

A Financial Technology Solution to Solving the Challenges in the Burial Society Informal Industry in South Africa

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Abstract

Technology is changing many aspects of consumers lifestyles, especially in the way interactions occur between consumers, groups of consumers and businesses. The diffusion of information through the use of technology is reducing the gap between low and high-income consumers and changing cultural norms (Casco & Montealegre, 2016). From an organisation perspective, digital technology is providing opportunities for businesses to target a wider consumer set and increase their reach by targeting global markets.

In this paper, the authors have developed a business model to solve a significant challenge in the South African economy, specifically in the banking sector. Financial Inclusion plays a critical role in assisting a country with escaping poverty (Burns, 2018). There is a portion of the population in South Africa that is unbanked, but even more so there is a substantial amount of consumers who do not transact because of the high cost of banking products and services (Mthanti, 2019). The informal sector plays a vital role in the economy of South Africa, and there have been unsuccessful attempts to formalise this sector. One of the significant informal sectors that contributes R49bn to the economy is the Stokvel society (NASASA, 2019). It is an informal savings mechanism that bypasses the formal sector (specifically the traditional banking sector) and caters for consumers sociological, physical and financial needs that cannot be met by the formal sector. It consists of different forms, some of the more popular ones are Burial Societies, Savings Stokvels, Investment Stokvels, High-Budget Stokvels and Food Stokvels.

The authors have chosen to take a focused approach by solving the significant challenges experienced by Burial Societies. The challenges identified are fraud, theft, inconvenience in the sourcing of products and inferior savings rates. The social impact that creates a sense of community within Stokvels and which is apart of African culture will not be disturbed due to it being inherent and core to the successful functioning of the system. The strategic approach that will be taken is to earn the trust of the Burial Society by providing value-added services such as convenience and preferential savings rates. The business model proposed is primarily a payments platform and will integrate into the current Burial Society ecosystem. It will also link into the back end systems of a preferred banking partner. The potential for the payments platform to provide scale and benefit from networks effects will allow it to obtain preferential savings rates. The secondary benefit will be to leverage the payments platform and create an aggregated market place that links suppliers of funeral products to Burial Societies. In the future state, a Peer to Peer (P2P) lending platform can be implemented that caters for Burial Societies to lend money to each other for emergencies and make a margin on it.

The proposed business model needs to be adopted by the Burial Society for it to be successful. Therefore, it is critical that an accurate understanding of the factors that promote adoption is analysed and understood. The Unified Theory of Acceptance and Use of Technology (UTAUT) and Technology Adoption Model (TAM) will be evaluated, modified and implemented via an interview process to understand the key factors that need to be considered for successful implementation of the solution.

Finally, the Financial Technology (Fintech) ecosystem and its stakeholders are essential elements that need to be leveraged to ensure that the business model has the best opportunity to succeed. It includes Fintech start-ups, government, traditional financial institutions, financial customers and technology developers. The model will be adapted to include educational institutions, international accelerators, influencers, financial news, data feeds and technology infrastructure.

The process described provides a methodological approach to ensuring that critical factors that affect the implementation and success of the proposed Fintech business model are considered and appropriate plans are in place to navigate this complex environment successfully.

Keywords: Fintech, burial society, informal Industry.

Introduction

The banking landscape in South Africa is highly concentrated and dominated by traditional banks. It is an industry that is sophisticated but lacks innovation and has high fixed costs. The banked population is 69.2% with mobile penetration at 162% (EY, 2018). However, only 24% of the population use their bank accounts for more than three times a month (Mthanti, 2019). Therefore, there is an opportunity to target not only the unbanked population but the banked population to increase their utilisation of banking products. Fintech can provide the innovation needed to change the industry (Lee & Shin, 2018). New business models that are enabled through the use of technology can disrupt the sector and add value to customers (Roeder et al., 2018). Fintech's can provide personalised service and offer a customer-centric value proposition that focuses on "cutting costs", "improving the quality of financial services", and "creating a more diverse and stable financial landscape" (Lee & Shin, 2018). In this paper, we propose a Fintech business model that can be applied in the South African context to address the needs of consumers.

Background

Overview of the Digital Landscape

The continuous evolution and revolution of cyberspace from Web 1.0 – "Static" to Web 2.0 – "Read-Write" and now entering Web 3.0 – "Semantic" is changing many aspects of consumers lifestyles (Jackson & Ahuja, 2016). Market dynamics are changing due to the proliferation of mobile devices and internet penetration, and the release of spectrum has the potential to reduce data costs (News, 2019; QWERTY, 2017). These factors are leading to consumers being more informed about products and services and causing organisations to re-evaluate their business models and value proposition. The disruption of the hotel and metered taxi industries by companies such as Airbnb and Uber are examples of how new business models can impact traditional industries. They also provide significant benefits to both suppliers and consumers through network effects. Digital technology is also playing a significant role in the financial service industry by serving communities that were underserved due to not having access to proper services (Citi, 2016). Fintech's can help shape the South African financial services industry through understanding customer needs and solving real problems for consumers that have been neglected by incumbent organisations.

Industry Background

The high inequality rate in South Africa is evidenced by the high Gini coefficient of 0.71 for market income (excluding social grants), (Easydata, 2014). There is disparate income distribution in the country, with 80% of South African households earning less than R3,807 per month (UCT, 2019). The low-income South African spends about 40% of their income on food and 16.3% on transport (STATSA, 2017). This makes it difficult for the lower-income rural and township population to make ends meet and survive. Therefore, every cent saved for this population has a significant impact on their lives.

The Stokvel industry in South Africa is similar to the Rotating Savings and Credit Associations (ROSCAs) or Accumulating Savings and Credit Associations (ACSAs) (Dallimore, 2013; Mulaudzi 2017). It is an informal system where groups of people (2 or more) get together to contribute money into a pool of funds which then gets distributed when an event occurs such as a death in the family, seasonal food purchases, cashing out savings at an expiry period, travel etc. Contributions are mainly cash although there are some sophisticated Stokvels that use other mechanisms. There is, however, a more deeply rooted tradition to Stokvels that is inherent in the African culture, which is being part of a close-knit and vibrant community. Stokvels satisfy this need by creating an environment where friends and family meet not only to make monetary contributions but to socialise with one another. According to NASASA (2019), the Stokvel market is estimated to be R49bn with 810,000 Stokvel groups consisting of 11.5 million people.

Stokvels solve the needs of many different challenges that the consumers face and can take different forms. Below are some common examples of Stokvels, although, this is not an exhaustive list (Matuku & Kaseke, 2014):

1. Burial Society – covers all expenses associated with funerals, including transportation, food, burial site, venue, and so forth (Matuku & Kaseke, 2014).
2. Savings Stokvels – promotes savings with an agreed cycle of receiving pooled funds (Matuku & Kaseke, 2014).
3. Investment Stokvel – involves investing in business ventures to earn a return (Matuku & Kaseke, 2014).
4. High-budget Stokvels – are for high-income consumers and promotes savings and investments (Matuku & Kaseke, 2014).
5. Food Stokvels – promotes savings to make bulk purchases for food and groceries during specified periods in the year at wholesalers and cash and carry stores.

The business model solution that the authors propose is for the Burial Society. According to GenLife (2019), the estimated Burial Society market is estimated to be around R5bn.

Burial Society Functioning and Challenges

The existing Burial Society process involves the following activities as depicted in figure 1 below:

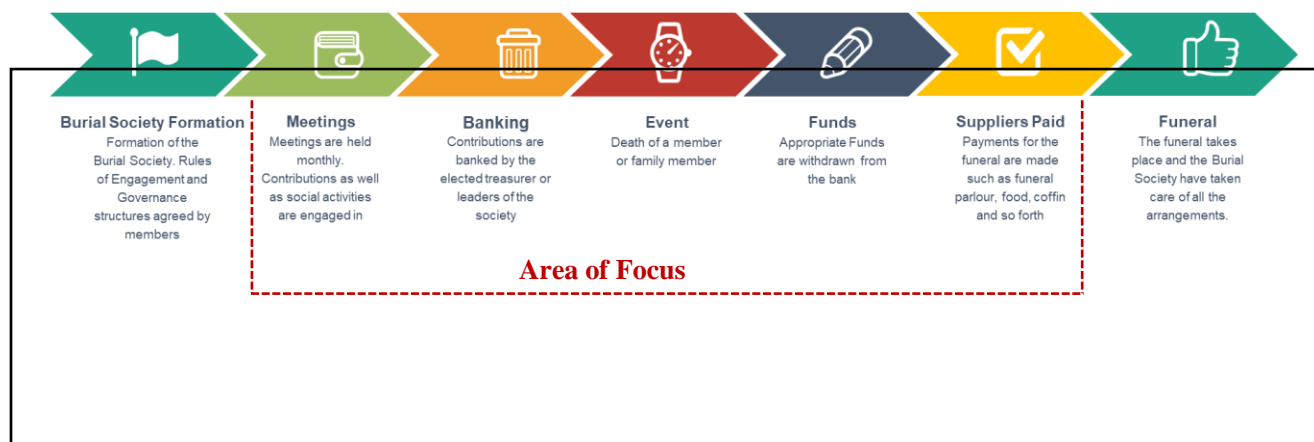


Figure 1: Burial Society Process, Authors Own Source

The reasons for Stokvels, including Burial Societies being successful, is the sense of community that it creates with its members. The monthly meetings serve as an occasion for the members to get together and share their stories and celebrate. Therefore, the authors have decided not to hinder or obstruct that part of the ecosystem. **However, from figure 1 above the challenges that the Burial Society faces is from the banking of funds to the utilisation of it to make payments to suppliers for an event. Once the money is collected at meetings to the time it is deposited into a bank account; there is the risk of fraud and theft. It is also a costly exercise as many of the Burial Societies are in rural or township areas, and banking facilities are some distance away. Generally, there is no insurance on the premiums because of the informal nature of the Society. Due to the fragmented nature of Building Societies, individual Societies do not receive preferential saving interest rates for monies deposited. Further, when an event occurs, the Burial Society is responsible for withdrawing an allocated amount from the bank to pay for the expenses related to the funeral. There is no formal process to select suppliers such as coffin makers, funeral parlours, food supplies, venue hire, tent installation, and so forth. Therefore the Burial Society has limited access to information and negotiating power.**

Solution – Fintech Business Model

Research in the field of Fintech platforms and solutions for ROSCAs are limited. The local market understanding is also critical to develop solutions that take into account the culture of the community. In Indonesia that has a high mobile phone penetration similar to South Africa Nuryakin, Aisha, and Massie (2019) state that “payment-related Fintechs dominate the Fintech landscape with around 42% of all Fintech companies in Indonesia”. As mentioned previously, although the Stokvel market and specifically the Burial Society market is substantial, there have been unsuccessful attempts by the financial service industry to penetrate this market. It is centred around trust, security and loyalty, therefore to penetrate this market by offering new products, services or technology is not good enough, trust must first be earned. The authors have, therefore decided to take a strategic approach to enter this market by solving significant challenges that the building society faces to earn their trust. This will open up access to this market and provide further opportunities in the future. **The solution is to provide a secure payments platform that blends Fintech with a physical human element or touch. A secondary solution that can be leveraged of the payments platform is to provide a market place linking suppliers and Burial Societies. The third, although the future state of the solution is to create a Peer to Peer (P2P) lending platform between Burial Societies. The annexures detail the elements in the business model and its characteristics (Annexures Page 27 to 31).** However, the first step is to solve the primary needs for convenience and maximising the savings for the members of the Burial Society. Monetisation of the model will be to charge a service fee from the Partner bank and suppliers that join the platform. The following process, depicted in figure 2 is what the authors propose:

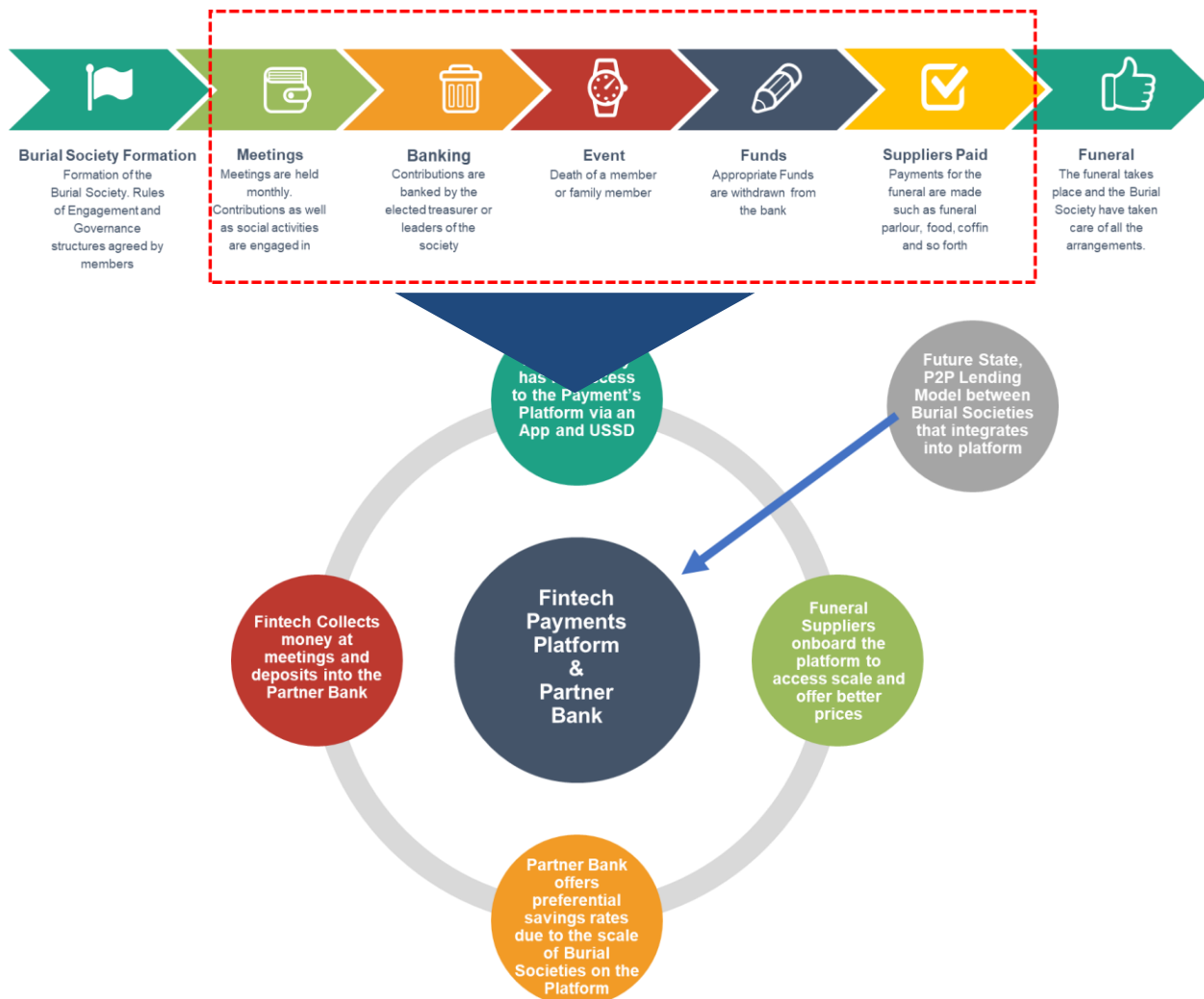


Figure 2: Fintech Business Model for the Burial Society Industry, Authors Own Source

The business model proposed in figure 2 enhances the current structure of the Burial Society Industry by providing convenience, security, reduced costs and increased value of savings. This Customer Value Proposition (CVP) solves a real challenge in the industry and will better the lives of people living in these communities.

The business model is primarily a payments platform but also has secondary benefits, such as creating a market place. It will be set up by partnering with a Bank whose values and CVP are aligned with the Fintech and the community that it is serving. An example of a partner Bank can be Tyme Bank, who are also seeking to serve the unbanked and offer convenience and low cost. However, thorough due diligence needs to be conducted before a partner Bank is selected. Once a bank is selected, the next step is to create a white label product in which the Bank focusses on the back end systems such as account, transactions, interest rate, and so forth. The Fintech will have a customer-facing payments platform that links to the Banks back end system. Therefore the Burial Society will not have any interaction with the Bank and will interact solely with the Fintech’s payments platform.

The Fintech will also provide a physical presence by attending the Burial Society meetings and collecting the funds physically and depositing it into the payments platform via the Banks back end solution. The Fintec will take the risk of fraud or theft from the time the money is collected and deposited into the bank by taking out an insurance policy. This takes the inconvenience away from the Burial Society of being responsible for transporting money and banking it. Once the money is deposited, the Burial Society has full access to their account vis USSD and an App. They can also transact via the app and withdraw cash at any time and any atm.

Due to the potential scale that the Fintech business model offers, the Partner Bank will offer preferential interest rates on the balance of funds in the Burial Society. The more Burial Societies that join the platform, the greater the scale and higher value is derived from it. A secondary benefit of the payments platform is that suppliers of funeral services and products can also sign up to join the platform as a supplier.

This provides suppliers with access to a broader market and enables them to offer lower prices on their products and services. It also creates convenience for the Burial Society as they can make payments to the suppliers via the platform. It also saves search costs of finding suppliers with the best rates. As mentioned previously every cent saved or earned by the Burial Society makes a difference in their lives, and both the potential for higher interest rates and lower costs of goods and services makes a difference in the lives of their members.

According to Chuen, Lee, and Teo (2015), the LASIC principle defines five essential attributes of business models that can successfully harness financial technology to achieve the objective of creating a sustainable social business for financial inclusion.

Low-profit Margin– for a Fintech to succeed costs to adopt for users need to be low or free; therefore, the solution needs to generate network effects to gain critical mass to make the business model sustainable. Initially, profit per user will be low, but the more significant the volumes, the higher the return generated. The solution proposed is designed to be low cost, and the return earned will be driven by network effects.

Asset Light– A Fintech must be innovative and scalable with minimal fixed costs. The marginal cost of new business is very low. The solution proposed will be able to onboard stakeholders and customers without investing in high-cost infrastructure.

Scalability– In order to capture the value of network effects without drastically increasing costs or compromising the efficiency of the underlying technology. The solution will use platform-based technology such as Amazon Web Services, Microsoft Cloud Services, IBM Watson, and so forth.

Innovative – Fintech needs to be innovative with respect to operations & products. The solution proposed is innovative because it offers the opportunity for societies to generate data that can assist with better management of societies. Process improvement allows operations to be more efficient without hindering the social aspect of society.

Compliance - Ease of compliance is one of the main advantages of operating in the Fintech industry when compared to a traditional financial service firm. Fintech operates in a less regulated environment and requires fewer resources to comply with the law. The solution is a digital wallet and payment platform that provides no advice or does not take deposits. It administers processors and facilitates financial interactions.

Although this business model provides benefits and addresses the critical challenges experienced by Burial Societies, adoption of the payments platform is critical to its success. The next section details the steps that will be taken to ensure the best chance of achieving a high adoption rate of the technology.

User Adoption Model

Adaptation of the User Adoption Model

UTAUT-TAM is a combination of models to anticipate better what the drivers of adoption of a specific technology will be.

Unified Theory of Acceptance and Use of Technology (UTAUT) as devised by Venkatesh, Thong, and Xu (2016) seeks to predict behavioural intention to use a piece of technology. Below in figure 3 is a diagram that shows the primary constructs of the model. Adoption of the solution proposed when analysed using the UTAUT model will be affected by the following factors that will drive actual use:

Performance Expectancy

This factor explores if the member in charge of financial administration believes that using the proposed solution will help him or her to attain benefits. The usefulness of the technology speaks to the performance expectancy, in this sense performance speaks to the ability of the solution to;

- Collect contributions
- Meet all requisite financial obligations in the event of a claim

Burial Societies provide a myriad of benefits to its members, but a lot of participants were found to often belong to more than one Burial Society to spread risk, and that resulted in the associates unable to meet all other financial contributions (The Guardian, 2015; Semenya, 2013). The solution proposed seeks to give Burial Society members a one-stop-shop that will alleviate the need to spread risk by guaranteeing contributions will be enough to meet obligations.

Effort Expectancy

Ease of use of the solution is determined by whether the technology and process around it allow users to do what they want to do. The factor focuses on determining if members will be able to use the provided mechanism to pay agreed contributions and receive benefits when a member or member's family claims in the event of death (Botes, 2016). Subjects will be asked to compare how much effort and time it takes to;

- Pay contribution
- Claim benefits
- Borrow to cover the funding gap

When using Fintech in comparison to their current processes, the effort expectancy will be affected by the societies' demographics (age, gender and voluntary usage).

Social influence

Social norms are driven by the environment that will drive attitudes. Semenya (2013) contends that the need to offer the quickest financial support for funeral preparations make participation in Burial Societies acceptable. The survey that will be conducted attempts to understand whether the participants expect others such as fellow members, relatives, friends, partners, co-workers, partners, spouses or neighbours, to influence them to use technology to manage their society. The relationship between social influence and behavioural intention in the acceptance of technology will be moderated by demographic variables, gender and age. Also, the experience of using technology to access financial services will also be tested.

Influence of the cohort may be driven by rules of the organisation, i.e. most societies require members to wear uniforms. Therefore, making something compulsory will influence the adoption of a practice. To further determine the strength of social influence, it is crucial to understand what the impact of making this solution compulsory or part of the society's operation will be. A critical question that needs to be answered is: Is it socially acceptable to administer a Burial Society using a Fintech platform?

Facilitation conditions

This variable is about understanding if the society has a minimum level of resources required to use the solution, For instance;

- Access to a mobile phone
- Sufficient data and airtime
- Experience using the internet
- Knowledge of lending and borrowing
- Experience with non-cash payments

In addition to resources, the availability of training and support for users will affect adoption. Perceived safety net and assistance will create a more receptive audience to participate. The actuarial society believes that society members believe that some kind of training is necessary to participate in order to curb administrative inefficiency and management (Posel & Thomson, 2002).

Behavioural intention

The behavioural intention in this instance is defined as the degree to which an individual intends to use the solution after an explanation of the technology.

Actual usage is dependent on the compatibility of the solution with the style of operation. Technology must adapt to the existing operation and not vice versa in order to drive usage. Burial Societies are informal in nature, relatively autonomous and are formed by people, mostly from the same community (Semenya, 2013). The solution proposed is designed to be aligned with this methodology. The technology is designed to play a supporting role to the traditional operations, i.e. the platform will allow the societies to keep their distinct characteristics.

UTAUT-TAM ANALYSIS

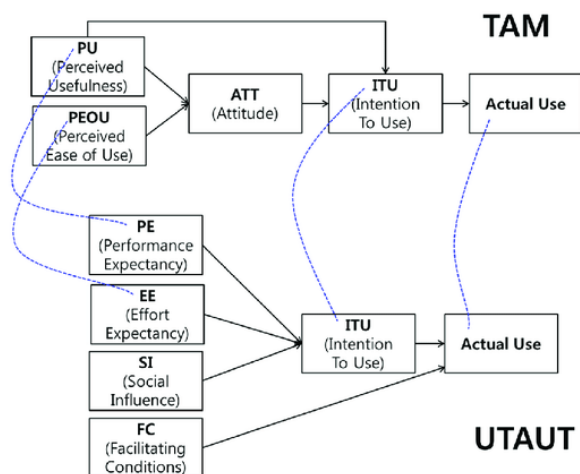


Figure 3: Similarities of variables used to construct models source: Kim, Lee, Hwang, and Yoo (2015)

A study conducted by Khalilzadeh, Ozturk, and Bilgihan (2017) proposed a model, which combines the UTAUT and TAM. The model produced results that provided higher explanatory power and predictive accuracy than the original UTAUT model and demonstrated strong evidence of the effects of risk, security, and trust on customers' intentions to use technology.

The small study conducted will seek to demonstrate that risk, security, and trust are also important determinants of whether Burial Societies would be keen to incorporate financial technology into their environment.

Trust is a pain point in the delivery of financial services using non-traditional technology. Burial Societies are formed based on mutual trust that is based on values, norms, culture and the promise that by participating in a society; if one pays premiums there will be funds available to give each member a decent burial. Participant trust that activities will happen in accordance with expectations. Within the Fintech space, in general, trust means treating the customer fairly and being transparent, including the fees charged for transactions (Demyan, 2019). Therefore it is vital to ensure that the process and costs associated with it are transparent for Burial Societies to trust the solution provided.

Perceived risk of using financial technology is centred around cyber risks, systemic risks, i.e. third-party reliance and the lack of a regulatory framework. Burial Societies offers a vehicle for the mitigation of the risk of inadequate financial provision for funerals. The solution involves ceding administrative control of a society's finances. Members would suffer material losses if the platform was to fail or not deliver on its promise. We expect our survey sample to identify the need for a detailed explanation of risk mitigation solutions and processes. This is a key factor in adoption (Kang, 2018).

Perceived security in Fintechs refers to the degree to which a customer believes that using a solution will be as secure as the traditional methods of accessing financial services. Burial Society members tend to focus on the need for security of their funds. The solution is centred around providing payment services, i.e. collection of premiums, paying suppliers when a claim is made and facilitating lending within the platform. The solution will need to address user's concerns around the security of funds to allow societies to have complete access to funds and availability. The solution also mitigates the security risk of withdrawing large amounts of cash when an event occurs by allowing users to transact via the platform in a cashless environment. A built-in requirement of mutual authentication can be a way to convince survey persons that usage of our solution would reduce perceived risk (Illing, 2018).

Risk, security and trust are the foundation of predicting if someone will see the usefulness of a solution. The effort required to use a solution will also be determined by the effects of those abovementioned factors. Intention to use and actual usage are heavily influenced by the users believing that the technology is low risk, secure and trustworthy.

Socio-cultural influence is likely to play a role in information technology product adoption. Various social groups rely on crucial community members to provide guidance and inform attitudes towards the usage of a new system or technology. If a consumer group is used to dealing with the complex process of learning how to use new technologies it is likely that the social group will have no issues with incorporating new technology (Lekhanya, 2013). Burial Societies come from different social groups, which will influence the adoption of the solution. The questionnaire will seek to understand the role of key influencers, i.e. the chairman of the social club has on the use of technology. An example would be to evaluate how the group communicates with each other, if it is via social media or phone calls, this could serve as a good indicator of the culture of the group.

Research Design – Semi-Structured Interviews

A semi-structured interview guide was developed to assess the behavioural intention of Burial Societies in adopting the fintech solution. Semi-structured interviews allow for probing and setting the context of the concepts under investigation and for validating of the answers received from participants (Barriball & While, 1994; Qu & Dumay, 2011). Furthermore, semi-structured interviews allow the interviewee to elaborate on topics or areas of study that might not have been identified as important prior to the interview being conducted (Gill, Stewart, Treasure, & Chadwick, 2008) and unearthing unconscious human and organisational behaviours (Qu & Dumay, 2011).

A challenge faced with such data collection is equivalence of meaning. Equivalence of meaning refers to the notion that the participants have the same understanding, context and meaning of questions being asked. According to Barriball & While (1994), equivalence of meaning allows for comparability of responses whilst probing allows for reliability of outcomes of a semi-structured interview.

Interview Process and Analysis

Ten (10) participants were identified and interviewed. Interviews were conducted face-to-face and via telephone and took between 20 and 40 minutes to complete.

Thematic analysis was used to analyse the outcomes of the interviews. The use of thematic analysis allows the researcher to explore new ideas from participants answers (Gray, 2015) and to establish the views on the adoption of the fintech solution.

Interview Findings and Recommendations

The interview findings were thematically analysed. The below table indicates a summary of the outcomes of the interviews and the themes identified.

Dimensions and related themes	Subthemes	Detailed description and sample response
Enablement	<ul style="list-style-type: none"> • Correct device • New device • Assistance with app • Process • Claim process 	<p>Respondents feel that they need to be enabled with a smartphone and shown how to use the technology</p> <p><i>"I think a new phone, I only use mine to make and receive calls. And then someone to show me how to use this technology"</i></p> <p><i>"I would need guidance in terms of what is required to process the funeral claims and what documents are required"</i></p>
Self-sufficiency	<ul style="list-style-type: none"> • Ability to use apps 	<p>Respondents feel confident in using technology and apps</p> <p><i>"I wouldn't need much help because I already use other apps and I taught myself how to use them"</i></p>
Safety & Security	<ul style="list-style-type: none"> • Integrity of technology organisation • Trust • Cash is not safe 	<p>Respondents feel that they need to feel safe, using the app and that the technology provided must be trustworthy</p> <p><i>"I would want information on how safe it is and when the company was established, so I can be sure that it is not a fly by night"</i></p> <p><i>Respondents raise safety concerns with regard to carrying cash</i></p> <p><i>"It is not safe when you have cash with you and when you are gathered, you don't know who knows of the gathering, so it will help avoid robberies"</i></p>

Dimensions and related themes	Subthemes	Detailed description and sample response
Dependence	<ul style="list-style-type: none"> • Dependence on Leaders • Dependence on other members • Dependence on younger family members 	<p>Respondents state that the leaders of the society have more access and there is a sense of depending on them</p> <p><i>"It is normally the leaders of the society who have access to smartphones"</i></p> <p><i>"It will work if the leaders of the society know how the app works and are able to assist the family with planning for the funeral, there must not be any delays"</i></p> <p>Respondents indicate a level of dependence to be able to use the technology</p> <p><i>"You can teach it to my grandchild, and she would have to assist me with it. If she does it with me many times, I will eventually be able to do it myself. "</i></p>
Access	<ul style="list-style-type: none"> • Use of current technologies • Younger family members encourage use • Access to smartphones 	<p>Respondents had mixed feelings with regard to access and use of technology</p> <p><i>"Some of us use Capitec cell phone banking and receive money from our children via FNB ewallet"</i></p> <p><i>"About 99% of our members use mobile technology for money transfer for the society contribution others go directly to the bank"</i></p> <p><i>"I have one of those cheap phones that I only use to make phone calls, so I don't transact with my phone"</i></p>
Limitation & Lack of knowledge	<ul style="list-style-type: none"> • Inability to use technology • No Data • Resistance to technology use 	<p>Respondents raised concerns with being able to use technology and having data or connectivity"<i>I only use my phone to make phone calls."</i>"<i>Most of my society members have the same phone as mine so I don't think they would be able to use the internet"</i></p>
Social Media Use	<ul style="list-style-type: none"> • Existing social media community • Communication channel • WhatsApp • Facebook • Instagram • Inability to use technology 	<p>Respondents state the wide use of social media by burial society members, though some indicated limitations to use</p> <p><i>"WhatsApp, to communicate with friends and family and members of society in case of one of our members passing away"</i></p> <p><i>"I only use my phone to make phone calls"</i></p> <p><i>"WhatsApp and Facebook. The older members of our society don't really use Instagram"</i></p>
Age and Education	<ul style="list-style-type: none"> • Elderly members • Lack of education • Effort to train 	<p>Respondents stated age and education as limitations to enable use</p> <p><i>"It would be easier to use a USSD solution for people who are not well educated or the elderly without smartphones"</i></p> <p><i>"Most of the society members are old, and they take time to process things and get used them. So, it would take long"</i></p>

Dimensions and related themes	Subthemes	Detailed description and sample response
Openness	<ul style="list-style-type: none"> • Acceptance of use of technology • Personal information already shared amongst members • Personal information is widely distributed 	<p>Respondents showed eagerness and openness to using technology</p> <p><i>"Yes, definitely"</i></p> <p><i>"It will save us costs with regard to transport and travel"</i></p> <p><i>"In the rural areas, towns are far, so this will bring the solution closer to people"</i></p> <p>Respondents showed openness to sharing their personal information because it is something they already do with others</p> <p><i>"No we don't fear because it is a norm and even companies such as AVBOB have our details. We didn't give these big companies our details, so we know cell phone companies give away our details"</i></p> <p><i>"No I don't think so, it is the same as when we share our own details amongst, the society"</i></p>
Cost Savings	<ul style="list-style-type: none"> • Benefits for members and families • Dignified Send-off • Doing more with less money • Eliminate social gatherings 	<p>Respondents indicated cost savings as a significant driver for determining whether the app would work for them</p> <p><i>"It will work, especially where we get discounts and cost savings and we can do other things with the money"</i></p> <p><i>"So the cost savings are really worth it, when people see how much others have saved they will join because they want to bury their loved ones with dignity"</i></p> <p><i>"It will help people because people are paying different institutions different amounts"</i></p> <p>Some respondents prefer to do away with the social gatherings</p> <p><i>"If you are the host, this will save you costs because you don't need to gather, so the social element will be eliminated"</i></p>
Transparency	<ul style="list-style-type: none"> • Funds Usage • Trust amongst members • Reconciliation of funds contributed 	<p>Respondents indicated the need to know how society funds are used and for this reason they would share their personal information</p> <p><i>"I think it would help us see how the money is used"</i></p> <p><i>"It would help us see how the money is used and we don't have to be worried about being robbed after collecting"</i></p> <p><i>"Money is sometimes not managed properly, we don't even know what happens with the interest we get from the bank"</i></p>
Trust	<ul style="list-style-type: none"> • Lack of trust in technology • Lack of trust in institutions • Information sharing in exchange for service • Lack of trust amongst members • Lack of trust in leaders 	<p>Respondents generally have a lack of trust in technology and financial institutions</p> <p><i>"I want it in black and white, I don't trust SMS. In case of an unfortunate event I would want to produce my proof"</i></p> <p><i>"It depends, if we know they are going to help us when something happens we will not feel that the information is at risk"</i></p> <p>Respondents indicated trust issues as a driver for wanting to use the technology</p> <p><i>"It will help when you are unable to attend the meeting to ensure that your money is transferred"</i></p> <p><i>"Sometimes we even worry that a member will say they were robbed while they are actually lying"</i></p> <p>Respondents don't always trust the elected leaders</p> <p><i>"Sometimes leaders spend without the knowledge of the members"</i></p> <p><i>"Money is sometimes not managed properly, we don't even know what happens with the interest we get from the bank"</i></p>

Dimensions and related themes	Subthemes	Detailed description and sample response
Affinity	<ul style="list-style-type: none"> Affinity to using technology Lack of affinity to using technologies Knowledge will increase use Trust amongst members 	<p>Respondents indicated mixed feelings with regards to using technology</p> <p><i>"Apps are easy to use, it might take two or so hours to learn. Examples are how people have been able to use cell phone technology"</i></p> <p><i>"It will save a lot of time, the more we get information on it. The more we are able to use it"</i></p> <p>Respondents indicate a lack of trust amongst each other</p> <p><i>"I think it will improve the trust in the society members"</i></p>
Convenience	<ul style="list-style-type: none"> Time savings 	<p>Respondents indicate saving time as a driver to adopting the technology</p> <p><i>"It will save a lot of time, the more we get information on it. The more we are able to use it"</i></p>
Community	<ul style="list-style-type: none"> Coordination of funerals 	<p>Respondents indicate that the technology will assist with the admin and coordination of funerals</p> <p><i>"I think it will improve the social element it will assist with coordinating funerals"</i></p>
Timely payments	<ul style="list-style-type: none"> Debit order capabilities Reconciliation of funds contributed 	<p>Respondents state that members don't always pay their contributions on time</p> <p><i>"People don't pay on time and miss payments"</i></p>
Conflict resolution	<ul style="list-style-type: none"> Disagreement amongst members 	<p>Respondents indicate that because of money exchanging hands, conflicts arise</p> <p><i>"Fights exist because sometimes we ask other members to pay on our behalf and they don't pay, or they pay for themselves"</i></p> <p><i>"Sometimes there are disagreements"</i></p>
Funds availability	<ul style="list-style-type: none"> Death is unpredictable Availability of funds 	<p>Respondents indicate that because of the nature of burial societies, there is high unpredictability</p> <p><i>"Funerals happen unexpectedly sometime the society does not have enough money, so we can take from the interests gained to add to the money we need for the family in need"</i></p>
Supplies	<ul style="list-style-type: none"> Money for coffin and cow Money for coffin and groceries Transport money to get supplies 	<p>Respondents indicated that some products are more expensive than others</p> <p><i>"The highest costs are groceries and the coffin/casket"</i></p> <p><i>"Going direct to the provider is expensive, so as you explained the cost savings will benefit us most. The cow and coffin are costly"</i></p>
Price Sensitive	<ul style="list-style-type: none"> Local suppliers Cheapest suppliers Higher interest received for money deposited Multiple financial institutions used 	<p>Respondents displayed high price sensitivity</p> <p><i>"We go to the cheapest supplier at that time"</i></p> <p><i>"We check the budget and decide where it is cheapest to go buy. We don't buy from the same suppliers all the time because of price"</i></p>

Dimensions and related themes	Subthemes	Detailed description and sample response
Family	<ul style="list-style-type: none"> Family decides Family decides, and cheapest suppliers are selected 	<p>Respondents indicated that the family has a level of decision making where purchasing is concerned</p> <p><i>"Its different service providers for different families. The coffin cost is normally dictated by the undertaker"</i></p> <p><i>"Sometimes families have their own insurance and they use those providers for the coffin"</i></p>
Formal Financial Institutions	<ul style="list-style-type: none"> Standard Bank Nedbank Capitec FNB Multiple financial institutions used 	<p>Respondents indicated the use of 4 out of 5 major South African banks by burial societies</p> <p><i>"Capitec for the cow contributions and FNB for the coffin contributions"</i></p> <p><i>"Nedbank, it seems a bit more reasonable with giving us better interest rates"</i></p>
Lack of awareness	<ul style="list-style-type: none"> Lack of awareness of interest charges Lack of knowledge of interest gained Compensate for shortage of funds 	<p>Respondents display a general lack of awareness of interest rates, indicating that leaders have better knowledge</p> <p><i>"The leaders would know what interest rates are charged but not the rest of the members"</i></p> <p><i>"We have no idea about the interest rates we pay. We keep adjusting contributions to ensure that we have enough in the bank to cover any funeral that occurs"</i></p>

The primary consideration for the use and adoption of the fintech solution being offered to burial societies is trust. During the interviews, respondents indicated that there is lack of trust in financial institutions, in technology and even amongst members. This means that as a technology provider we are going to have to work hard to earn the trust of communities and potentially leverage existing trust networks that exist amongst the target audience. The secondary driver was dependence. To use the application or USSD solution, burial society members will depend heavily on their network – family members, leaders of society and other society members to assist with the use of the technology. This is prevalent amongst older members of the society. The tertiary factors were cost savings, openness/willingness and limitation & lack of knowledge. Respondents were very excited about the potential cost savings and benefits that will come with the adoption of the technology. Furthermore, respondents showed openness and willingness to adopt the technology on condition that they will be taught how to use the app. Limitation and lack of knowledge may present a challenge with adoption. Essentially respondents did not know what they did not know, and thus there was a level of feeling limited to adopting the technology.

Fintech Ecosystem Model

Critique of the Fintech Ecosystem Model

In the journal article “Fintech: Ecosystem, business models, investment decisions and challenges”, Lee and Shin (2018) have argued and identified a five-element ecosystem consisting of Fintech start-ups, government, traditional financial institutions, financial customers and technology developers (refer to Figure 4). The ecosystem is continually evolving, with players continually interacting and developing. For the purposes of the Burial Society Fintech solution and business model, we have adapted the aforesaid Fintech ecosystem model to include and address educational institutions, international accelerators, financial news, data feed and technology infrastructure. We have further positioned the customer (Burial Societies) at the centre of the Fintech ecosystem (refer to Figure 5)

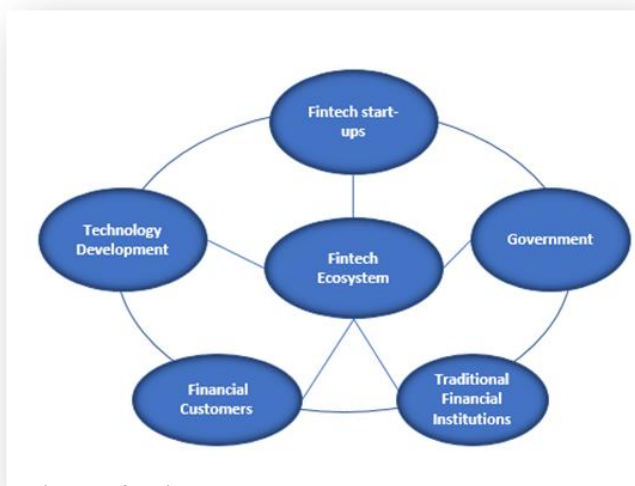


Figure 4: Fintech

Ecosystem



Figure 5: Fintech Ecosystem Adapted by

Authors

The entrepreneurs and talent within the Fintech organization are required to remain abreast of developments within the Fintech and corporate environment in which they operate which is often achieved through academic incubation, where formal insight is provided on how to develop a viable and scalable enterprise (Hutton, Bhana, Allen, & Nursoo, 2019). In addition to the above, the success of Fintechs is to an extent dependent on the technology infrastructure available to both the Fintech start-up and the Fintech target market as well as obtaining acceleration in the start-up's life-cycle through support provided by accelerators through various means such as mentorship, immersive education and funding (Hutton, Bhana, Allen, & Nursoo, 2019).

Ultimately, the purpose and value in the proposed venture are highly customer-centric as it is intended to foster financial inclusion, especially for customers in underprivileged circumstances (which is generally the case with Burial Society members) with minimal negotiating power (KPMG, 2017).

Factors in the Model that Hinder the Venture

The most prominent hindrances to the execution of the proposed venture, based on the ecosystem highlighted above, is the acquisition and retention of skills for the Fintech environment, regulatory and funding environment, particularly in South Africa.

Fintech innovation is rapidly transforming the constructs of the financial market. However, the existing financial regulation has remained relatively restrictive in nature, therefore stifling the development of Fintech start-ups in the South African landscape. The proposed venture is no exception to exposure to compliance risk which, both directly and indirectly, is as a result of the comprehensive and daunting regulatory environment (The Centre of Excellence in Finance Services, 2019) as their customers (Burial Societies) which provide insurance must register under the Friendly Societies Act, while all other bodies providing the funeral cover of more than R5000 must register under the Long-term Insurance Act (Genesis, 2005).

In addition to the above, the funding environment is not conducive to providing financial support to high-risk startups, therefore posing a threat to the development of the venture as capital investment is required to be made in order to acquire resources to develop and maintain the software application as well as resources to ensure compliance with the comprehensive regulatory requirements (The Centre of Excellence in Finance Services, 2019).

Finally, South Africa has a shortage of skills in the Fintech environment, which is further exacerbated by the struggle to attract international talent to grow and prosper in the future. There is no doubt there is a widespread demand for talent, especially technology-based talent, across the financial services sector but financial services organizations of all types are struggling to fill the vacancies.

Although the above challenges are prevalent in the Fintech ecosystem, both short- and long-term insurance acts are under review to create new opportunities for existing insurers and provide licenses for micro-insurance products.

It is fundamental, for the development of Fintech startups, for regulators to evolve with the financial service industry to reduce barriers to entry and compliance requirements. This will ensure that competition and innovation are not stifled while maintaining the safety and soundness of the financial system.

Factors in the Model that Enhance the Venture

There is an elevated emphasis on financial inclusion and start-ups are required to utilize the opportunity to innovate and service the underprivileged communities. This hardly happens with formal financial institutions, where it is more difficult to access loans, and people are charged to save while earning minimal interest (FinMark Trust, 2004). Based on this, the Fintechs should play a role in filling the gap by ensuring the money collected from Burial Societies (Stokvel) gain a good interest and partnership is established with players in the value chain to offer a better and cheaper service.

Regulators such as South African Reserve Bank (SARB) and the Financial Service Board are strategically assessing the emergence of Fintech in a structured manner, and considering its regulatory implications (Mittal, 2019;Ernest & Young, 2018) .

The SARB and the Financial Services Conduct Authority (FSCA) will establish an innovation hub for the regulation of Fintech or innovative financial products in the first half of 2020 (Ernest & Young, 2018). These moves by the regulators create a fertile environment for innovation to address the underserved communities that belongs to Stokvels and Burial Societies.

Conclusion

Fintechs can play a significant role in solving challenges that are experienced by consumers in the South African economy. This paper has proposed a business model that solves the fundamental challenges that are experienced by Burial Societies without impacting what is core and inherent in its operations. The sense of community that it creates and social aspects of the society need to be respected and are one of the main reasons why there have been unsuccessful attempts at formalising this sector. The business model proposed provides convenience, better savings rates, scale to create a market place and in the future a P2P lending model all through a payments platform.

Adoption of the model was considered using the UTAUT and TAM models and adapted to the South African market. Interviews were conducted, and trust was highlighted as the primary consideration of adoption. Dependence on family and friends was also a factor that impacts the adoption of technology. Therefore, the focus on trust during implementation is critical to gaining scale and network effects, which in turn will increase the adoption rate and create a feedback loop. Other factors that affect the adoption of the technology are cost savings, openness/willingness and limitation & lack of knowledge.

Fintechs operate in an ecosystem that is fluid and ever-changing. Regulation was identified as an inhibitor and an enhancer that needs to be managed to ensure the business model operates within the confines of the law.

Skills required to run the operations is also essential; therefore partnering with other stakeholders in the value chain allows core capabilities to be leveraged. Banks can provide Fintechs with the funds and back end systems required to operate while Fintechs can provide critical customer data to the traditional banking sector that was not accessible before

The business model proposed in this paper ultimately promotes financial inclusion and focusses on a sector that has been overlooked by incumbent organisations for a long time. There is an opportunity to improve the lives of people in this sector and contribute to narrowing the inequality gap in the country.

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