3.1 Level One: Savings Groups

The savings groups included in this research study kept the operational activities and all members' saving decisions and status transparent as discussed in the previous section. Beshears et al. (2015) found that providing information on peers' saving behaviour can serve as a very effective intervention to drive increased savings through peer pressure. The findings support this literature in that groups referred to being pushed by each other to save and that all decisions were made collectively as a group.

6.3.3.2 Level Two: Individuals

The abovementioned literature on peer pressure as an intervention to drive increased savings, was also supported by the individual informants' responses. Kast et al. (2018) conducted experiments on savings groups in Chile and found that, where peers set

goals and monitor and reward the achievement of these goals in public, savings can be significantly increased. Apart from disclosing that the group's "push" helped them to save, individuals were concerned not to save less than their peers to avoid receiving a smaller share at the end of the savings cycle. Sharing at the end of the cycle, which was essentially the reward for achieving a savings goal, happened in public with full transparency of all members. Findings from individual informants' responses therefore support literature on the positive effect that public rewards could have on saving behaviour.

6.3.3.3 Summary

Whilst both Level One and Level Two informants admitted that the group dynamic helped them to save; group informants also noted the importance of group consensus in decision-making. This was not mentioned by individual informants; for whom comparison with others also contributed towards the peer pressure experienced.

6.3.4 Mental Accounting

6.3.4.1 Level One: Savings Groups

According to Steinert et al. (2018), by mentally allocating money to saving, it was less available for other expenses and would lead to feelings of guilt and failure if it was then spent instead of saved. From the research findings, it was evident that members of savings groups knew exactly what amount to save and towards which purpose. Members planned and budgeted diligently around these earmarked funds for their savings groups. The internal controls of the savings groups then facilitated the allocation of funds to the correct member and purpose for sharing at the end of the cycle. These findings support Steinert et al.'s (2018) results in terms of mental allocation of income to monthly savings. However, since the default rate is so low in savings groups as members would help each other to save if needed; no data on the emotions experienced at default were collected.

6.3.4.2 Level Two: Individuals

The results of experiments conducted by Karlan et al. (2016) proved that reminder messages to save mitigated limited attention to saving and increased salience amongst bank customers. These reminders led to an increased commitment to saving being reported (Karlan et al., 2016). The majority of individual informants to this study stated that they did not need any reminders to save. Saving as part of a savings group was top-of-mind and ingrained in their thinking – which offers support for the Level One

informants' responses and literature discussed earlier. Nevertheless, individual members of rotational savings groups continued to receive communication and reminders from each other. The member due to receive the lump sum in a particular month would send reminders to ensure that the rest complied and money is shared on time. With saving being top-of-mind and unnecessary reminders, it seems that the possibility of limited attention to saving is mitigated in line with Karlan et al.'s (2016) evidence.

6.3.4.3 Summary

Both levels of informants attested to mentally allocating funds to save in a savings group. Level One informants ascribed their mental accounting to budgeting and planning; while Level Two informants experienced saving as being top-of-mind and reinforced by reminders.

6.3.5 Obligation

6.3.5.1 Level One: Savings Groups

The act of binding oneself to a specific course of action at the cost of flexibility is what Laibson (2015) considers to be commitment. The commitment of members to savings groups was apparent from the low turnover rates reported in all groups. Reasons for leaving a groups were generally ascribed to changes in circumstances.

The motivation behind members' commitment to remain in the groups was a more comprehensive question which was not posed directly to groups during the interview. According to O'Donoghue and Rabin (2015), present-bias or the need for immediate gratification is not the only motivation for making commitments. However, the research findings indicated that members framed their commitment as an obligation; most often expressed as a "have to" save mentality. Behaviour economic literature uses the term commitment almost exclusively, whilst "obligation" is conventionally used in collective contexts as a commitment towards others or a "moral obligation". The results showed that this obligation or commitment makes it easier for members of savings groups to save.

6.3.5.2 Level Two: Individuals

The individual informants explained that they regarded their monthly savings contributions as expenses and compared them to rent or insurance payments. This framing supported their notion that they had no choice but to pay their contributions.

Furthermore, their responses also frequently included the “have to” phrase, but they were able to express their obligation towards others much more explicitly. Knowing that others in the group were affected by, and depended on, their contributions, seemed to drive them towards saving every month.

6.3.5.3 Summary

The “have to” mentality expressed by both Level One and Two informants implies that there is no choice in whether to save or not. This supports Laibson’s (2015) description of what a commitment is; as mentioned above. In the context of social groups such as a savings groups, it seems more appropriate to refer to this commitment as an obligation. Level One and Level Two informants expressed that their obligation towards others either made savings easier or drove monthly savings. For this reason, this mental obligation towards others can be considered an intervention towards positive saving behaviours.

6.3.6 Emotion

Berg and Zia (2017) conducted an experiment in South Africa to determine if financial messages delivered through mainstream media could affect the financial behaviours of participants. They found that research participants’ emotional connection to actors led to positive effects on financial behaviours. According to this literature, emotion can serve as an intervention to change behaviour.

The findings revealed a whole array of emotions mentioned by savings group informants, but the most popular were feelings of love, respect and encouragement. Individual informants, on the other hand, expressed motivation, excitement and satisfaction the most. It is not surprising that these emotions differed between the two levels of informants, since emotions felt collectively by a group will be less specific than individual emotions which are more personal. What seems to emerge from the collective results, is that emotion plays an important role in savings groups as a savings mechanism – which is not usually the case with standard, commercial savings products.

Emotion may also support the findings that social influences are non-standard drivers of saving behaviour in savings groups as per the results of Research Question 1. However, this study did not attempt to identify which emotions, combinations of emotions, or the extent to which they influenced saving behaviours. It is merely

recognised that certain emotions can be potential interventions that reinforced the social capital and saving behaviour in savings groups.

6.3.7 Incentives

6.3.7.1 Level One: Savings Groups

Responses from savings group informants indicated a number of benefits to savings-group membership that stretched beyond increased savings. The incentives mentioned were all of a non-financial nature, such as help in need, women empowerment and financial independence.

Kast et al. (2018) conducted an experiment on savings groups in Chile to determine the effectiveness of incentives as interventions to save. They found “social” or non-financial interventions to be more effective than higher interest offered as a monetary incentive (Kast et al., 2018). The frequency with which these incentives were mentioned by savings groups, seem to indicate their importance to the savings group construct. However, the extent to which non-financial or social incentives drive the saving behaviour of savings groups was not determined.

6.3.7.2 Level Two: Individuals

Personal benefits derived from membership of savings groups were identified by Level Two informants as problem-solving, emotional healing and advice. Even though the perceived incentives differ from those identified by Level One informants, the notion that non-financial incentives could serve as interventions to improve saving behaviours is supported.

6.3.7.3 Summary

Examples of non-financial incentives derived from savings group participation are help in need, women empowerment, financial independence, problem-solving, emotional healing and advice. These incentives are seen to contribute to the success of savings groups and are therefore considered to be saving-promotion interventions.

6.3.8 Summary of the Discussion of Research Question 2

A summary of the literature supported by each of the identified interventions is presented in Table 11 below. This study further contributes to literature by supporting and connecting existing behavioural economic literature, with literature on saving behaviour, saving promotion interventions and savings groups in new ways. To offer

an example: this research study suggests emotion as an intervention to drive saving behaviour in savings groups. Emotion has been linked to interventions for financial behaviour (Berg and Zia, 2017), but not to the saving behaviour of savings groups as far as the researcher could determine from the literature review.

Table 11: Literature Supported by Identified Interventions

Intervention	Topic	Literature
1 Trust	<ul style="list-style-type: none"> - Importance of trust in financial institutions - Trust in savings groups - Social trust - Social interactions to build trust 	Burlando & Canidio, 2017; Karlan et al., 2014 Burlando & Canidio, 2017 Hoff & Stiglitz, 2016 Feigenberg, 2013
2 Discipline	<ul style="list-style-type: none"> - Self-discipline to save - Lack of self-control to save 	Giné et al., 2018 Dupas & Robinson, 2013; Bernheim et al., 2015; Thaler & Benartzi, 2004
3 Peer Pressure	<ul style="list-style-type: none"> - Sharing of peer's saving information - Public awards for saving achievements 	Beshears et al., 2015 Kast et al., 2018
4 Mental Accounting	<ul style="list-style-type: none"> - Mental allocation of income to savings - Reminders to save 	Steinert et al., 2018 Karlan et al., 2016
5 Obligation	<ul style="list-style-type: none"> - Commitment - Motivation for commitment 	Laibson, 2015 O'Donoghue and Rabin, 2015
6 Emotion	<ul style="list-style-type: none"> - Emotion as an intervention to change financial behaviours 	Berg and Zia, 2017
7 Incentives	<ul style="list-style-type: none"> - Effectiveness of non-financial incentives as saving interventions 	Kast et al., 2018

6.4 Results: Research Question 3

Research Question 3:

What features of savings groups can be replicated in alternative commitment saving devices?

The attributes of savings groups that drive positive saving behaviour have been identified and discussed under Research Questions 1 and 2. With Research Question 3, this study shifted towards identifying features of savings groups that could potentially

be replicated into the design of commitment saving devices. This question was posed only to Level Two informants as consumers of savings groups.

Informants' responses on the most desired features of a commitment savings device, are grouped as soft features and hard features, and discussed with reference to relevant literature in the sections that follow.

6.4.1 Soft Features

6.4.1.1 Flexibility

Savings devices that are appropriate for the poor in developing countries should be flexible and allow for small and frequent deposits in line with the fluctuation of their income (Afzal et al., 2017). Individual informants revealed their preference for flexibility in terms of affordability and freedom of choice. Since eight of the ten informants were salaried personnel, they had relatively stable income albeit in the low-income range. However, saving what they could afford was mentioned, and through their savings groups, they managed to do just that. The amount to save per month was decided through group consensus or a majority vote to ensure that savings goals were attainable for all members of the group.

The second element of informants' desire for flexibility related to freedom of choice on how to spend the saved funds. This desire is reflective of why they have joined general savings groups in particular. These groups allow members to use their savings to fulfil any need and were not prescriptive or in control of the withdrawal and consumption of funds like grocery *stokvels* generally are, for instance.

6.4.1.2 Effectivity

According to Giné et al. (2018), commitment saving devices could be a cost-effective solution to drive saving behaviours and to improve the lives of the poor in developing countries. Findings of this research study support the literature in the sense that saving through a savings group was considered by all informants to be highly effective. Effectivity was generally phrased as "it works" and was based on individual members seeing the benefits in the form of purchased items or being able to "make ends meet" with limited resources.

6.4.1.3 Summary

The three soft features, affordability of the amount, freedom of choice on the use of funds, and effectivity can be regarded as qualities of savings groups that are valued by consumers of this commitment savings device. These qualities should, therefore, be replicated in the design of alternative commitment saving devices.

6.4.2 Hard Features

6.4.2.1 Access to savings device

Easily accessible and unsophisticated saving devices such as lockboxes have been found to work better in markets where income is low and infrequent (Dupas & Robinson, 2013). Access to savings accounts in rural areas is important, since Dupas et al. (2017) found that communities benefited and collective welfare was increased when savings were kept and spent locally.

As members of savings groups, informants valued the easy access they had to fellow members of their groups through regular meetings and electronic communication (WhatsApp, mostly). The reasons offered for this were to know each other and to resolve problems. It was also established in Research Question 2 that proximity to fellow members builds trust in the savings group institution, which contributes to its overall success. Members, therefore, benefit from the easy access to their savings group in terms of the ability to save in the first place, to resolve issues and to build social cohesion which translates into increased collective welfare through saving. These findings, therefore, support the literature presented here.

6.4.2.2 Restricted access to savings

Individual informants ascribed their own failure to save to a lack of self-discipline when there were no barriers to access saved funds. Financial institutions were criticised for allowing easy withdrawal of funds at short notice and informants stated that penalties were not severe enough to deter these withdrawals ahead of time.

Commitment saving devices require a savings goal, restrict access to funds until that savings goal is achieved and release the funds once the goal is achieved (Bernheim et al., 2015). Restricting access to savings means a lack of liquidity until a savings goal or maturity of a savings product has been achieved. This seems to be exactly what informants prefer and value in terms of the savings groups they belonged to. The

access restrictions imposed by savings groups were considered stricter than that of financial institutions.

6.4.2.3 Liquid funds

Liquidity, as mentioned before, relates to free access to saved funds, which contrasts with the commitment to saving funds for a specific goal unless the saver has no self-discipline problems. Galperti (2015) states that the design of commitment saving devices should take cognisance of the trade-off between requirements for commitment on the one hand, and flexibility and liquidity on the other hand.

Low income groups are particularly susceptible to income shocks and need the flexibility to access funds for emergencies at short notice. This is often the reason why individuals wish to withdraw funds ahead of time in standard commitment saving devices. Savings groups do not allow this, but most do offer loans albeit at very high interest rates. However, since these interest amounts were returned to the specific member at the end of the cycle, informants did not consider it to be exploitive. Savings groups, therefore, demonstrated that they found a balance between the need for commitment, flexibility and liquidity, as suggested by Galperti (2015).

6.4.2.4 Transaction fees

High transaction fees, together with a lack of trust in financial institutions, were identified by Dupas et al. (2017) as constraints to the uptake of commitment saving devices in Kenya. Laibson (2015) asserts that commitment carries the costs of a loss of flexibility, as well as direct product costs associated with commitment devices, which often exceed the benefits.

Individual informants identified fines as the only charges associated with saving in a savings group, and these are avoidable costs. Another form of avoidable costs are the costs of compliance with financial institutions' rules and regulations and Know Your Customer (KYC) requirements in order to gain access to commercial products. These costs are costs associated with time and effort to comply – even travel costs to the financial institution. With low to no charges levied by savings groups, the pitfalls as identified by Dupas et al. (2017) and Laibson (2015) are avoided, making this a very valuable feature of this savings device.

6.4.2.5 Interest Earnings

Whether individual informants preferred and valued interest earnings in their commitment savings device, seem to be determined by what their current device offers or not. Informants that earned interest in their savings groups valued this feature, whilst those who receive none, seem to disregard this feature. This indicates that informants compare gains from interest to a reference point in the status quo (Imas et al., 2016), which reinforces earlier findings of a possible status quo bias in the saving behaviour of savings groups.

According to Kast et al. (2018), interest earnings may not matter as much for precautionary savings as for long-term investments: the saving purpose drives the need for these returns. The short-term horizon and precautionary nature of saving through savings groups, may therefore contribute to the varied results in terms of interest as a valued feature in commitment saving devices. It is, therefore, suggested that interest is a valued feature in commitment savings devices, but subordinated to the other features mentioned before, which drive saving commitment to a much larger extent.

6.4.2.6 Summary

Hard features that should be included in the design of commitment saving devices are access to the device in the first place; restricted access to funds saved; liquidity; no transaction fees and interest earnings.

6.4.3 Summary of the Discussion of Research Question 3

Soft features or qualities of an ideal commitment saving device were identified by informants as flexibility and effectivity. Hard features, driven by rules or terms and conditions, will be easier to include in the design of commitment saving devices from a practical perspective. Access to the device, restricted access to funds saved, liquidity, no transaction fees and interest earnings are valued features for a model commitment saving device from the perspective of individual members of savings groups.

6.5 Conclusion

This chapter presented a discussion of the research findings of this study. The drivers of the standard saving behaviours of savings groups were identified as preferences and optimisation. This constitutes the results for the first part of Research Question 1.

It was established that savings groups have stable, well-defined preferences in terms of their saving purpose, operational activities, members allowed to join, meeting procedures and so forth. These results support the literature on standard economic theory by Thaler (2016). The research did not explore whether optimal preferences, in the best interest of the group, were selected in every instance and made no inferences in this regard.

Optimisation according to standard economic theory was supported in terms of saving in a savings group (Greaney et al., 2016; Ksoll et al., 2016; Le Polain et al., 2018) to smooth consumption in the first place; bulk buying (in the case of *stokvel* savings groups) and partly through earning interest either in bank accounts, or in the savings group mechanism itself. However, informants revealed very limited efforts taken to optimise interest rate and amounts, which may be an indication of non-standard behaviours in terms of standard economic theory.

Non-standard drivers of saving groups' saving behaviours were identified as biases and social influences. Findings indicated that status quo bias (Dean et al., 2017; De Haan et al. (2018); confirmation bias (Bénabou & Tirole, 2016) and loss aversion (Cronqvist & Siegel, 2015; Imas et al., 2016; Thaler, 2015) may be present in the decision-making of savings groups, driving their saving behaviour. Surprisingly, no findings supported present bias in the savings groups' saving behaviour. The second driver of non-standard saving behaviours was social influences, which supported the social determinants of behaviour theory by Hoff and Stiglitz (2016); assertions on social capital theory by Newman et al. (2014) and Feigenberg et al. (2013).

Research Question 1 was therefore answered and results indeed indicated that savings groups have non-standard (irrational) saving behaviour and the drivers of these saving behaviours were identified. Research Question 2 aimed to identify the characteristics of savings groups that serve as natural saving promotion interventions. The following interventions were identified as a result: trust; discipline, peer pressure, mental accounting, obligation, emotions, and incentives. Behavioural economic literature supported by each of these concepts are presented in Table 11.

The valued features of commitment saving devices with reference to savings groups were revealed by individual informants. Soft features or characteristics of flexibility and effectivity were identified and assessed, as well as hard features of access to the

device; restricted access to funds saved; liquidity; no transaction fees and interest earnings.

The results were used to construct a behavioural design framework for successful commitment saving devices that is presented in the concluding chapter that follows.

7. CONCLUSION AND RECOMMENDATIONS

7.1 Introduction

Concern for the inadequate savings rates of individuals and households (WEF, 2017) was the catalyst behind this study. The proposition that an increased propensity to save, driven by positive saving behaviour and enhanced by effective commitment saving devices (Giné et al., 2018) could increase these savings rates, was illustrated in Chapter 1 (cf. Figure 2). For this reason, the study explored the drivers of saving behaviour, interventions that change saving behaviour positively, and the most valued features of commitment saving devices according to customers. Savings groups, as successful commitment saving devices (Le Polain et al., 2018; Steinert et al., 2018), offered the context for this study to inform the design of effective saving devices.

This study specifically explored the saving behaviour of savings groups to gather insights on the behavioural design of this savings device. As presented in Chapter 1, savings groups are popular informal saving mechanisms that offer flexible services to the poor in developing countries (Burlando & Canidio, 2017; Dupas & Robinson, 2013; Le Polain et al., 2018). One of the many benefits that savings groups offer, is overcoming behavioural constraints to saving (Steinert et al., 2018). Although literature offers a considerable amount of information on these constraints and negative influences on saving behaviour (cf. Table 2, section 2.2.2), there is still a need to understand the factors responsible for consistent, positive saving behaviour in order to design effective behavioural interventions (Dholakia et al., 2016). Commitment saving devices, such as savings groups, provide the mechanisms through which these interventions can be implemented and savings goals can be achieved (Afzal et al., 2017; Benartzi & Thaler, 2004; Dupas et al., 2017). However, a number of constraints to the up-take of these devices have been identified (Galperti, 2015; Dupas et al., 2017) and whether these constraints were present in the context of savings groups, needed further investigation.

This chapter presents the research findings; discusses their implications for theory and business; proposes a behavioural design framework for commitment saving devices; draws attention to the limitations in this research; and suggests key areas for future research.

7.2 Research Findings

With savings groups being widely credited as effective savings mechanisms (Burlando & Canidio, 2017; Greaney et al., 2016; Kast et al., 2018; Ksoll et al., 2016), albeit not without shortcomings (Afzal et al., 2017; Greaney et al., 2016), this construct was chosen as the subject for this study. The question if, and how, savings groups could inform the behavioural design of effective commitment saving devices needed to be explored. This formed the basis for the main research question as presented in Chapter 1: “What behavioural economic attributes of savings groups explain their positive saving behaviour as a model for the design of effective commitment saving devices?”

This qualitative research study answered the overall research question through three sub-questions and the findings are presented here and summarised in Appendix 5.

7.2.1 Drivers of Saving Behaviour in Savings Groups

Any study on economic behaviour should commence with a consideration of rationality, as per standard economic theory. This study identified two key drivers of rationality (standard saving behaviour) in the context of savings groups: preferences and optimisation. All savings groups revealed clear preferences in terms of saving purposes, operational procedures, membership requirements and formal meeting proceedings; which were well-defined in the rules or constitutions that guide their saving decisions. These findings support the concept of well-defined preferences; a driver of rational decisions per standard economic theory (Thaler, 2016). However, it was beyond the scope of this study to establish whether the highest-ranking preference (Carvalho et al., 2016) or optimal preference that was in the best interest of the group, was always adopted. Savings groups clearly demonstrated rationality through optimisation (Thaler, 2016) by taking the action to save in the first place (Greaney et al., 2016; Ksoll et al., 2016; Le Polain et al., 2018) and through bulk-buying to leverage off economies of scale (*stokvel* groups). Groups also earned interest on saved amounts in bank accounts (*stokvel* groups) or loans offered to members (SSC groups) and saved on bank charges (SSC groups) by avoiding the use of bank accounts. However, these findings also revealed that groups did not pursue the best available options in terms of interest rates or the safest place to store their funds. Contrary to conventional wisdom and standard economic theory grounded in rationality through optimisation (Thaler, 2016), savings groups expressed their *belief* that they had chosen the best options in these instances. Savings groups, therefore, try to optimise

but do not necessarily succeed to the extent that the objective, rational economic man, would. This indication of irrationality suggested the presence of non-standard behaviour for further exploration in accordance to behavioural economic theory.

Optimal choices are based on unbiased beliefs (Thaler, 2016), which may offer a partial explanation why optimisation was not achieved in all the saving decisions of savings groups. Biases identified in the saving decisions of savings groups were: status quo bias (Dean et al., 2017, De Haan et al., 2018), confirmation bias (Bénabou & Tirole, 2016) and loss aversion (Cronqvist & Siegel, 2015; Imas et al., 2016; Thaler, 2015). These cognitive errors in decision-making (Tversky & Kahneman, 1974) could potentially influence saving behaviour positively (in the case of loss aversion (Cronqvist & Siegel, 2015)) or negatively in general (Dupas & Robinson, 2013; Karlan et al., 2014; O'Donoghue & Rabin, 2014) (cf. Table 1, Chapter 2). Determining whether the identified biases, individually or collectively, had positive or negative effects on savings groups' saving behaviour was beyond the scope of this study and no inferences can be made in this respect. Two possibilities exist: either these biases have a positive effect on saving behaviour and contribute towards savings groups' success, or they have a negative effect which is consequently changed through behavioural interventions. However, the mere presence of these biases seems to indicate that they play a role in driving non-standard saving behaviour of savings groups. The finding on confirmation biases also contributes to literature with a possible new link between confirmation bias and saving behaviour in the context of savings groups.

Present-bias links to a lack of self-control and the need for instant gratification (Jackson & Yariv, 2014; Laibson & List, 2015; O'Donoghue & Rabin, 2015) and is arguably the most frequently cited bias in the analysis of saving behaviour. This research set out to determine drivers of saving behaviour at the savings group level and the results seem to indicate that present-bias does not play a role at this level. However, individual members stated that their present-bias or need for instant gratification on a personal level, was mitigated by saving through a savings group. This effect was also expressed as the main reason for joining a savings group in the first place. The present-biases of individual members could therefore be regarded as an indirect driver of positive saving behaviours in savings groups, where this bias no longer seems to play a role. This insight contributes to literature with an example of present-bias mitigation through participation in savings groups and supporting literature which suggests that a savings group in itself drives positive saving behaviour (Dupas et al., 2017).

The fourth, and final, identified driver of saving behaviour in savings groups was social influences, or more specifically, relationships and culture. Savings groups meet regularly and are in close contact between meetings, which contribute to their social capital. These findings support literature that social networks enhanced by frequent social interactions (Feigenberg et al., 2013) can influence saving behaviour (Newman et al., 2014). While Hoff and Stiglitz (2016) proposed social context and culture as two social determinants of behaviour, they also stated that evidence is lacking on whether they influence saving behaviour positively or negatively. It emerged from this study that relationships and culture seem to have a positive influence on saving behaviour in the context of savings groups and, therefore, add to literature in this respect.

The findings of Research Question 1 suggest that the savings decisions of savings groups are driven by both standard and non-standard behaviour. Savings groups' success despite the presence of non-standard saving behaviour seems to indicate that behavioural change occurs within this mechanism. This lead to the findings for Research Question 2 as discussed in the next section.

7.2.2 Saving-promotion Interventions Embedded in Savings Groups

The ability of savings groups to alter saving behaviour was demonstrated in Research Question 1's findings on present-biases as discussed earlier. Saving as part of a group seems to resolve the lack of self-control individuals experience when trying to save on their own. Further to this, Research Question 2 was answered through the identification of seven possible saving-promotion interventions embedded in the characteristics of savings groups. These interventions are: trust, discipline, peer pressure, mental accounting, obligation, emotion and incentives; which support literature in the fields of behavioural economics, savings groups and saving behaviour; as was summarised in Table 11 (cf. Chapter 6) and Annexure 5. Individually, none of these interventions may be considered a new contribution to literature, but the combination of interventions offer suggestions towards theoretical gaps identified in extant literature. Cronqvist and Siegel (2015) expressed the need to identify the specific characteristics of groups that are important nudges for saving decisions. According to Beshears et al. (2016), saving-promotion interventions that drive improved saving behaviour need to be identified and implemented. The seven characteristics of savings groups that possibly act as savings-promotion interventions, therefore, collectively adds to literature.

These possible interventions were identified by two independent sources: savings group informants (Level One) and individual informants as consumers of savings groups (Level Two). However, differences between the meanings that these two levels of informants associated with the interventions emerged from the findings, which were compared and contrasted in Table 8 as presented in Chapter 5. What is important to note, is the clarity of association between the two levels of informants in respect of the discipline, peer pressure and obligation interventions. In the case of these three interventions, savings groups and individual members seem to agree on some aspects of how these interventions work. The discipline to save is achieved by rules and the strict enforcement thereof, groups push them to save and an obligation or “have to” mentality is instilled in members. A pattern of “force” emerged from these findings which suggested two possible categories for interventions: “hard” interventions and “soft” interventions. Hard interventions seem to require a level of force or pressure to instil positive saving behaviours, whilst soft interventions rely on a more indirect approach to achieve the same result. Neither the relative importance of each intervention compared to the others, nor the relationships between the interventions were established as part of this study. However, the theme of “force” in the context of savings groups’ saving behaviour is noted as a contribution to literature on behavioural economics in the context of savings groups.

Whilst behavioural economic theory used the term “commitment” in reference to saving behaviour (Laibson, 2015; O’Donoghue & Rabin, 2015), the results of this study indicated that a more appropriate term in the context of savings groups could be “obligation”. This term seems to better describe and combine informants’ associations of “having to” save; saving framed as an expense or an insurance payment with no choice; and saving obligation to others, into one intervention. This insight potentially contributes to behavioural economic literature with the new framing of commitment in the context of savings groups.

7.2.3 Features for Replication in Commitment Saving Devices

As consumers of savings devices, individual members of savings groups were considered to be in the best position to advise on valued features of such devices. Flexibility and effectivity were revealed as the most valuable “soft” features of savings groups, which supports extant literature on requirements for commitment saving devices (Afzal et al., 2017; Giné et al., 2018).

Individual informants also expressed the need for five “hard” product features in commitment saving devices, namely, access to the savings device in the first place; restricted access to their savings; liquidity; no transaction fees and interest earnings. Access to savings devices as a valuable feature, supports results from previous studies on the popularity of easily accessible and unsophisticated saving devices such as lockboxes (Dupas & Robinson, 2013). The requirements for restricted access to savings (Bernheim et al., 2015) and liquidity at the same time, seem to be in juxtaposition. However, this is a reality for consumers in low-income groups who have to balance the need for restricted access to mitigate self-control issues, with the need for liquidity in the time of emergencies (Galperti, 2015). Members of savings groups included in this study, seemed to value the ability of savings groups to get this balance right. Responses revealed that savings are restricted over the short term: long enough to build up a sizable lump sum, but not too far into the future for the restriction to be regarded as paternalistic. In the case of emergencies, informants’ savings groups assisted with either short term loans from the group, or one-to-one loan arrangements between fellow members. The research findings, therefore, support literature on the requirements for both restricted access to savings and liquidity in commitment saving devices (Bernheim et al., 2015; Galperti, 2015).

Transaction fees can be a deterrent to saving through a commitment savings device (Dupas et al., 2017). Individual informants (as well as groups, for that matter) seemed to be strongly opposed to transaction fees and appreciate the fact that their savings groups do not charge any fees except for avoidable fines. The matter of interest earnings as a valuable feature of commitment savings devices (Kast et al., 2018) was found to be ambiguous, as consumers revealed a possible status quo bias in their responses. A pattern that emerged from the responses, was that the informants valued what interest option their savings groups were offering to them at the time of the interview and seem to disregard other, potentially better, options. For this reason, interest is regarded as a valued feature, but may be of less importance than the other hard features in the context of commitment saving devices. This supports Kast et al.’s (2018) assertion that interest earnings may not matter as much when saving for short-term precautionary purposes as it would for long-term investments. However, the possibility of a status quo bias in members’ interest preferences is noted as an addition to literature.

This study supports the literature on the desired features for commitment saving devices in general. With all these features considered to be present in savings groups,

it is suggested that savings groups can be regarded as model commitment saving devices. With the overall research question answered, the findings on savings groups' saving behaviour, interventions and valued features as commitment saving devices, were combined into the proposed behavioural design framework that follows.

7.3 Proposed Framework

The research findings revealed that there are lessons to be learned from savings groups as effective saving devices. These findings were combined into a behavioural design framework for commitment saving devices, consisting of two parts. Part One represents the design dimensions based on the results of this study, while Part Two offers explanations on the behavioural levers and related design elements for product development purposes.

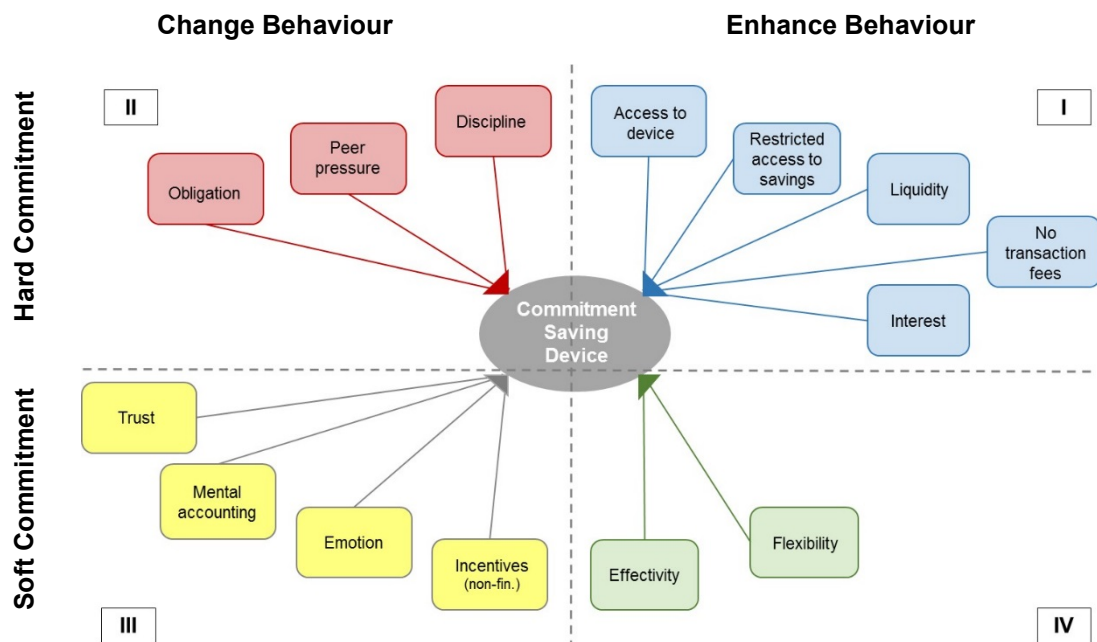


Figure 10: Part One – Behavioural Design Framework for Commitment Saving Devices

This figure illustrates the following design dimensions for commitment saving devices, based on the research findings:

- *Quadrant I:*
Customers have identified five valuable features of commitment saving devices, which should therefore be incorporated into the product design in order to attract customers. These features are also expected to enhance positive saving behaviour once product interventions have done their part to change behaviour for the better.

- *Quadrant II:*
The three interventions: discipline, peer pressure and obligation, were found to be the most forceful in their approach to change saving behaviour. Together with the product features per Quadrant I, these are considered to be hard commitment features because they rely on forces, rules or terms and conditions to function effectively.
- *Quadrant III:*
Soft commitment interventions rely on changing mind-sets and perceptions of customers in order to change saving behaviour. Coercion, rather than force, is required to effect these changes.
- *Quadrant IV:*
The qualities of flexibility and effectivity in commitment saving devices are often only perceived once a customer has used a product for some time. These qualities are therefore important features to retain customers.

Even though this framework is meant for general application, it is based on the savings group-model and its effectiveness will therefore improve with the ability to build a “savings network” or saving support groups around consumers. Table 12 offers explanations on possible behavioural levers and related design elements behind this proposed concept of savings networks which can potentially be built around existing commercial products. Since the relationships, relative importance and impact of each lever were not tested as part of this research study, it is left to the product designer to either consider all levers together to ensure maximum effectiveness or to select elements of interest. However, it is also important to note that the effectiveness of each lever, and the whole, can potentially vary between contexts and target markets.

The main purpose of this framework is to suggest ways to make up-take of commitment saving devices and saving decisions easier; whilst making withdrawals of savings harder. Some of these design elements overlap and some may be working against each other. A balance need to be found after rigorous testing of combinations have been performed. This framework does not profess to offer all new and original ideas, but is comprehensive and provides explanations and motivations on behavioural levers behind proposed product design elements.

Table 12: Part Two - Behavioural Design Framework for Commitment Saving Devices

Behavioural Levers	Design Element
<u>Quadrant I: Hard Commitment Features</u>	
<p>1. Provide easy access to savings device:</p> <ul style="list-style-type: none"> - Reminder in person, saving can be done at the meeting as well - Deposit collecting in person allow for accessibility in remote areas - Physical and emotional proximity of peers i.e. colleagues, neighbours in saving network - Close contact between peers with regular communication and meetings of savings networks 	<ul style="list-style-type: none"> - Savings Network meetings - Deposit collection stations - Proximity of peers - Personalised communication
<p>2. Restrict access to savings:</p> <ul style="list-style-type: none"> - Restrict access by allowing only: <ul style="list-style-type: none"> → Physical withdrawal at teller to create effort → Withdrawals when a pre-determined reason is provided to leverage off personal accountability and even embarrassment → For a predetermined purpose only - No 100% withdrawals allowed, i.e. 20% to remain in savings account and rolled forward to build wealth 	<ul style="list-style-type: none"> - Personalised Withdrawal Restrictions - Rolling savings account
<p>3. Offer liquidity:</p> <ul style="list-style-type: none"> - Options in terms of saving period: 6 months / 1 year / longer - ST Loans only allowed as a % of amounts already saved, only available after a few months of saving - Assist with short term cash flow: easy to borrow, easy to repay within 30 days 	<ul style="list-style-type: none"> - Choice of savings term - “Saving first” micro lending - 30 day loans
<p>4. No transaction fees:</p> <ul style="list-style-type: none"> - Zero transaction fees - Enforce rules with fines – just big enough to “hurt” 	<ul style="list-style-type: none"> - Zero transaction fees - Enforce fines
<p>5. Interest earnings:</p> <ul style="list-style-type: none"> - Promote savings growth towards a longer-term mind-set and investment orientation 	<ul style="list-style-type: none"> - Financial incentives

Table 12 (Continued): Behavioural Design Framework for Commitment Saving Devices

Behavioural Levers	Design Element
<u>Quadrant II: Hard Commitment Interventions</u>	
<p>1. Enforce discipline:</p> <ul style="list-style-type: none"> - Create structure and focus through simple, understandable rules that are easy to remember and increase transparency - Leverage on personal accountability and goal-directed behaviour - Enforce rules and personal savings plan through fines or penalties which are just big enough to “hurt” 	<ul style="list-style-type: none"> - T&Cs or Rules - Create a personal Savings Plan - Enforce fines
<p>2. Leverage off peer pressure:</p> <ul style="list-style-type: none"> - Group saving mechanisms for lower income groups where KYC per person is problematic - Leverage off network effects to create social capital and to provide encouragement, support and to “push” each other - Leverage off observability by announcing saving goals in public: in front of peers in saving network - Leverage off observability to reward saving achievements in front of peers (announce in group communication) 	<ul style="list-style-type: none"> - Create group savings accounts - Create Saving Networks - Public savings goals - Public rewards
<p>3. Instil an obligation:</p> <ul style="list-style-type: none"> - Debit orders are a form of automatic enrolment to avoid 1) the pain of loss of income 2) the effort of physical deposits 3) mental exertion to remember to save (financial obligation) - Draw on accountability and social commitment within saving network (social obligation) - Personalised reminders from peers in saving network 	<ul style="list-style-type: none"> - Promote Debit Orders - Shared savings goals - Peer reminders
<u>Quadrant III: Soft Commitment Interventions</u>	
<p>1. Build trust:</p> <ul style="list-style-type: none"> - Collect and store personal information beyond just demographics, draw on this for personalised communication - Provide regular, clear feedback on saving status, progress towards personalised goals through trusted saving network - Allow for freedom to decide and to select known and trustworthy peers into savings network 	<ul style="list-style-type: none"> - Personalise the experience - Transparent communication - Self-selection of peers

Table 12 (Continued): Behavioural Design Framework for Commitment Saving Devices

Behavioural Levers	Design Element
<p>2. Promote mental accounting:</p> <ul style="list-style-type: none"> - Provide a personalised, visual reminder to hang on a wall, i.e. saving calendar - Differentiate between accounts to assist with mental allocation of income - Savings accounts labelled i.e. “Education Account”, “House Deposit” to promote mental allocation and commitment - Draw on accountability and social commitment with personalised messages - Reminder in person, saving can be done at the meeting as well 	<ul style="list-style-type: none"> - Personal Savings Plan - Visual reminder - Separate Savings Account - Labelled Savings Accounts - Peer reminders - Utilise electronic “Group Chats” - Saving Network meetings
<p>3. Evoke emotion:</p> <ul style="list-style-type: none"> - Create connections / build relationships within saving networks through regular interaction: meetings and communication - Communication about more than just saving commitments; share information on consumer deals of interest, events, interests etc. 	<ul style="list-style-type: none"> - Peer relationships - Personalised communication
<p>4. Provide non-financial incentives:</p> <ul style="list-style-type: none"> - Training on product, compounding of interest, financial literacy - Provide mentorship in saving networks to offer visual support and encouragement, assistance with problem solving - Offer tangible, visible rewards for achievement of saving goals 	<ul style="list-style-type: none"> - Free training - Saving mentorships - Visible rewards
<p><u>Quadrant IV: Soft Commitment Features</u></p>	
<p>1. Allow for flexibility:</p> <ul style="list-style-type: none"> - Affordable savings amounts - Timing and conditions of maturity / withdrawal 	<ul style="list-style-type: none"> - Personal Savings Plan - Personalised Withdrawal Restrictions
<p>2. Proof effectivity:</p> <ul style="list-style-type: none"> - Track and communicate progress towards goals, make it visible - Offer tangible, visible rewards in public for achievement of saving goals - Seeing is believing: visual proof of benefits 	<ul style="list-style-type: none"> - Track progress - Public rewards - Visible results

7.4 Implications for Business

7.4.1 General Consumer and Market Insights

The results from this study offered some suggestions on what consumers of commitment saving devices want and need. From an interpretivist stance, additional customer insights were obtained from observations during face-to-face interviews and immersion into their context. The possibility of researcher bias is acknowledged, but every effort was taken to note observations accurately and objectively. Recommendations from customer insights obtained during the research process are as follows:

- *Customer sophistication:*
Informants to this study were assertive and expressed their needs and wants clearly and without hesitation. Their saving purposes were clearly defined, they run household budgets and are creative and resourceful in stretching their income. Businesses practitioners will be well advised not to underestimate the sophistication of this market and to perform in-depth research to understand customers in the low-income market better.
- *Discerning market:*
Low-income groups are very sensitive to income shocks and need to allocate their limited income carefully to “make ends meet”. Products and services that do well in this market are those that provide value for money and are appropriate in this context. The balance between affordability and effectivity is of great importance; products and services that manage to balance these requirements win the trust, respect and loyalty from this market. For this reason, business is advised not to plan marketing campaigns that rely heavily on push strategies without understanding the market. Such campaigns are generally not well perceived and could even damage brand reputation.
- *Community networks:*
The spirit of Ubuntu runs strong in South Africa’s low-income communities, especially amongst women. Households depend on each other in a number of different ways because of the reality of their circumstances. Herein lies considerable opportunity for business to capture a market. Businesses that manage to capture the loyalty of influential women in a community, could benefit from spill-over effects in wider community networks if they employ these women as local brand ambassadors. It is therefore strongly suggested that product

developers should apply customer-centric design principles in this market, with a particular focus on involving women in the process.

7.4.2 Product Development of Commitment Saving Devices

Any successful commitment saving device offered to the market will essentially be a compromise between what consumers want, and what the product developer can offer given its resource constraints. In order to serve low-income markets well, businesses need to be resourceful in their design-thinking to deliver affordable and effective savings products. Applied behavioural economics have demonstrated that large impacts do not necessarily require large administrative investments in product design or financial incentives (Tantia, White & Wright, 2015). The following recommendations for the development of effective commitment savings devices, are based on the research findings:

- Customers have identified no transaction fees and interest earnings as valuable requirements for commitment saving devices. However, the findings also revealed that interest earnings are possibly less important for customers who save small amounts over the short term. Based on this, there seem to be an opportunity for financial service providers to fund a potential lack of revenue from transaction fees, from the reduced interest required by customers. If financial service providers are able to economically balance this trade-off between transaction fees and interest levers, more customers in the low-income market could potentially make use of commercial commitment saving devices.
- Savings groups, as informal savings mechanisms, have shown a surprising amount of dependence and compliance to rules and controls in their saving behaviour. The identified interventions of discipline, peer pressure and obligation, all use a level of force to change saving behaviour within this mechanism, yet savings groups are not perceived to be paternalistic by their members. In reference to the concept of “libertarian paternalism” (Thaler & Benartzi, 2004, S185), the findings suggest that a level of “libertarian force” could be effective under the right conditions to frame saving as an obligation, not a choice. Product developers are therefore advised to carefully consider these behavioural aspects into the design of their commitment saving devices.
- A number of prior studies and experiments have proven that behavioural interventions can be effective if embedded into the product design of commitment savings devices (Thaler & Benartzi, 2004; Exley & Naeker, 2017). This can be a

very powerful and cost-effective tool to drive up-take and retention in commitment saving devices. Product developers are therefore advised to leverage off these examples and to embark on experiments of their own to find the correct balance of interventions to drive their desired outcome from a behavioural perspective.

7.5 Limitations to the Research Study

As an exploratory, qualitative research study, there are limitations to the generalisability of the results. Additional limitations to this research study due to its design and scope are as follows:

- *Researcher bias:*
One of the main risks of qualitative research is the biases and assumptions introduced by the researcher, which may affect the results. The researcher recognised this possibility and managed to mitigate the effect somewhat by introducing external interviewers into the data collection process.
- *Time horizon:*
A cross-sectional research study was performed as interviews were conducted at only one point in time during 2018 due to time constraints. Behaviours, as the subject of this study, are subject to change and no inferences could therefore be made on the transference of identified behaviours into future periods (Williams, 2007).
- *Cultural and language differences:*
The majority of interviews were conducted by the researcher in English, which was not the home language of the informants. The researcher recognised that meanings and nuances might have been lost in the process due to cultural and language differences.
- *Access to the informal market:*
Data collection in the informal market presents unique challenges as relationships and connections need to be built to gain access to informants for data collection. For this reason and due to time constraints as mentioned before, the researcher had to rely on external assistance to arrange focus-group group interviews, which limited the diversity of the sample selection to some extent.
- *Gender bias:*
Linking to the limitation of access to the informal market; the limitation of gender bias in the sample selection was mostly due to access constraints. All respondents apart from one individual informant, were female.

7.6 Suggestions for Future Research

Based on the findings of this research study, a number of areas that require further research are proposed as follows:

- *Proposed Behavioural Design Framework:*
The proposed design framework as presented earlier should be tested experimentally to determine the optimal combination of interventions and features to increase effectiveness of commitment savings devices. The relative importance of each intervention and feature compared to the others, and relationships and correlations between them should also be tested under different scenarios. Information from such studies should assist product developers to prioritise the introduction of design elements.
- *Behavioural biases:*
A number of biases were identified in the non-standard saving behaviour of savings groups: status quo bias, confirmation bias and loss aversion. Whether these biases have positive or negative influences on saving behaviour in their context, is still to be determined through further research.
- *Emotion as an intervention:*
One of the findings of this study was that emotion plays a role in saving behaviour within a group context. It would be interesting to determine whether this result would be evident if more male savings group members, other types of savings groups (investment *stokvels*, property *stokvels*) or groups with higher net-worth members were explored. The members of these groups are presumed to be more individualistic and business-orientated in their saving behaviour.
- *Savings groups and income growth:*
South African savings groups offer a wide variety of choice in terms of their savings purposes. Participation spans across all income groups, although the saving purpose seem to change with income growth (African Response, 2012). Within this context, future research should explore at what point along the income growth scale, members no longer regard savings groups as an effective savings mechanism and decide to leave permanently. Furthermore, whether social capital remains as strong in wealthier savings groups should be explored.
- *Interest and precautionary savings:*
Informants to this research study revealed a possible status quo bias in terms of their interest preferences. Future research should explore all the reasons for this, for example: is it just because the savings balances are too low to see a difference

in wealth from interest earnings? Or is it due to a short-term mind-set and that the concept of compound interest is not understood?

- *Wealth creation in savings groups:*

Savings groups are critiqued for their inability to create wealth for members and for being based on a consumption model. Future research should explore what it would take to move from a short term consumption mind-set to a long-term investment mind-set in savings groups. Saving mechanisms such as SaveAct's Savings and Credit Model may offer some valuable insights in this regard.

7.7 Conclusion

This research has provided insights into the behavioural aspects of savings groups as model commitment saving devices. Focus-group interviews with ten savings groups and in-depth interviews with ten individual members of savings groups were conducted. The findings were then analysed to compare, contrast and consolidate the different perspectives. Within the context of savings groups, the findings revealed drivers of positive saving behaviour, seven possible interventions to change saving behaviour for the better, and seven valuable features of effective commitment saving devices. These findings were combined and a behavioural design framework for the development of alternative commitment saving devices was proposed. This framework may be useful to product developers for the design of new savings devices or to improve existing devices in a cost-effective way to achieve increased up-take, customer retention and savings outcomes. This study also contributes towards literature with a comprehensive behavioural economic analysis of savings groups that combined the fields of saving behaviour, savings groups, saving-promotion interventions and commitment saving devices in a single behavioural economic study.

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APPENDIX 1: CONSISTENCY MATRIX

Research Questions	Sections in Literature Review	Data collection tools	Analysis technique
1. What drives the saving behaviour of savings groups?	2.2. Saving behaviour of savings groups 2.3. Saving behaviour and economic theories	Interview Guide 1: Section II, Questions 1 - 5	Thematic Content Analysis
2. What inherent characteristics of savings groups serve as natural saving behaviour interventions?	2.4. Interventions to change saving behaviour	Interview Guide 1: Section III, Questions 6 - 9 Interview Guide 2: Section II, Questions 1 - 4	Thematic Content Analysis
3. What features of savings groups can be replicated in alternative commitment saving devices?	2.5. Commitment savings devices as a vehicle for interventions	Interview Guide 2: Section III, Questions 5 - 7	Thematic Content Analysis

APPENDIX 2: ETHICAL CLEARANCE

**Gordon
Institute
of Business
Science**
University
of Pretoria

07 June 2018

Landman Mama

Dear Mama

Please be advised that your application for Ethical Clearance has been approved.

You are therefore allowed to continue collecting your data.

Please note that approval is granted based on the methodology and research instruments provided in the application. If there is any deviation change or addition to the research method or tools, a supplementary application for approval must be obtained

We wish you everything of the best for the rest of the project.

Kind Regards

GIBS MBA Research Ethical Clearance Committee

APPENDIX 3: PHASE 1 – INTERVIEW GUIDE FOR SAVINGS GROUPS

Informed Consent Form

Hi, my name is Marna Landman and I am visiting you today to learn more about savings groups for a research project. As you know, savings groups are very popular and help many people to save for a variety of different purposes. For this reason, I want to ask you questions to better understand why your savings group is saving successfully and how your savings group makes it's saving decisions. If you agree, I will lead this interview based on a questions I have prepared. You don't have to answer all the questions, but it would be appreciated if you can, since it would be lead to better results for the study. **Your participation is voluntary and you can withdraw at any time without penalty.**

Your answers will be treated confidentially and you will not be asked for any information that will identify yourself or the group. The interview will last for more or less 90 minutes, depending on how fast we go through the questions. In order to analyse your answers later, will you allow me to record our conversation (YES / NO)?

Researcher:	Marna Landman	Supervisor:	Morris Mthombeni
Email:	marna.landman@gmail.com	Email:	mthombenim@gibs.co.za
Phone:	082 992 0000	Phone:	082 440 5552

Signature of participant: _____

Date: _____ 2018

Signature of researcher: _____

Date: _____ 2018

Semi-Structured Interview Questions

I. General Data

Number of members in group:

Constitution (Yes / No):

Years in operation:

II. Rationality of saving behaviours

No.	Question Guide
1.	a) What is the goal of your savings group / what are you saving for? b) Is this purpose reflected in the savings group's constitution? (Yes / No)
2.	a) Where does the savings group keep the saved funds (money received from members)? b) Why? c) If in a bank account: - What interest rate will the savings group earn on the savings during the saving cycle? d) If the interest is zero or below market rate: - Do you know if the savings group can earn higher interest anywhere else? (Yes/ No) Where?
3.	What is the main reason why you have formed this savings group?
4.	a) Has the savings group ever changed any of its rules, for example: what it is saving for, number of members, amount every member has to contribute per month, or how it is saving?
	b) If NO: - Will the savings group change any of these elements in future? - Why / Why not?
	c) If all the members can save more in the savings group as of this month: would you prefer to start saving more this month, or in a later month? (The sooner the savings group start to save more, the more funds will be paid back) - Why?
5.	a) Suppose there is a 50/50 chance to double the savings group's savings over the cycle (year) by saving somewhere else, but there is also a 50/50 chance that the savings group may lose 33% of its savings during this period), would you do it?
	b) If NO, why?

III. Saving Promotion Interventions

No.	Question Guide
6.	What is the most important reason why members want to save in your savings group?
7.	a) Do members want to see or know that everyone has made their payment for the month? (Yes/ No) b) Why / Why not? c) What does the group do if someone can't make a payment?
8.	a) How do the members know that they will receive their savings when their turn comes? b) What makes your savings group successful in saving?
9.	a) How difficult is it for the savings group to collect money from members every month? b) Why is it difficult / easy?

APPENDIX 3: PHASE 2 - INTERVIEW GUIDE FOR INDIVIDUAL MEMBERS OF SAVINGS GROUPS

Informed Consent Form

Hi, my name is Marna Landman and I am visiting you today to learn more about savings groups for a research project. As you know, saving groups are very popular and help many people to save for a variety of different purposes. For this reason, I want to ask you questions to better understand why you belong to a savings group and how a savings group helps you to save. If you agree, I will lead this interview based on a questions I have prepared. You don't have to answer all the questions, but it would be appreciated if you can, since it would be lead to better results for the study. **Your participation is voluntary and you can withdraw at any time without penalty.**

Your answers will be treated confidentially and you will not be asked for any information that will identify you. The interview will last for more or less 60 minutes, depending on how fast we go through the questions. In order to analyse your answers later, will you allow me to record our conversation (YES / NO)?

Researcher: Marna Landman Supervisor: Morris Mthombeni
Email: marna.landman@gmail.com Email: mthombenim@gibs.co.za
Phone: 082 992 0000 Phone: 082 440 5552

Signature of participant: _____
Date: _____ 2018

Signature of researcher: _____
Date: _____ 2018

Semi-Structured Interview Questions

I. General Data

Saving Group type: Number of members:
Constitution (Yes / No): Years in operation:
Member since:

II. Saving Promotion Interventions

No.	Question Guide
1.	What is the most important reason why you save through a savings group?
2.	a) What is the reason why you want to save as part of a group? b) What will you need to save the same amount every month on your own?
3.	a) How do you know that you will receive your savings when your turn comes? b) What makes you continue to save in a savings group if you can save in a bank account?
4.	a) How difficult is it for you to decide to save every month? b) Why is it difficult / easy?

III. Features of commitment saving devices

No.	Question Guide
5.	What do you prefer when saving: a) Monthly amount: fixed or flexible? b) Timing of withdrawals: fixed or flexible? c) Use of amounts saved: fixed or for any purpose?
6.	Access to funds: a) Have you ever had to ask for a loan from family / friends / your savings group in an emergency? (Yes / No) b) How easy / hard is it to access your savings amounts or get a loan from your savings group in an emergency?
7.	Transaction fees: a) Does your savings group charge any fees, penalties or transaction fees? (Yes / No) b) What is the reason why you don't save in a bank account?

APPENDIX 4: THEMATIC MAP

Research Question	Number of Codes per group	Code Groups / Categories	Themes
RQ1	5	Saving purpose Operations	Preferences
RQ1	1		
RQ1	3	Saving to improve Bulk buying Interest Safe storage Optimisation	Optimisation
RQ1	4		
RQ1	2		
RQ1	1		
RQ1	1		
RQ1	2	Status quo Loss aversion Present-bias Confirmation bias	Biases
RQ1	3		
RQ1	2		
RQ1	2		
RQ1	4	Relationships Culture	Social Influence
RQ1	6		
RQ2	8	Trust Discipline Peer pressure Mental Accounting Obligation Emotion Incentives	Interventions
RQ2	5		
RQ2	4		
RQ2	4		
RQ2	7		
RQ2	20		
RQ2	9		
RQ3	9	Flexibility Effectivity Access to device Restricted access Liquidity Transaction fees Interest earnings	CSD Features
RQ3	1		
RQ3	1		
RQ3	1		
RQ3	3		
RQ3	2		
RQ3	1		
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APPENDIX 5: SUMMARY OF RESEARCH FINDINGS COMPARED TO LITERATURE

SUPPORT LITERATURE	ADD TO LITERATURE	CONTRADICT LITERATURE	BEYOND SCOPE OF STUDY / FUTURE RESEARCH REQUIRED
Research Question 1: What drives the saving behaviour of savings groups?			
<p>Standard Economic Theory:</p> <ul style="list-style-type: none"> • Well-defined Preferences • Optimisation through: <ul style="list-style-type: none"> - act of saving - bulk buying (where relevant) - earning interest - saving on bank charges <p>Behavioural Economic Theory:</p> <ul style="list-style-type: none"> • Lack of Optimisation in terms of: <ul style="list-style-type: none"> - interest rate - safest place to store funds • Behavioural biases in saving behaviour: <ul style="list-style-type: none"> - Status quo bias - Confirmation bias - Loss aversion - Present-bias (Individual level) 	<ul style="list-style-type: none"> • Behavioural biases possibly present in the context of savings groups' saving behaviour: <ul style="list-style-type: none"> - Confirmation bias • Behavioural biases possibly not present in the context of savings groups' saving behaviour: <ul style="list-style-type: none"> - Present-bias (Group level) • Savings groups as a possible mitigation (intervention) against present-bias 		<ul style="list-style-type: none"> • Whether the identified biases have positive or negative influences on savings groups' saving behaviour

APPENDIX 5: SUMMARY OF RESEARCH FINDINGS (CONTINUE)

SUPPORT LITERATURE	ADD TO LITERATURE	CONTRADICT LITERATURE	BEYOND SCOPE OF STUDY / FUTURE RESEARCH REQUIRED
<p>Research Question 1 (Continued):</p> <p><u>Behavioural Economic Theory (Continued):</u></p> <ul style="list-style-type: none"> • Social Influences in savings groups: <ul style="list-style-type: none"> - Relationships - Culture • Social Influences: <ul style="list-style-type: none"> - possible <i>positive</i> influence on saving behaviour in the context of saving groups <p><u>Literature on Saving Behaviour in General:</u></p> <ul style="list-style-type: none"> • Savings groups as a positive influence on saving behaviour • Social Influences: <ul style="list-style-type: none"> - Social networks enhanced by frequent social interactions influence saving behaviour 			
<p>Research Question 2: What inherent characteristics of savings groups serve as natural saving behaviour interventions?</p>			
<p><u>Literature on Savings Groups:</u></p> <ul style="list-style-type: none"> • Characteristics associated with savings groups: <ul style="list-style-type: none"> - Trust - Peer pressure • Social interactions build trust in social networks / savings groups 			

APPENDIX 5: SUMMARY OF RESEARCH FINDINGS (CONTINUE)

SUPPORT LITERATURE	ADD TO LITERATURE	CONTRADICT LITERATURE	BEYOND SCOPE OF STUDY / FUTURE RESEARCH REQUIRED
<p>Research Question 2 (Continued):</p> <p><u>Behavioural Economic Theory:</u></p> <ul style="list-style-type: none"> • Behavioural economic concepts in the context of savings groups: <ul style="list-style-type: none"> - Social trust - Peer pressure • Behavioural economic concepts associated with saving behaviour in general: <ul style="list-style-type: none"> - Lack of self-control - Peer pressure - Mental accounting - Commitment - Interventions to change saving behaviour: <ul style="list-style-type: none"> ○ Reminders ○ Incentives 	<ul style="list-style-type: none"> • Combination of seven characteristics of savings groups that possibly act as saving-promotion interventions: <ul style="list-style-type: none"> - Trust, discipline, peer pressure, mental accounting, emotion, incentives • Theme of “force” in the context of savings groups’ saving behaviour through the emphasis on three of the possible interventions (“hard interventions”): <ul style="list-style-type: none"> - discipline, peer pressure and obligation • New framing of commitment to “obligation” in the context of savings groups. 		<ul style="list-style-type: none"> • Neither the relative importance of each characteristic/ possible intervention compared to the rest, nor the relationships between the characteristics/ possible interventions were established as part of this research study.

APPENDIX 5: SUMMARY OF RESEARCH FINDINGS (CONTINUE)

SUPPORT LITERATURE	ADD TO LITERATURE	CONTRADICT LITERATURE	BEYOND SCOPE OF STUDY / FUTURE RESEARCH REQUIRED
<p>Research Question 2 (Continued):</p> <p>Literature on Saving Behaviour in General:</p> <ul style="list-style-type: none"> • Importance of trust in financial institutions to saving behaviour • Importance of self-discipline • Emotional connection as an intervention to change saving behaviour 			
<p>Research Question 3: What features of savings groups can be replicated in alternative commitment saving devices?</p>			
<p>Literature on Commitment Saving Devices:</p> <ul style="list-style-type: none"> • Required qualities of commitment saving devices: <ul style="list-style-type: none"> - Flexibility - Cost-effectiveness • Required specifications of commitment saving devices: <ul style="list-style-type: none"> - Access to the device in the first place - Restricted access to funds - Liquidity - Low transaction fees • Relative importance of interest earnings 	<ul style="list-style-type: none"> • Possible status quo bias on interest preferences in the context of savings groups 		