



**Disruptive innovation: The impact of peer-to-peer lending on
funding for small business**

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I. Abstract

A large number of jobs are created by small business and, as a result, these small businesses contribute substantially to national competitiveness. This often means that the onus of achieving targets set by national policy makers for the creation of new jobs and fostering of economic growth falls on the small business segment in times of financial distress. As a result, the role and importance of small businesses in creating new jobs and stimulating the economy to improve national competitiveness becomes increasingly evident.

In order for a small business to become established, to survive and to grow, they require access to funding, particularly in the early stages of their existence. This research report seeks to better understand the role played by a specific disruptive innovation; peer-to-peer lending platforms, in providing funding to small business owners and to determine what would drive a small business owner to utilise a peer-to-peer lending platform as a substitute delivery channel from traditional financial institution funding mechanisms.

The research delves into the various types of innovation, with a specific focus on Christensen's theory of disruptive innovation and looks at the characteristics of a disruptive innovation. In addition, peer-to-peer lending platforms are discussed to understand the nature of social lending in the financial services environment.

The research will be conducted in a quantitative manner, seeking to understand through an online, emailed survey, what characteristics small business owners find necessary when gaining access to finance and how this would shed more light on the acceptance of a disruptive innovation over a traditional financial institution delivery channel..

II. Keywords

Innovation

Disruptive Innovation

Small Business

Peer-to-peer lending

Characteristics

III. Declaration

I declare that this research project is my own work. It is submitted in partial fulfilment of the requirements for the degree of Masters 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.

Christopher Wood

November 7th 2012

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1 CHAPTER ONE: INTRODUCTION TO THE RESEARCH PROBLEM

1.1 Background to the research problem

Chapter one outlines the basis for the research topic. This investigates the state of national competitiveness of South Africa in the context of the global economy and the challenges faced in sustaining strong economic growth, while identifying the role of the small business sector in creating job opportunities to alleviate a high unemployment rate. It then refines the focus on to the challenge the small business owner faces in gaining access to finance.

1.1.1 National competitiveness in South Africa

In the wake of the recent financial crisis, the need for the establishment of small business to create jobs and to stimulate the economy, while large organisations are looking to cut costs and increase efficiency (Moscarini & Postel-Vinay, 2011), is an indication of the importance of establishing sustainable small business ventures. The recent trend of small businesses seeking funding outside of financial institutions indicates the reliance of a small business owner on having access to alternate sources of funding (Laderman & Gillan, 2011).

Mass joblessness and the need for employment creation are at the heart of the New Growth Path framework (Republic of South Africa, 2010), which states that South Africa has a relatively weak small and micro enterprise sector. The economy, despite relatively strong economic growth between 1994 and 2008, has not created sufficient employment opportunities for many of the population over the past three decades.

The New Growth Path (Republic of South Africa, 2010) highlights a target growth of five million new jobs by 2020, where over half of the working age population would have paid employment, thereby reducing unemployment by 10%. The framework specifically identifies the promotion of small business and entrepreneurship as a mechanism for job creation. Within this policy, the Global Entrepreneurship Monitor (GEM, 2012) supports the statement that access to finance and reduction of red tape in the administration of small businesses is a core driver for growth.

In addition to this, the New Growth Path (Republic of South Africa, 2010) refers to the role of technological innovation in creating opportunities for substantial employment creation. In support of this is the planned expenditure on the improvement of the access to and usage of internet technology. The traditionally high cost of bandwidth is targeted for a rapid reduction in fees, increasing the ability of the population to seize the potential of new economies through online connectivity and make use of platforms in the online environment. Specifically, the framework highlights the creation of stronger institutions to diffuse new technologies to small businesses and households.

The World Bank, in association with the International Finance Corporation (2013) in their Doing Business Report publishes an annual ranking on the ease of doing business amongst 185 countries. A high ranking indicates a more conducive environment when a business owner is looking to start up and run a firm. Utilising 10 indicators, the rankings illustrate where each of these countries fit on the overall list in comparison with each other and indicates the shift year on year with their own previous performance.

Figure 1.1 shows that South Africa is ranked number 39 out of the 185 countries included in the report, an improvement of two places on 2012, where the position was 41st. Important to note in the calculation of the rankings are some of the measures utilised to come to the score. South Africa places 53rd overall when it comes to the ease of *starting a business*. This measure has dropped 10 places since 2012, where the same measure was in the 43rd position. It is favourably placed in comparison to

other Sub-Saharan African participants in the report, with the number of procedures, the time it takes and the cost all favourably indicating that to establish an operation in South Africa is less onerous than in neighbouring environments.

Figure 1.1: South Africa rank in Doing Business Economy Rankings

France	34
Slovenia	35
Cyprus	36
Chile	37
Israel	38
South Africa	39
Qatar	40
Puerto Rico (U.S.)	41
Bahrain	42
Peru	43
Spain	44

Source: The World Bank, International Finance Corporation (2013)

Certain factors, notably getting access to electricity, enforcing contracts and trading across borders are measurably worse in the overall rankings for South Africa, sitting 150th, 82nd and 115th respectively. Further work will be done in this research report to understand the challenges faced by small business when seeking to establish and grow their operation. Figure 1.2 illustrates the summary table of each of the factors utilised to determine the overall ranking for South Africa in the Doing Business (2013) rankings.

Figure 1.2: South Africa Summary Ranking

REGION	Sub-Saharan Africa	DOING BUSINESS 2013 RANK	39	DOING BUSINESS 2012 RANK	41	CHANGE IN RANK	↑ 2
INCOME CATEGORY	Upper middle income						
POPULATION	50,586,757						
GNI PER CAPITA (US\$)	6,960						
TOPIC RANKINGS	DB 2013 Rank	DB 2012 Rank	Change in Rank				
Starting a Business	53	43	↓ -10				
Dealing with Construction Permits	39	38	↓ -1				
Getting Electricity	150	148	↓ -2				
Registering Property	79	78	↓ -1				
Getting Credit	1	1	No change				
Protecting Investors	10	10	No change				
Paying Taxes	32	34	↑ 2				
Trading Across Borders	115	145	↑ 30				
Enforcing Contracts	82	83	↑ 1				
Resolving Insolvency	84	81	↓ -3				

Source: The World Bank, International Finance Corporation (2013)

In his article “Decent work means decent business”, Sunter (2011) proposed that South Africa should create an environment in which small business growth can take place, and has voiced the opinion that as a nation, South Africa should change the grand objective of creating five million jobs by 2020 to one of creating one million new businesses by 2020, hiring five employees per business, with the result that it leads to at least five million additional jobs. Sunter expanded on this to posit that if informal sector champions could graduate into the formal business sector, they could potentially become world-class players with an international customer base sometime in the future.

The World Economic Forum (2012) lists South Africa at number 50, out of 142 countries, in its Global Competitiveness Report for the 2011/2012 period. This is a slight improvement on the previous period where the country was in 54th position. Notably, the rank for innovation and business sophistication improves the overall score, placing South Africa in the 39th position and indicating an opportunity to take advantage of innovation opportunities.

Labour market efficiency, a measure for the effectiveness of the workforce in the formal and informal sectors, ranks South Africa as low as 95th, showing the gap between the availability of an innovation capability and the ability to create meaningful job opportunities as a result. This serves to illustrate the low level of productivity of the workforce, where the Global Competitiveness Report (2012) can indicate the sophistication of the business sector, but at the same time, the inefficiency of the labour market. This indicates a wide gap between two factors that should be more closely aligned.

1.1.2 The role of small business

Data out of the United States showed that two thirds of new jobs are created by small business with roughly the same percentage of revenue created from small business being plowed back into the same segment (American Express, 2011). In South Africa, small and medium enterprise accounts for 91% of the formal business entities within the economy, providing approximately 60% of the employment contribution (Kongolo, 2010).

The most pressing problem facing South Africa today is the absence of sustained economic growth in job creation, which is essential to reduce poverty, increase equality and improve living conditions (Lewis, 2002). One of the most significant characteristics of a flourishing economy is a successful small business industry, mostly because of the role it plays directly or indirectly in creating employment for the growing rural and urban

employment force, providing desirable sustainability and innovation in the economy as a whole (Kongolo, 2010).

The small and medium enterprise sector is an important vehicle for addressing the challenges of job creation, economic growth and equity (Global Entrepreneurship Monitor, 2010) and in many developing economies like South Africa, small businesses have been shown to contribute substantially to job creation, economic growth and more equal income distribution (Lewis, 2002).

The official unemployment rate in South Africa as at the second quarter of 2012 (Statistics South Africa, 2012) was sitting at 24.9%, an improvement of 0.3% on the previous quarter and 0.8% in comparison to the same quarter in the previous year, largely due to growth of jobs in the formal sector. More concerning is the labour force participation rate of 54.5%, with over 4.4 million people unemployed.

Moscarini and Postel-Vinay (2011) do raise an interesting argument in their work by stating that small businesses are the engine of job creation at times of high unemployment, when compared to job creation within large firms or establishments through business cycles, which is typically when jobs are needed more. Large employers destroy more jobs than their small business counterparts when unemployment is greater than usual, similarly creating more when unemployment is less than trend. This can typically be seen late into or right after the end of a recession.

1.1.3 Access to finance for small business owners

While the increase in the establishment of small business activity in difficult financial times is shown to increase job creation, access to funding is linked directly to the credit history of the entrepreneur or small business owner and the availability of sufficient collateral to back up the risk of the loan required (Wang & Greiner, 2011).

The conditions set by most financial institutions for small businesses to get access to loans disqualify most applicants from getting access to the necessary finance and due to the limited resources, both financially and in terms of staff, disproportionately affect small businesses (Kongolo, 2010). The nature of traditional institutional lending models and credit regulations put in place to control lending to small business is primarily focused on reducing the risk on the lending book (Wang & Greiner, 2011).

Berger, Cowan & Frame (2009) illustrate the challenge small businesses face in gaining access to finance from traditional institutions in that they typically have much less historical information available in comparison to large corporations as a result of not having certified audited financial statements to yield credible financial information on a regular basis. These firms typically do not have publicly traded equity or debt, yielding no market prices or public ratings that might further add any credibility or suggest their quality.

The New Growth Path (Republic of South Africa, 2010) sets out the need to strengthen access to finance for small enterprises in order to bring more citizens into economic activities and the creation of specified mechanisms to do so, therefore widening the enterprise pool in the country as one key step to promote the growth of new enterprises.

Lewis (2002) singles out efforts by government to increase access to finance for small business as a critically important component to creating a more dynamic and developed small business segment. In his research, Lewis (2002) points out that in the South African context, small business owners tend to rely on their own existing savings or borrowing from family to finance their working and investment capital.

Interestingly enough, the World Bank (Doing Business, 2013) ranks South Africa number 1 out of the 183 countries included in the indicator for getting credit; showing

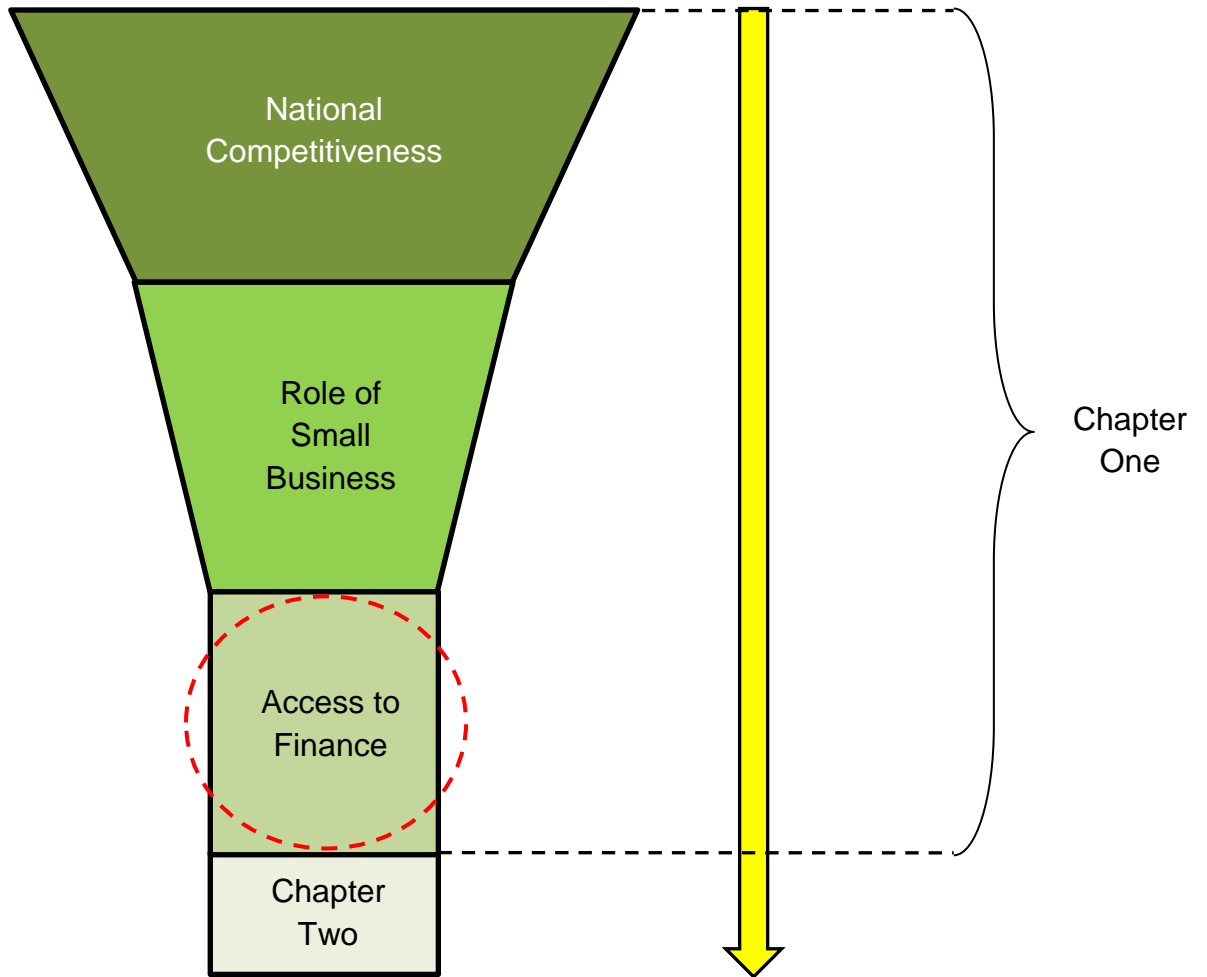
no movement from the previous year. This seems to throw doubt into the fact that it is difficult to gain access to finance for small business. This is largely a result of the quality of the coverage of the private credit bureaus, as there is no public registry in South Africa. Due to this, the definition and measure of “getting credit” as per the World Bank is misleading and does not translate to the challenges faced by the small business owner. What it does not allude to, however, is the difficulty that the small business experiences when trying to access finance to start their business and then furthermore, to grow their business when additional funding is required. While the availability of credit information is a large driver in the high ranking, the difficulty of getting finance on the ground will be further explored through the research process.

By understanding where South Africa is situated in relation to its peers from a competitiveness perspective (Global Competitiveness Report, 2012) and the measurement of how easy it is to do business (World Bank, 2013), and overlaying this with the targets laid out in the New Growth Path framework (2010) we begin to get a picture for the importance of facilitating growth in the small business sector.

Chapter one and the foundation for the research is approached in a similar way to that of a funnel (figure 1.3). Much like the lip of the funnel is broad; the state of competitiveness gives a broad overview and sets the scene for the challenges faced at a National level. The funnel then narrows as the role of small business is addressed within this national picture and the role of creating jobs is understood within the small business context. Lastly, as we move lower down towards the spout of the funnel, the importance of gaining access to finance to establish and grow these small business operations is further explored.

This analogy indicates a movement from a broad positioning into one with specific relevance to a challenge faced by the small business and one that will be further investigated in the second chapter of the research.

Figure 1.3: Foundational Research Approach Funnel



Source: Author's own (2012)

1.2 Research Motivation

Despite research being available regarding the conditions that determine the success factors for small business, as well as the importance of small businesses in job creation, there is less information available regarding how disruptive innovation can be utilised to provide finance to small businesses in order for economic growth and job creation to occur.

This study investigated the role of a peer-to-peer lending platform as a disruptive innovation and a potential alternative solution to traditional financial institution's lending practices. It sought to understand what role this type of disruptive innovation might have to play in providing access to finance for the small business owner when first seeking to establish an operation and furthermore, to grow it.

Clayton Christensen's work on disruptive innovation (Christensen & Raynor, 2003) forms the basis for the investigation into disruptive innovation as a model for the introduction of new business models and technology, to better understand whether or not peer-to-peer lending models offer a realistic alternative for access to finance for small businesses and the success factors relating to the use of these platforms.

1.3 Research Scope

This paper is conducted in the financial services field and will focus the on the small business customer and not on large organisations. Further to this, it seeks to understand innovation and the role this plays in the sphere of business. A specific focus on disruptive innovation theory will be highlighted and will form the focal point of the research.

The existing literature on disruptive innovation will be critically analysed in order to further understand how this might impact the small business customer when gaining access to funding. The paper, however, does not look extensively at other sources of funding, such as private equity, venture capital or angel investment.

Further to this, the research will focus on peer-to-peer lending models and platforms and seek to understand the role that a peer-to-peer lending platform plays in gaining access to finance for small business owners.

2 CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

Chapter two builds on chapter one's positioning of:

- The state of competitiveness in South Africa,
- The role of small business in job creation and
- The ability of small business owners to gain access to finance

and the role this plays in the growth and sustainability of the small business segment.

The research explored the literature in order to understand the definition of innovation and profiles the three different types of innovation. Further to this, the characteristics that define these innovation types and how they differ from each other. The research then focused in on disruptive innovation to identify what the unique characteristics were that separate this type from the other two forms of innovation widely utilised.

Chapter two also explains the nature, role and growth of peer-to-peer lending platforms and their increased usage as an alternative source of finance. The research utilises Christensen theory of disruptive innovation (1997; Christensen & Raynor, 2003) as a framework for the role that peer-to-peer lending platforms can play in providing this alternate source of finance. By identifying that peer-to-peer lending platforms are a disruptive innovation to traditional financial institution lending practices, chapter two will lead into the research propositions for this paper.

2.2 Types of Innovation

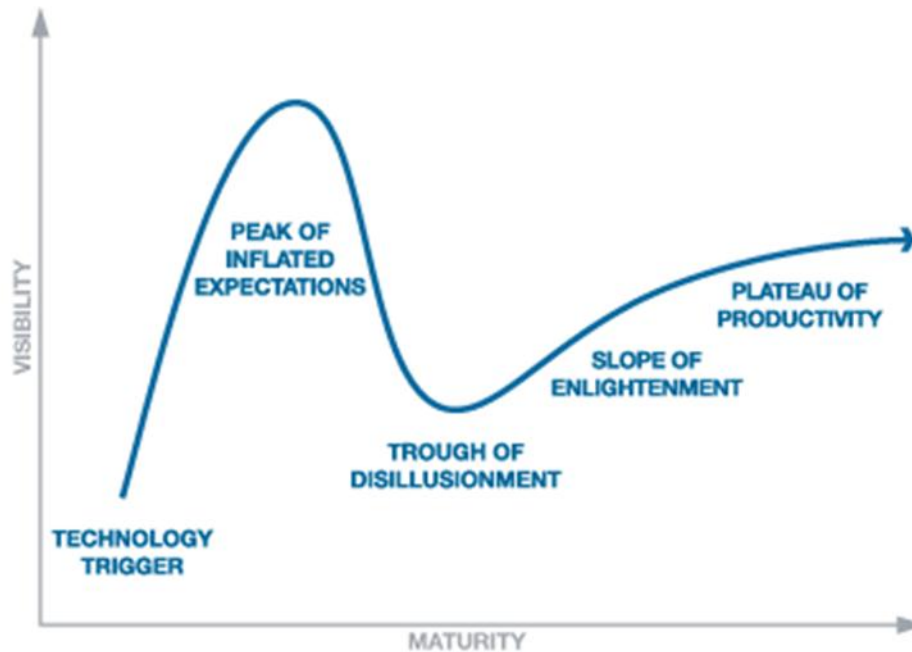
2.2.1 Innovation as a concept

Rogers (1962) describes an innovation as an idea, practice, or object that is perceived to be new by an individual. Even if the innovation is objectively new, it is the perception of its newness to the adopter of the innovation that matters. The characteristics of an innovation are seen as important factors in determining the rate at which it penetrates a market (Flight, Allaway, Kim & D'Souza, 2011).

Jaakkola and Renko (2007) cite Rogers (1962) as the most commonly recognised scheme for evaluating the characteristics of an innovation and explain his five constructs, being: relative advantage, compatibility, trialability, observability and complexity. While these are measures to test the characteristics of a specific innovation, they do not define the characteristics themselves.

When looking at diffusion of products in the market, Gartner (2012) utilises their hype cycle methodology to determine whether or not the promise of the technology matches up to what is actually commercially viable. It also acts as an indication of where the technology might evolve to as it matures. In many instances, new innovations will be adopted more quickly when the technology shows rapid movement from the time it is first introduced, referred to as the technology trigger, through a point where it starts to show real value in productivity upliftment and becomes a mainstream offering. Figure 2.1 illustrates the Gartner Hype Cycle and how an innovation can shift through the various stages of maturity in order to meet or fail to meet a customer's needs.

Figure 2.1: Gartner Hype Cycle



Source: www.Gartner.com (2012)

In addition, innovation is a process through which new products and services are created from the generation of new ideas and the development of these ideas. (Marin-Garcia, Aznar-Mas & de Guevara, 2011). These provide new solutions to problems and become useful to companies and to society. As a result, innovation starts with an idea and through a process of development becomes a commercial output.

Innovation can converge across many dimensions (Marin-Garcia et al, 2010) and can be an incremental enhancement on existing processes, new business models within an organisation or even the launching of new markets. In this way, innovations can be considered to have either an incremental or radical nature and are classified based on the level or degree of innovation achieved.

Backes and Janke (2004) assess the key characteristics that define an incremental, or “sustaining” innovation versus those of a radical, or “breakthrough” innovation. They describe incremental innovation as being negatively correlated to breakthrough innovation and primarily focused at planned, process driven improvements on existing products and services. In contrast, radical innovations are those that often dramatically change social or business practices and create something completely new, causing a breakthrough and a significant impact in the market (Marin-Garcia et al, 2011).

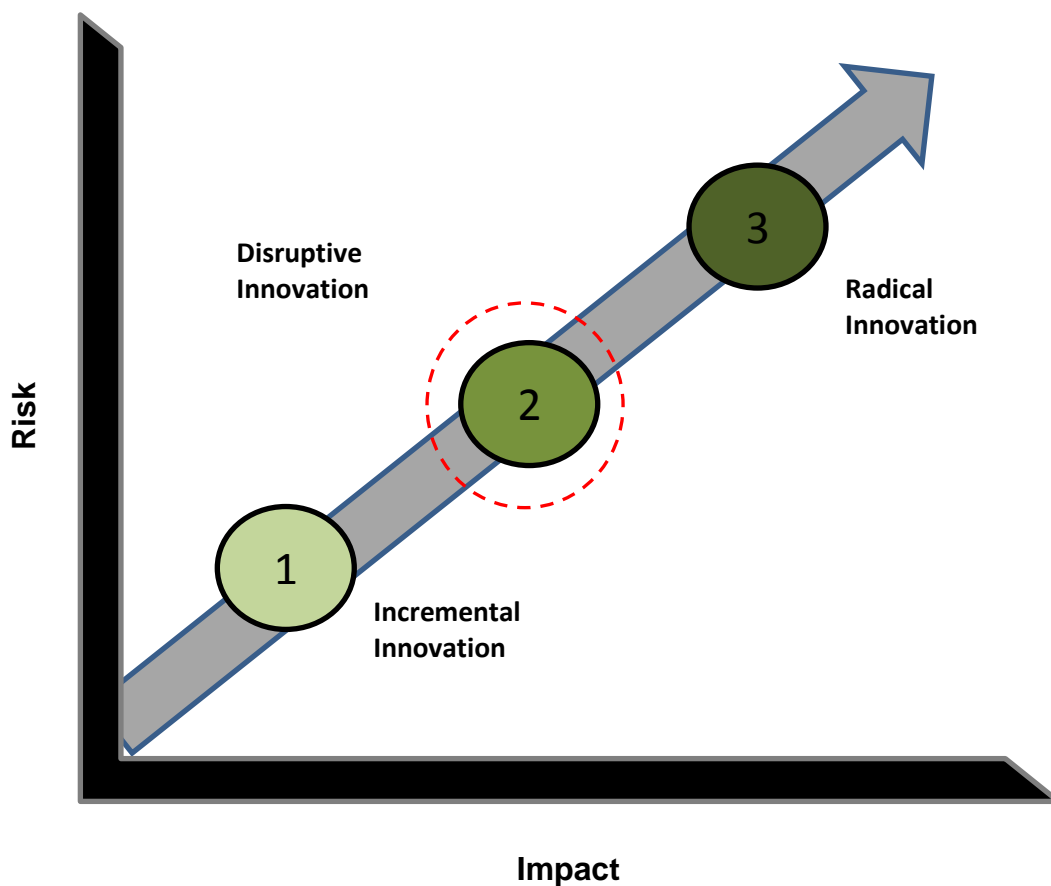
The Australian Institute for Commercialisation (2012) elaborates further to say that while radical innovation often entails high uncertainty and high risks, the potential for high returns, though not guaranteed, is always a possibility. Incremental innovations, the most common form of innovation today, although essential to business improvement, are likely to often only produce incremental growth.

Clayton Christensen (1997) popularised the concept of disruptive innovation theory as a powerful means to broaden and develop new markets and provide new functionality, which in turn, disrupts existing markets (Yu & Hang, 2009). Disruptive innovation occurs when a firm, attracted by a potential new market, introduces a new set of performance parameters that allows it to compete against existing incumbent products and services (Christensen & Raynor, 2003). These parameters often involve offering ‘good enough’ quality at a lower price point (Harrison, 2010)

This provides us with three types of innovation, namely incremental, radical and disruptive, of which Christensen’s Disruptive Innovation (1997) is the focal point for the research. Christensen initially based his work on the theory of disruptive *technology* (1997), but later changed the focus to that of disruptive *innovation* to encompass other components that were not necessarily technology related in their essence (Christensen & Raynor, 2003).

These three innovation types can be illustrated in a model (figure 2.1) where incremental innovation (1) occurs at a point where risk and the impact of the innovation are low. Disruptive innovation (2) exists where mainstream products and services already exist, but seeks to change the performance of the disruptor over time (Christensen, 1997; Yu & Hang, 2009) and lastly, radical innovation (3) which often seeks to create new business models or markets for a new product or service (Marin-Garcia et al, 2011).

Figure 2.2: Types of Innovation



Source: Author's own (2012)

2.3 Disruptive Innovation

2.3.1 Introduction

Disruptive innovation forms the basis for the literature review in the research paper and is a key building block in positioning the need for an alternative solution to meet an unmet need in the access to finance for small business owners. This section will outline what disruptive innovation is and what the principles and characteristics of a disruptive innovation are. In addition, it will look at where disruptive innovations are most effective and what types of customers are typically willing to adopt a disruptive innovation instead of an incumbent mainstream offering.

Disruptive innovation happens in a process (Yu & Hang, 2009) where different values from mainstream offerings are created and are typically initially inferior to the incumbent product offerings (Christensen, 1997). An innovation that is disruptive allows a whole new population of consumers access to a product or service that was historically only accessible to consumers who had available resources, either finance or a certain skill (Christensen & Raynor, 2003).

Yu and Hang (2009) elaborated on Christensen's theory to say that these disruptive innovations typically experience a change in performance over time, with only niche segments, the early adopters, being served initially. As further development is undertaken, and the attributes of the disruptive offering are enhanced, it begins to attract a more mainstream following.

At this stage, the performance of the established offering is still superior and is typically improving, if only incrementally, as well. In some instances, the traditional offering can actually exceed the demand of the mainstream customer and leave these customers over-served (Christensen and Raynor, 2003). The market disruption occurs when,

despite inferior performance, the disruptive offering replaces the incumbent offering in the marketplace and is adopted by the mainstream customer base (Yu & Hang, 2009).

2.3.2 Principles of disruptive innovation

Christensen and Raynor (2003) posited that incumbent companies do not stop innovating as they grow; rather the kind of innovation they focus on is very different to the innovation practiced by new entrants. The on-going pressure for new growth draws incumbents towards sustaining innovation, that is, innovation focused on the most attractive customers at the higher end of the market.

Disruptive innovation theory explains what kinds of products can outperform already existing products or innovations on demand and seeks to make improvements on products or services for the consumer (Demuth, 2008). In addition, disruptive innovation does not always mean that it will always be new entrants or emerging businesses that will replace the incumbent, or that the disruptor must be a start-up firm (Yu & Hang, 2009).

Incumbent firms can focus on satisfying their least price sensitive customers with incremental innovation in order to sustain the customer requirements. In this way, as long as the incumbent firm, a financial services institution in this case, continues to update and innovate on its current offerings, a portion of their customer segment should remain unaffected (Schmidt & Druehl, 2008).

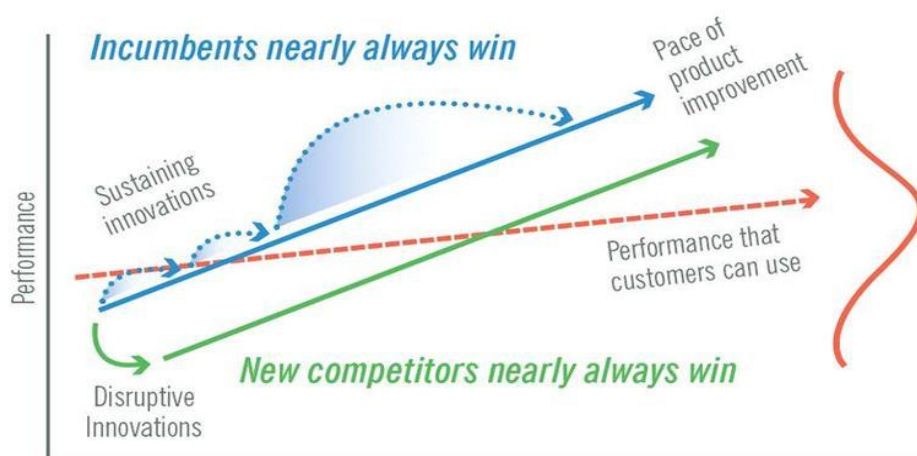
The process of disruptive innovation is dynamic (Christensen and Raynor, 2003) which is why the threat to sustaining, iterative innovators intensifies over time. The market then founded on the product deemed “good enough” is then ripe for disruptive innovation. The on-going challenge for innovators is to become serial disruptors and

constantly create disruptive products, to prevent the threat of becoming sustaining innovators.

Figure 2.2 illustrates that organisations that tend to innovate faster than their customer's lives change, end up producing products and services that are too good, too expensive or simply inconvenient for much of the customer base. As a result, when these organisations continue to perpetuate what has historically helped them to succeed through sustaining innovations, the door is opened to disruptive innovation that not only challenges the sustaining innovation, but often tend to replace them (Christensen and Raynor, 2003).

At a point in time, the functionality or performance that is actually valuable to the customer is exhausted with the sustaining innovation and a new product, the disruptive innovation, identifies the performance most relevant to the customer. This creates a shift where the disruptive innovation allows the new competitor to capture customer share (Christensen and Raynor, 2003). The disruptive innovation occurs at the point where the trajectories intersect.

Figure 2.3: Disruptive Innovation Model



Source: Christensen and Raynor, (2003)

Danneels (2004) stated that despite how widespread Christensen's work on disruptive technology has become in business circles, there seems to be a lack of constructive criticism of the core concept of his disruptive innovation theory. This extends to its mechanisms and effects on firms and industries. In order to address customer needs, Danneels (2004) proposed that incumbent firms that fail to identify technological advances and changes in the marketplace, or changes in customer needs linked to market conditions are more likely to be impacted by disruptive forces. In addition, Govindarajan and Kopalle (2006) and Yu & Hang (2009) highlighted that where the nature of the customer base is emerging, the more disruptive the innovation could be.

2.3.3 Innovating in emerging economies

This section looks at the environment in which the adoption of a disruptive innovation would thrive and poses the background to research proposition one in chapter three.

The alignment between the requirements of low-income customers and the characteristics of disruptive innovations can often be seen where the innovations are required to address social and environmental challenges (Hart & Christensen, 2002). In these circumstances, disruptive innovations can make large impacts further down the income pyramid where markets are not yet fully served and alternatives are required to generate potential growth.

Hart & Christensen (2002) stated that developing countries, or emerging economies, are ideal target markets for disruptive technologies. There is typically an unmet need in these markets that the disruptive innovation seeks to address. While mainstream solutions might be in place, these can still fall short of providing the outputs that customers in these markets require (Yu & Hang, 2009).

Disruptive innovation is not only about displacing competitors, but about generating growth through enlarging existing markets and creating new ones, this is largely due to an increase in aggregate demand for the products of an industry (Harrison, 2010; Utterback & Acee, 2005). Disruptive innovation very often provides a product or a service to people who would otherwise be left out entirely or who are not appropriately served by the existing offerings in the market. This opens the door for alternative solutions to meet the same, or a similar need (Hart & Christensen, 2002).

Disruptive innovation in the financial sector is perhaps best understood in the context of Grameen Bank in Bangladesh where a disruptive model provided finance to a population in great need through microcredit (Hart & Christensen, 2002). Similarly, these innovations exist in the midst of establish financial sector practices, yet where the funding for small enterprise or individuals does not extend beyond existing credit models.

Forcing a potentially disruptive model into an existing industry, financial services for example, where an incremental innovation approach is more the norm, puts the disruption directly in the path of incumbent offerings (Hart & Christensen, 2002). The flip side to this is that the potential rewards that result from targeting unmet needs in emerging markets provides a dual benefit; corporate growth and a more balanced macroeconomic sphere of development.

2.3.4 Characteristics of disruptive innovation

This section will highlight the characteristics, as defined by the literature, of a disruptive innovation and will form the basis of comparison for the second research proposition in chapter three. The characteristics of all three types of innovation will be compared in a matrix, with specific focus on disruptive innovation.

Tellis (2006) commented on Christensen's theory (1997) of disruptive innovation by highlighting five key components that define this form of innovation:

- It initially underperforms incumbent solutions
- It has new features that customers value and is typically cheaper, simpler, more convenient than the incumbent offering
- The most profitable customers of incumbent firms generally do not want to utilise these disruptive innovations, leading to them being commercialised in emerging markets or with under-served customers
- The disruptive offering steadily improves in performance over time to catch up with the demands of the mainstream market
- This results in the disruptive offering replacing the mainstream offering

Tellis (2006) posits that customers who have already made use of a mainstream offering, in this case the small business owners who have made use of a financial institution to gain access to finance, are those that are least likely to adopt a disruptive innovation until it has eventually migrated to a mainstream offering. Those customers are typically less price sensitive and have found that their needs are met by the incumbent product or service. It is for this reason that disruptive innovations tend to be adopted more quickly in emerging markets, where the needs of the customer are largely under met (Hart & Christensen, 2002; Schmidt & Druehl, 2008).

Disruptive innovations can typically be characterised by a few key elements (Christensen, 1997), these include:

- Affordability
- Simplicity
- Different performance parameters
- Convenience
- New business models, including different cost structures
- Product architecture overhaul

Christensen (1997) stated that disruptive technologies are typically aimed at customers who cannot afford the mainstream offering, and as a result are likely to be sold at a lower price point in order to be more *affordable* and to penetrate the market. In addition, disruptive innovations often start out as more *simplistic* offerings, with fewer features than the incumbent product, but aimed at being easy to use. *Different performance parameters* refers to the fact that disruptive innovations often cannot compete with the incumbent product as far as the existing performance criteria are concerned. Danneels (2004) explained that disruptive innovations compete by changing the metrics that the incumbent firm competes within.

Convenience plays a large role in the effectiveness of a disruptive innovation, Christensen (1997) posited that the disruptor must be easy to use and efficient and must be accessible and easy to locate. In order for a disruptive innovation to be able to threaten the incumbent offering, it must be able to offer something that the existing product does not, while allowing the producer to provide it at a lower cost. This often involves devising a *new business model* to assist in lowering the price and capturing more customers for less (Christensen, 1997). Lastly, Christensen (1997) believed that in order for the disruptor to challenge the incumbent product, a full *overhaul of the product architecture*, rather than mere incremental change, was required. This would allow it to meet a new set of customer needs, potentially not yet defined.

Table 2.1 illustrates a comparative matrix of the three types of innovation, incremental, radical and disruptive, where each characteristic is captured as identified in the literature. The characteristics of a disruptive innovation are highlighted in red. The matrix indicates that both incremental and radical innovations operate at product and industry level respectively, while the disruptive innovation characteristics have the customer at the core of the innovation. Disruptive innovations attempt to meet an unmet need for the customer in an existing market, bringing more solutions to underserved customers where incumbent products exist, but only suit the mainstream customer (Utterback & Acee, 2005; Hart & Christensen, 2002).

Table 2.1: Innovation Characteristics Matrix

Type of innovation	Incremental/Sustaining	Radical/Breakthrough	Disruptive
Innovation Characteristics per type	Low uncertainty	High level of uncertainty	Affordability
	Exploits existing products and services	Explores new opportunities	Simplicity
	Key players operate across functional teams	Key players are cross functional individuals	Convenience
	Business plan developed at the outset	The business plan evolves throughout the process and is discovery based	Flexible product parameters
	Formal process followed	Informal process	New business models
	Improves existing products and processes	Development of new products and services	Differing performance parameters

Source: Author's Own (2012)

2.4 Peer-to-peer lending

The term peer-to-peer (P2P) lending describes the loan origination process between private individuals on online platforms. These lending platforms were initialised by groups in online social networks and the first peer-to-peer lending platforms were started in 2005. As a result, peer-to-peer lending is a relatively young research field (Bachman, Becker, Buerckner, Hilker, Kock, Lehmann, Tiburtius & Funk, 2011).

A peer-to-peer lending platform is an infrastructure where each peer can play the role of a client and a service provider at the same time, in such a way that the peer looking for access to finance is able to connect with the peer who has finance available (Wang, Wong, Lin & Varadharajan, 2007). Peer-to-peer lending, in its more traditional sense, is the oldest form of credit, where any store of value could be lent to a borrower with the promise of a future repayment in turn (Meyer, 2006). While the principle of peer-to-peer lending is not new, the practice of lending money to family members, or within communities dates back long before the establishment of traditional financial institutions (Wang & Greiner, 2011).

2.5 Growth of online peer-to-peer lending platforms

Peer-to-peer lending platforms such as Zopa (Hulme & Wright, 2006) in the United Kingdom were launched in 2005 and continue to grow, while others such as Prosper in the United States (Meyer, 2007; Wang & Greiner, 2011) have identified the opportunity and entered the P2P lending market as well. The increase in online accessibility and the creation of new online platforms that serve to match those people who need finance, with those who have available cash to lend, are on the rise (Meyer, 2006).

Peer-to-peer lending schemes have also served to highlight that due to the legacy of unethical investments and a lack of perceived transparency of traditional financial institutions, this may be the cause of higher usage of social network lending models in

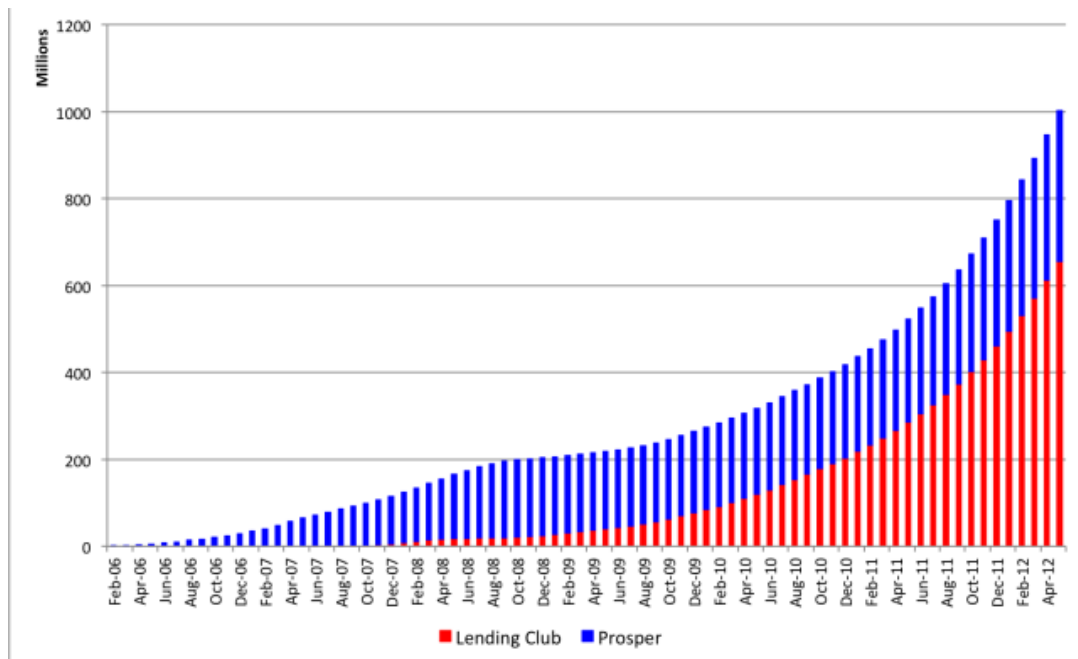
the place of traditional systems (Hulme & Wright, 2006). The extent to which it is now being formalised, or has become a recognisable alternative to borrowing from financial institutions, otherwise known as institution-to-individual lending, is on the rise (Wang & Greiner, 2011).

In the period between 2006 and 2008, twelve new social lending websites opened around the world, these were all aimed at connecting lenders with borrowers without the intervention of a traditional financial institution involved in the transaction (Freedman & Zhe Jin, 2008). Online businesses such as FundingCircle and ThinCats are two key players who specialise in the provision of peer-to-peer lending facilities to small businesses where individuals or businesses offer to lend specific sums of money at interest rates that the lenders choose themselves, creating a social network of investment lending (Bartram, 2011).

Figure 2.4 illustrates the rapid growth of loans dispersed over peer-to-peer lending platforms from two of the prominent United States based P2P firms, Prosper and Lending Club. Since inception in early 2006, loan disbursement as a cumulative running total of the two organisations grew from a zero base until it reached the billion dollar mark in April 2012.

United Kingdom based peer-to-peer lender Zopa posted an amount of 150 million pounds dispersed between members in April 2012 (Zopa, 2012). While these are only three of the large P2P lending platforms, they are indicative of the volumes and appetite experienced in the social lending market by customers seeking access to funds.

Figure 2.4: Rapid growth in P2P lending volumes



Source: www.wiseclerk.com (2012)

2.6 Disruptive innovation and peer-to-peer lending

Characteristics of disruptive products, at least in their initial stages, can include lower gross margins, smaller target markets, and be presented as a simpler offering that may not appear as attractive as existing solutions when compared against traditional performance metrics (Christensen and Raynor, 2003).

As long as borrowers and lenders are content that they can safely utilise social network models such as Zopa, Kickstarter and Prosper to transfer funds, the usage of community based transactions will flourish. It is with this in mind that the openness of social network lending comes under the microscope as the protection, privacy and security of personal information is at risk. Bohme & Potzche (2009) concluded that the disclosure of more personal data is rewarded in the market place with more favourable conditions, such as lengthier repayment terms and lower interest rates between the borrower and the lender.

An incumbent organisation, in this case, a financial institution, may fail to take action and may, therefore, be the subject of a disruptive innovation with catastrophic ramifications in the long run (Schmidt and Druehl, 2008). Peer-to-peer lending platforms serve to create a network where a traditional financial institution plays no part in the transaction between borrower and lender, thus disintermediating them from the transaction (Meyer, 2006). This potentially creates a space for financial institutions to provide alternative services in the end-to-end process, harnessing on areas of expertise such as facilitating the transaction of funds between the borrower and lender, providing access to legal parties to structure contracts, administrate the loans and provide advice to the parties in the loan.

2.6.1 Peer-to-peer lending platforms replacing traditional offerings

Peer-to-peer communities introduce virtually unlimited options for peer-to-peer or institution-to-individual lending without the need for traditional institutions to play a role (Lin & Viswanathan & Prabhala, 2009). With record low interest rates provided by a network of investors and driven by a reduction in bank lending, new business models built on a client friendly technology innovation platform have created a space in the market for peer-to-peer lending sites to provide much needed finance to small business (Bartram, 2011).

While financial institutions continue to use historical credit models to assess the financial risk of a lending transaction, and thus turn away small business not meeting these conditions (Hulme & Wright, 2006), peer-to-peer lending platforms create a credible alternative for the small businesses that financial institutions do not wish to fund (Bartram, 2011).

Peer-to-peer lending platforms are generally best understood as a marketplace for small business owners or individuals to build up their credit history, to gain basic

business skills and to develop networks of support that may not be readily available in traditional financial institutions. Additionally, peer-to-peer lending groups create important identity benefits for members, giving them a sense of belonging in a community of entrepreneurs or small business owners that they do not normally experience by borrowing from a bank (Kibria, Lee & Olvera, 2003).

Peer-to-peer platforms function on almost the same criteria of a traditional financial institution. This criteria includes the provider of the peer-to-peer platform giving a service to lenders where they can subscribe to loans according to a risk profile, authentication of the identity of borrower and lender, the creation of a contract between the parties, calculation of interest on the loans, monthly repayments and the movement of loans into arrears upon missed payments and the subsequent collection on these defaulted loans. These characteristics mean that the peer-to-peer platform effectively replaces the financial institution as an intermediary by allowing the online transactions between borrowers and lenders to occur (Groeneveld, 2011).

2.6.2 Disruptive innovation and peer-to-peer lending

Danneels (2004) explained that even though disruptive technologies initially underperform established ones while becoming entrenched as an alternative product in serving the mainstream market, they eventually displace the established technologies. In the process, entrant or incumbent firms that supported the disruptive technology eventually displace other incumbent firms that supported the old technology.

Schmidt and Druehl (2008) highlighted the point that disruptive innovation has more to do with the characteristics of the innovation itself and nothing to do with the organisation that introduces it. In fact, the role of the incumbent firm in introducing new disruptive innovations themselves, instead of only focusing on sustaining innovations, was a key point in the work done by Christensen. In this way, Christensen's work infers that incumbent firms should disrupt themselves, before new substitute products from external sources can substitute their own (Schmidt and Druehl, 2008).

3 CHAPTER THREE: RESEARCH PROPOSITIONS

3.1 Introduction

The previous chapter built on the foundation created in chapter one and discussed the literature on innovation, but with specific attention to disruptive innovation theory. It outlined the role that disruptive innovation plays in markets where mainstream offerings are entrenched through incumbent firms. The literature indicates that the disruptive offering slowly attracts customers over time away from the mainstream offering and/or is typically more effective in emerging markets where customer needs are not being appropriately met. In addition, the characteristics of a disruptive innovation were outlined and separated from those of other innovation types in a characteristic matrix (Figure 2.3).

The literature then shifted to focus on peer-to-peer lending and the phenomena that these platforms have created in providing a means for individuals and companies to transfer money without a traditional financial institution being explicitly involved. The growth and popularity of these platforms was explored and the alignment to disruptive innovation theory explored.

3.2 Themes of the research

Through this literature review, certain themes emerge that elicit a set of questions. These will form the basis for the research propositions for this paper, these include:

3.2.1 Small businesses operate across a variety of industries and geographies. Similarly, small business owners can be relatively new to running a business or have many years of experience; can be male or female, young or old. Their

willingness to move away from mainstream offerings in getting access to funding and make use of alternative, disruptive solutions can be understood in the light of what the literature has already outlined.

It is important to understand the relationship between these variables and certain indicators to start to paint a picture of whether or not there are certain types of customers who would be more, or less, willing to adopt disruptive innovations than others.

- 3.2.2. The characteristics of disruptive innovations have been discussed. As a result, the reflection in this space is about what characteristics a small business owner would find important in persuading them to make use of a disruptive innovation, and in this case, an online platform.

A correlation between the characteristics of a disruptive innovation and those that the small business owner prioritises as important to persuade them to switch to a disruptive innovation, would show synergy between the nature of the disruptive innovation and what the small business owner requires to engage. These insights form the fabric of the disruptive innovation that the research is trying to understand further. There may also be other characteristics that surface that could potentially be considered important when understanding what would make the take-up of a disruptive innovation more rapid.

- 3.2.3 The literature illustrates that profitable customers in emerging markets who make use of mainstream products and services are less likely to migrate to a disruptive innovation because they are satisfied that the incumbent product already meets their needs. In this scenario, the small business owners who initially gained access to finance from a bank or through a financial services delivery channel are indicative of those mainstream clients in the literature. The same can be said for the small business customer who utilised a financial institution to gain access to funding for the growth of their business. As they

have met the criteria to receive funding from the financial institution and are, as a result, less likely to use a disruptive innovation for funding at another stage.

These themes form the basis for the research propositions of this paper.

3.3 Research Propositions

- 3.3.1 Small business owners are willing to adopt disruptive online mechanisms to access finance
- 3.3.2 The characteristics of a disruptive innovation are aligned to and are also important to small business owners when gaining access to finance
- 3.3.3 Small business owners who have historically been able to use a bank to gain access to funding would not migrate to a disruptive innovation as a source of access to finance.

4 CHAPTER FOUR: RESEARCH METHODOLOGY

4.3 Introduction

Chapter three explained the research propositions to be tested in this research report. These research propositions were identified out of the literature review and the first of these focused on the propensity for small business owners to use disruptive online funding mechanisms. The gathering of basic information about the small business owner population allowed for a variety of different variables to be used in this test.

Further to this, the second research proposition looks at the characteristics of a disruptive innovation and how these characteristics might correlate to those of a small business owner in the process of getting funds for the small business. Using the responses gathered through the research process, these characteristics are highlighted and tested against those identified in the literature.

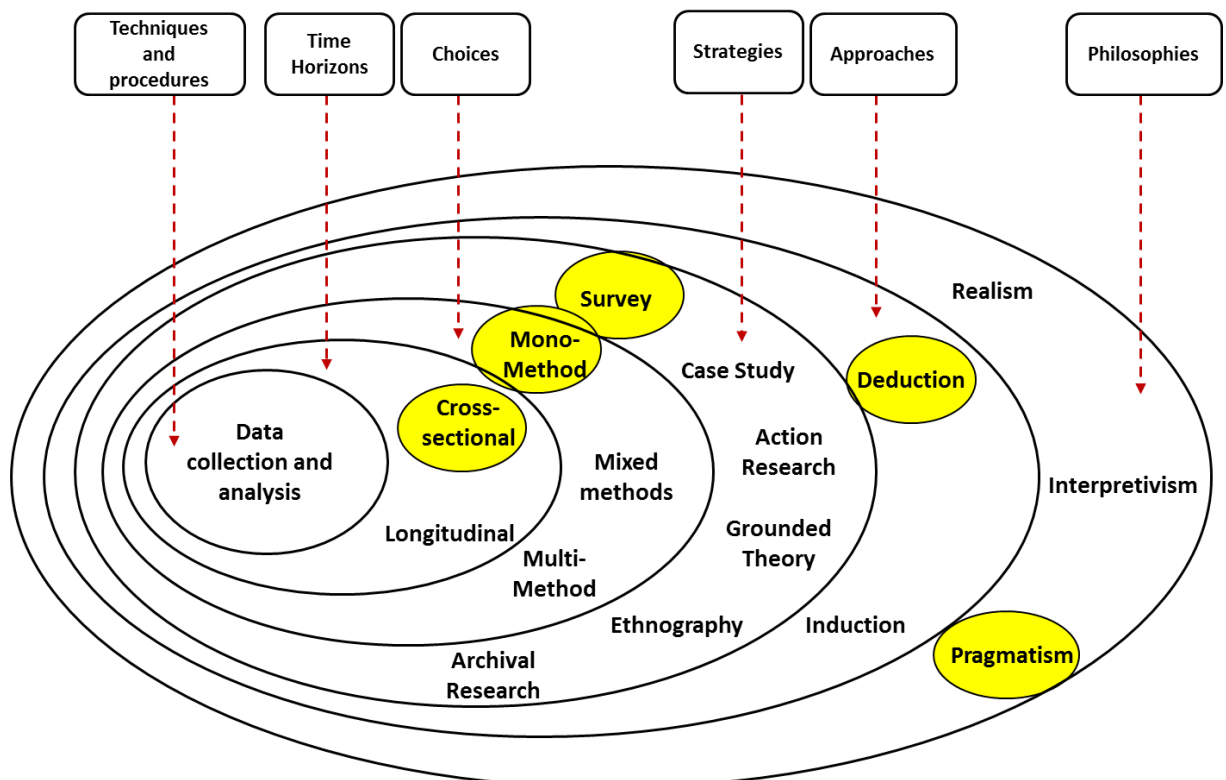
The third research proposition posited that disruptive innovation theory (Christensen, 1997) establishes that mainstream users of an incumbent solution, in this case traditional financial offerings for small business funding, are not likely to migrate to a disruptive alternative as the incumbent delivery channel already meets their needs.

Chapter four explains the methodology that will be used to gather the data in order to test the propositions outlined in chapter three.

4.4 Research Method

Saunders and Lewis (2012) first introduced what they called “The Research Onion” in 1997 to illustrate the approach to understanding the research methodology. Each of the layers of the onion depicts the decisions that must be made at each step of the process in order to gather the data for the research. The choices for the research onion in this research are highlighted in yellow in figure 4.1. Each of these is selected to guide the research from philosophy and approach in the outer layer, towards the research strategies and choices in the inner layers and finally, the data collection and analysis at the centre of the onion.

Figure 4.1: The Research Onion



Source: Saunders & Lewis (2012)

The research philosophy describes the development of knowledge and how we use that knowledge in relation to the research being conducted (Saunders & Lewis, 2012). The approach followed in this research paper was one of pragmatism, where the approach was guided by what is possible. Through understanding the literature and gathering the responses from the sample, the questions posed guided the outcomes.

The next layer of the onion describes the approach to conducting the research, which can be either through induction or deduction. In this research, the approach utilised was one of deduction, where the research strategy is designed to test what the existing theory has already laid out. Saunders and Lewis (2012) explained that this involves a process of:

- Defining research questions from the existing theory base
- Specifying in which way these questions should be answered
- Seeking the answers to these questions through the responses
- Analysing the results of the questions and answers to see if there is support for the existing theory base or if there are modifications required
- Finally, confirming the existing theory or proposing modifications in the light of the findings.

The strategy applied to the research was the survey method. The nature and geographical dispersion of the small business customer base meant that conducting face to face interviews would not be possible and so a structured survey questionnaire was created to provide the mechanism to distribute this through an electronic communication.

This involved the structured collection of data from a large population. The fact that the questionnaire was standardised meant that it could be sent to multiple respondents operating in different industries and with different descriptive characteristics and still

render a consistent response. A survey was the only mechanism used and, as such, the method for capturing the data was mono-method.

The research was a cross-sectional study where data was collected at a snapshot in time across multiple groups of small business owners. The small business owners varied in age, gender, industry their business operated within and the duration that their business had been in operation.

This study made use of a quantitative data gathering approach, deriving the research propositions from the literature and testing these propositions through the use of an online survey with a sample of small business owners, this being the deductive approach mentioned above.

Categorical data was gathered in both a descriptive (nominal) and ranked (ordinal) format. The nominal data was used to identify the basic descriptive variables to explain the nature of the small business owner sample. These variables were used as identifier variables in the relationship tests with the ordinal data. The ordinal data was used as the test variable in the relationship tests. These were gathered through Likert scale questions within the questionnaire.

A questionnaire was created to gain the relevant insights from the small business owner sample. The elements within the questionnaire were aimed at eliciting descriptive feedback from the sample group that would assist in understanding the nature of the small business owner in relation to the theory base.

The research was both descriptive in its nature, with an accurate representation of the small business owners responses being sought, as well as explanatory, through the study of the theory of disruptive innovation and the phenomenon of peer-to-peer

lending platforms as a disruptor. It sought to understand the relationships and characteristics of these in the context of the small business owner. Explanatory research is particularly relevant when trying to determine the relationship between variables (Saunders and Lewis, 2012).

The research propositions provided a conceptual framework and guided the data collection and data analysis. This research aimed to formulate theoretical conclusions which may lead to additional research or can be tested at a later stage.

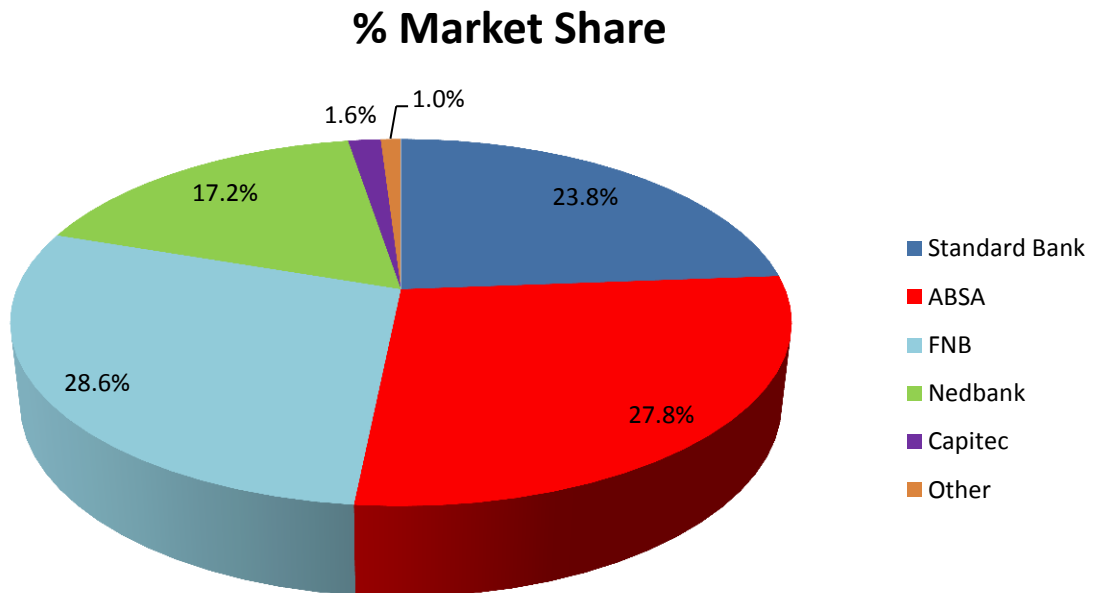
4.5 Population and Unit of Analysis

The population for the study was the Nedbank Retail Relationship Banking division. This division is split into two components, namely Small Business Services and Private Banking. For the purposes of the research, the Small Business Services client base was selected in order to focus the data gathering on the requirements for small business funding. As a result, the Private Banking client base was excluded.

Nedbank Limited is one of the big four banks in South Africa and with approximately 17% market share in the small business segment (Nedbank, 2012). The small business services area has just over 215,000 small businesses banking with Nedbank within this segment. Of these, approximately 48% are primary banked clients with Nedbank. A client with a primary banking relationship is one who has their main transactional account, where the majority of their transactions flow, with the bank.

Figure 4.2 illustrates the split in the small business market share between the four large banks; Standard Bank, ABSA, First National Bank and Nedbank, as well as the minor share contributions by Capitec and other players in the segment.

Figure 4.2: Percentage by market share

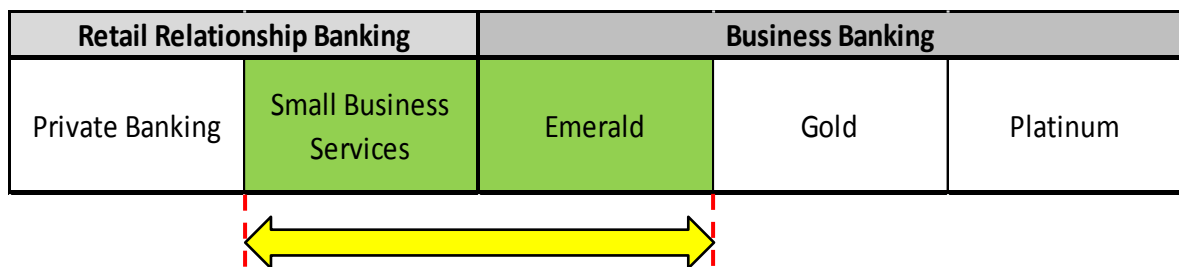


Source: Nedbank Small Business Services Tracker (2012)

Nedbank considers those businesses with an annual turnover of between R2 million and R25 million, with at least one employee, in the form of a sole proprietor, but with no more than 100 employees, in its definition of what constitutes a small business. These are primarily banked within the Retail Relationship Banking segment, but also flow over into the lower end of the business banking segment. This portion of business banking is referred to as the Emerald segment. In addition, customer accounts could also be flagged incorrectly on the customer information system. In these instances they could appear to be a small business customer based on the nature of the flag, but may rightfully be individual or business banking customers. These are removed manually to be excluded as part of the research (Nedbank, 2012).

The inclusion for the research is highlighted in green and illustrated in figure 4.3, which shows the make-up of the customer base considered to be a small business in the Nedbank construct.

Figure 4.3: Research base by segment



Source: Nedbank (2012)

The Nedbank Small Business client base operates across a number of industries. Due to the format of the questionnaire, it was not possible to list all industries that the small business may operate in, so a selection for “other” was included to catch those responses that fell outside of the core industries listed.

Table 4.1 illustrates the industry selection that was included in the research questionnaire. These were selected based on information shared by the bank as the most common industries that the small business customers operate in within the construct of the Nedbank customer base (Nedbank, 2012).

Table 4.1: Industry Types

• Retail
• eCommerce
• Manufacturing
• Import/Export
• Wholesale
• Financial Services
• Agriculture
• Education
• Tourism
• Other

Source: Nedbank (2012)

While Nedbank does not have the largest market share in the small business segment, it is one of the largest banks in South Africa, with a substantial portion of the banked client base in the segment, totalling approximately R25 billion worth of assets under management within this segment. As a result, the responses of the interviews could be extrapolated in order to represent the greater small business universe within the South African banking context. The unit of analysis is the perspective of the small business owner and the characteristics they require in the process of gaining access to funding.

4.6 Size and Nature of the Sample

Saunders and Lewis (2012) stated that organisations are more likely to grant access to individuals if you come from within the organisation. As a result, Nedbank's small business segment is the designated target population in order to make use of existing contacts and relationships within the organisation.

The research was conducted with the assistance of the executive team, particularly the executive accountable for client experience management, of the Retail Relationship Banking unit situated in the Nedbank Head Office in Sandton, Johannesburg. The research will aim to elicit a response from as many of the small business owners within the Nedbank organisation who were willing to take part in the completion of the online survey.

4.7 Data Collection and Analysis

An online survey based on the questionnaire created from the literature review and the research propositions was the primary method for collecting data for the research. The nature of the questionnaire was such that the small business owner could complete it without extensive information required to be shared beforehand. A consent statement was sent out by the researcher, in conjunction with the Gordon Institute of Business Science and Nedbank Retail Relationship Banking accompanied the survey as an introduction to the research. (See Appendix item 8.1)

The online survey was sent to the entire Nedbank Small Business client base where an email address was available on the client information system (CIS). As a result of the CIS system relying on the information captured by the client, not every client record has an email address captured. In some cases, the email address captured was out of date or was incorrect. In these cases, the penetration for the online survey into the client base was reduced. The questionnaire was distributed via an email with a hyperlink embedded to gain access to the questionnaire. These emails were sent out anonymously and no customer information was assessed in the selection of the data set. The online survey sought to elicit as many responses from the Small Business client base where an accurately captured email address was stored within the CIS system. The method to select the small business owner population is illustrated in figure 4.4, while the data collection method that depicts the actual number of accounts successfully contacted is depicted in the waterfall diagram in figure 4.5.

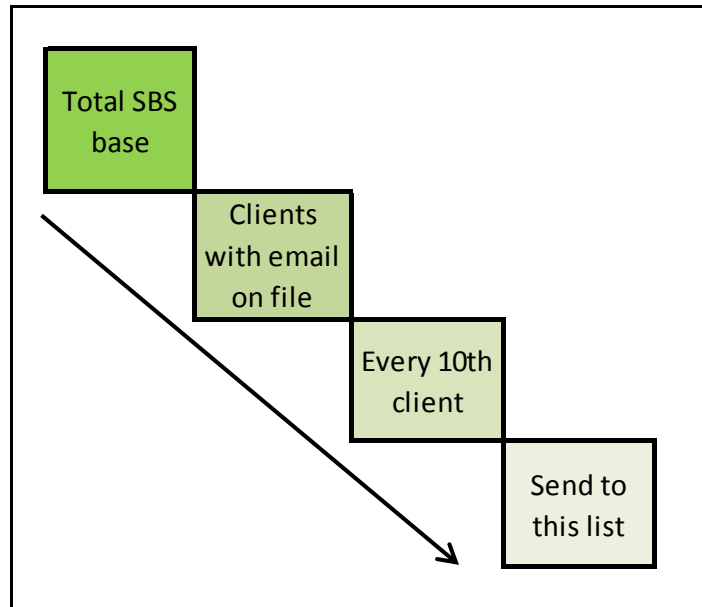
The structured survey questionnaire was created in such a way that the questions posed could be understood without explanation and could be interpreted by the respondents in the way intended by the researcher. The intent was to look for content validity, where the questionnaire would provide enough information to answer the research question and meet all the objectives of the research.

The research was conducted using a sample of the whole population of small business owners in South Africa. It would not have been possible to include all of these in a survey. A simple random sampling approach was utilised, in other words, selecting small business customers at random from a complete list of the Nedbank population. In order to achieve this, every tenth customer was selected from the data set that met the requirements of the research and the definition of what Nedbank constitutes as a small business. This data gathering method is illustrated in Figure 4.4.

This was achieved after applying a number of rules to the data population. These rules served to reduce the total population of Nedbank small business customers from the data set for various reasons, including:

- Any customer contacted in the previous six months for a campaign or for other forms of research were automatically excluded from being contacted again within the six month window
- Any customer who had indicated on their customer record that they did not wish to be contacted for marketing or research by any party
- Customers where no email address was captured on the customer record
- Customers who were incorrectly classified on the system as small business but were actually business banking or individual customers

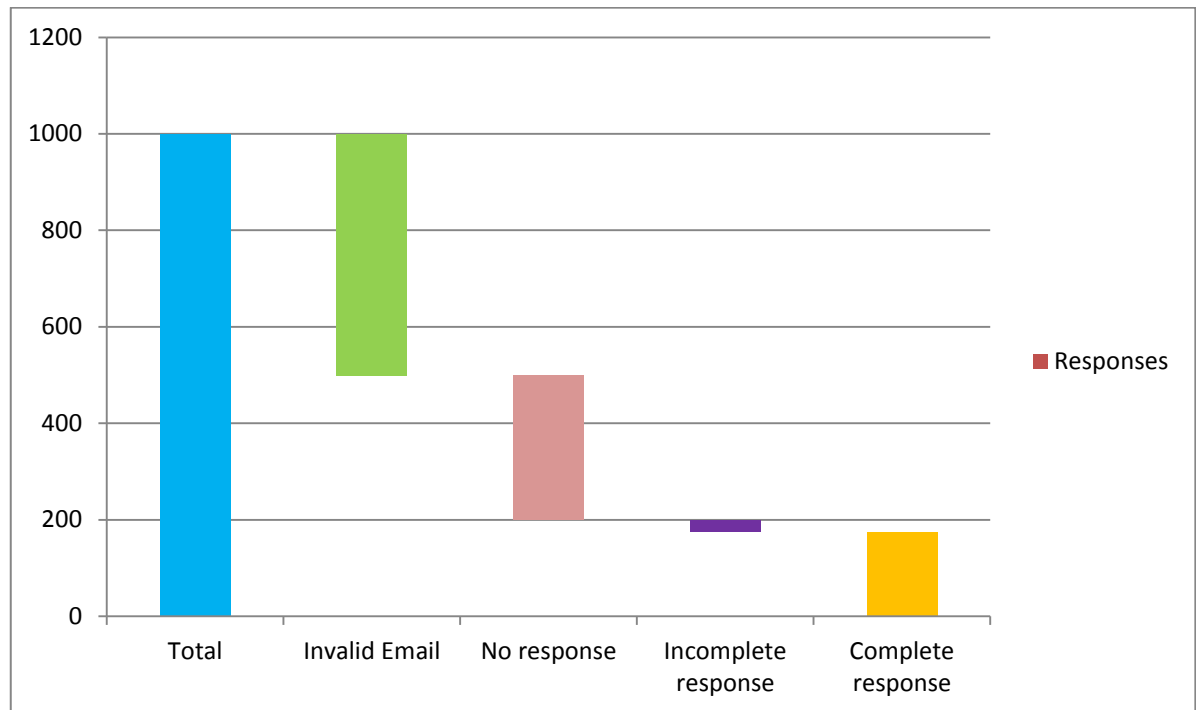
Figure 4.4: Data gathering method



Source: Author's own, (2012)

Figure 4.5 illustrates, with fictional volumes, how this waterfall effect reduces the overall population by applying the above rules until the final sample for the research was attained. The volumes shown in the figure 4.5 were not fictional volumes and were not representative of the actual volumes in the submission and response of the research survey, these are indicated in chapter five in figure 5.1. As such, no values were indicated in figure 4.5 due to it being purely for illustrative purposes.

Figure 4.5: Data collection method



Source: Author's own (2012)

The interview questionnaire was led by the research propositions identified in chapter three. The respondents for the online survey came from a cross-section of industries. No specific industries were selected. These were all existing small business banking clients within the Nedbank base.

The geographical location of the small business owners was also not restrictive in the selection process, taking into account a nationwide reach for the distribution of the online survey. Further to this, the age and race of the business owner and the length of operation of the business was also not considered to be a restrictive factor, but was captured within the questionnaire to help segment the data upon completion and receipt of the online survey.

The online survey was distributed via electronic mail as a bulk email to all small business owners with an email address captured. No personal information that would be used to identify the small business owner was requested, this was in order to retain anonymity throughout the survey process. Each record returned was given a random record for anonymous storage and was stored electronically in a central location accessible only to the researcher.

The reliability and validity of the data is generally a measure of consistency (Saunders & Lewis, 2012). This data was not guided or coerced in any way to achieve an outcome. The research was conducted in English and was not translated into any other language prior to distribution. This did not have a significant impact on the number of small business customers that the survey was sent to, but may have had an impact on the number of responses received where the home language of the small business owner was not English.

4.8 Research Process

The first part of the research was undertaken to understand the background and motivation for a study into small business access to finance. By having more insight into the nature of national competitiveness and the role that small businesses play in meeting targets of economic growth and job creation, the importance of finance to create and grow these small businesses for the national agenda became apparent.

An extensive literature review was conducted to position the role of peer-to-peer lending platforms as a disruptive innovation in the context of an existing traditional financial institution delivery channel for financing for small business. Further to this, was to understand the characteristics of disruptive innovations and the characteristics that a small business owner would value when seeking access to finance.

The second part of the research was to elicit direct responses from a population of small business owners across industries, utilising a standardised survey questionnaire to allow for the gathering of data in order to conduct comparative analysis. Respondents were selected based on their being classified as a small business and based on their banking relationship within Nedbank's small business client base.

A pilot survey utilising the questionnaire was conducted first in order to test the question set and the approach. The aim of the pilot was to guide the process to be followed when the actual survey distribution commenced and any necessary modifications identified in the pilot acted as a guide in driving changes to both the questionnaire and the approach for the online survey.

Once the pilot was concluded, the survey process was carried out such that the respondents both guided the research propositions with their responses and informed the questionnaire throughout. The research process was as follows:

- Send out online survey to a sample of small business owners
- Review data captured from the initial pilot survey
- Capture any additional researcher notes for use in the final survey.
- Organise the feedback in line with the research propositions for the research. Identify trends aligned to the research propositions and take cognisance of any new themes that may be emerging, and adjust the survey accordingly to allow for further exploration of the new themes.
- Refresh the survey approach and update the questionnaire with any new or additional information gathered and adjust the approach for the final mass submission of the online survey.

4.9 Research Survey

The survey questionnaire (see Appendix 9.2) was utilised for small business owners to gather the necessary research data to uncover the information in line with the research propositions. The questionnaire was introduced by a covering letter to explain the reason for the research to the small business client. (See Appendix 9.1)

5 CHAPTER FIVE – DATA ANALYSIS

5.1 Introduction

The previous chapter explained the methodology used to test the propositions outlined in Chapter Three. This chapter will present the results of the structured survey conducted with the small business sample who submitted complete responses.

The data gathered will be presented in four parts, namely:

- Descriptive display of the base, or identifier data gathered,
- Research proposition one
- Research proposition two
- Research proposition three

The chapter will close out with a summary of what the data found.

As mentioned in the previous chapter, the population for the research was identified as Nedbank small business customers. The research methodology is described in chapter four, but chapter five illustrates the outcomes of the survey. This includes the need to depict how many responses were gathered from the population identified.

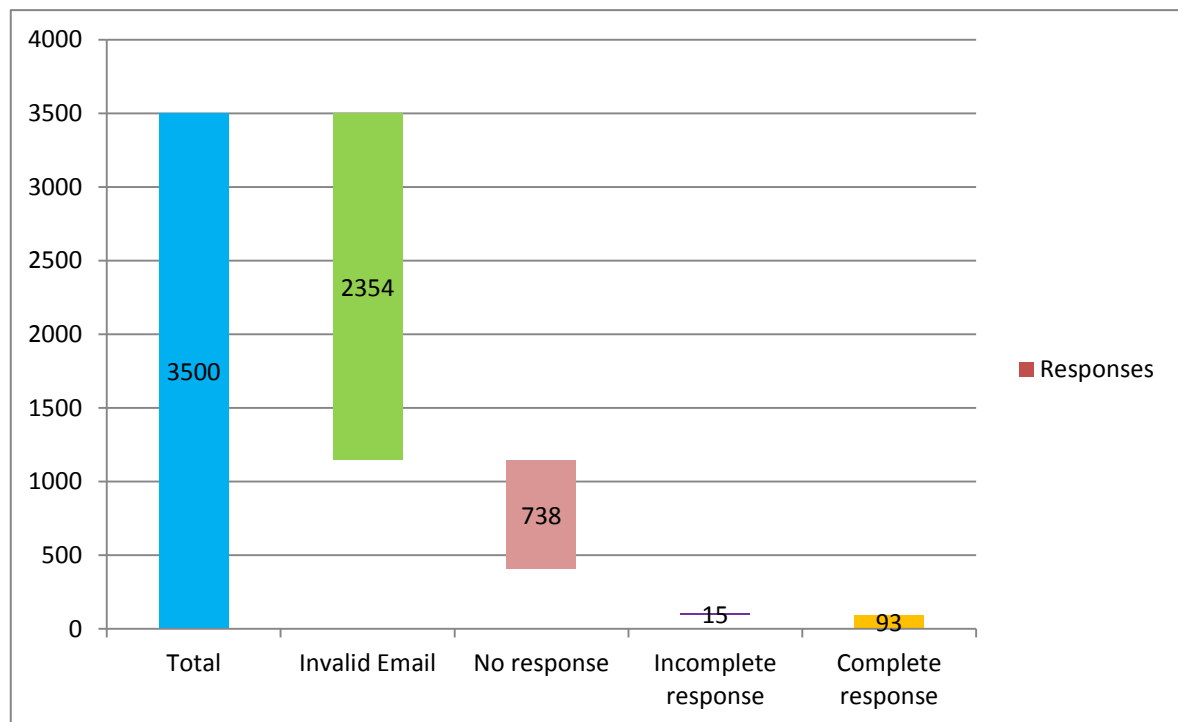
Figure 5.1 illustrates, by way of a waterfall diagram, the number of surveys that were sent out after the rules mentioned in chapter four for exclusion were applied. A total of 3500 anonymous surveys were sent out to the small business owners. Of these, a large portion, 67%, came back without being delivered. This is as a result of a combination of outdated information being stored on the customer information system and due to the fact that a number of the email addresses within the population having changed since initial capture.

Of the remaining surveys, 1157 (33%) were not responded to by the small business owners. 108 respondents (3%) started the survey, of which 15 did not complete it or left out certain responses to questions. Only completed surveys were considered for the

research because of the interdependency built into the questionnaire for each of the research propositions to be answered.

A total of 93 (2.6%) complete surveys were received, which became the sample for the research. All subsequent analysis and tests run beyond this point made use of the 93 responses gathered. Figure 5.1 uses the same waterfall approach described in chapter four (Figure 4.5) to show the actual volumes processed for the research survey.

Figure 5.1: Sample data gathered



Source: Author's own (2012)

5.2 Results: Descriptive Data

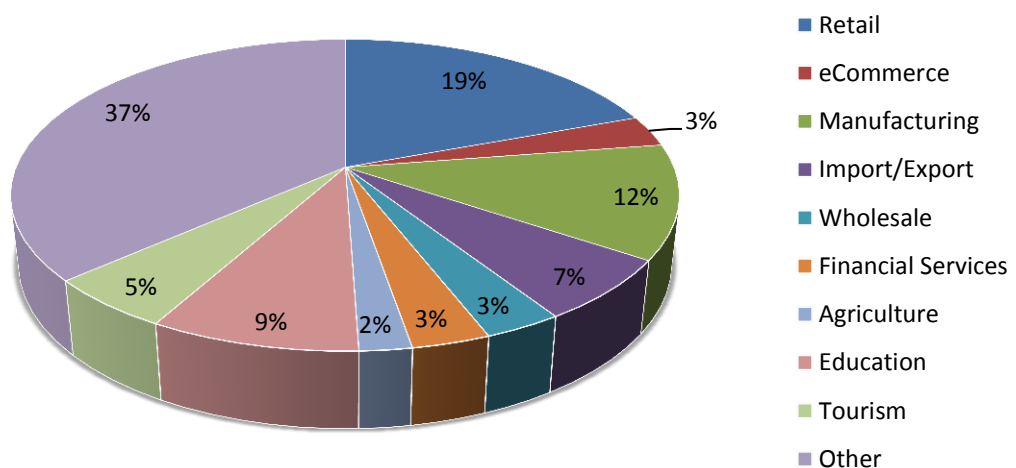
5.2.1 Introduction

The general information captured about the small business owner is represented in this section, this includes:

- The industry the small business respondents operate in
- The location where their main office is based
- Age of respondent
- Gender of the small business owner and lastly,
- The duration of the business since its inception

These base identifier variables give a quick overview of the total sample gathered and play a role in research proposition one when trying to determine the willingness of specific groups, using these identifier variables, to adopt a disruptive source of funding.

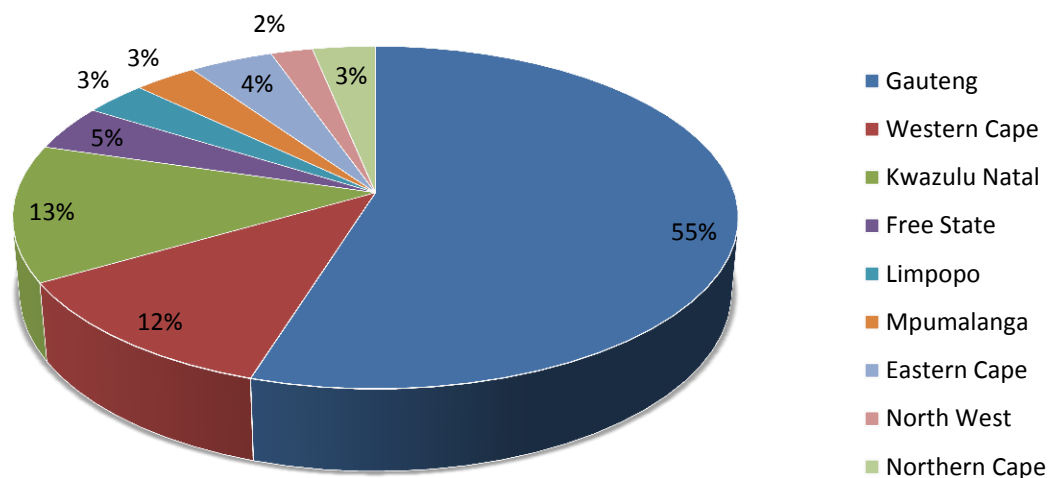
Figure 5.2: Industry Type



The pie chart (Figure 5.2) shows the breakdown of which industry the small business operates within. Retail has the largest portion with 19%, followed by manufacturing with 12% and education with a 9% contribution towards the whole.

Due to the varied nature of the industries that the small business sample operates within, a number of responses (37%) did not fit directly into the industry types that were made available in the survey. As a result, these are a mix of other industries that contribute 37% of the pie.

Figure 5.3: Geographical Location by Province

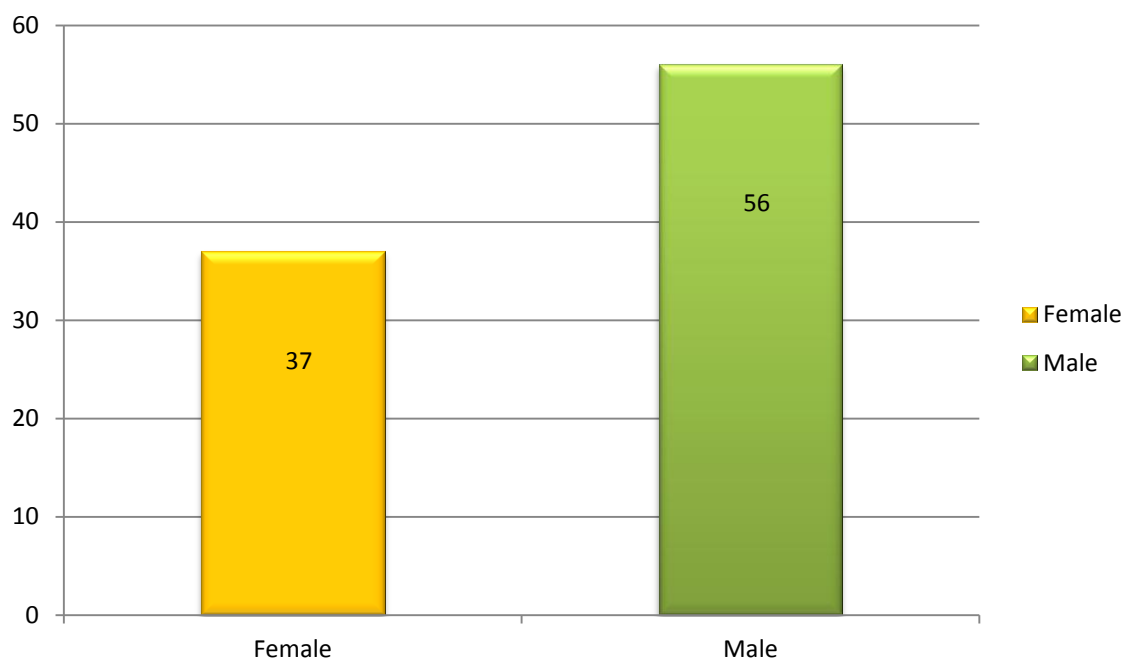


The majority, making up 55%, of the total sample operate their business in Gauteng. Kwazulu Natal follows with 13%, while the Western Cape has 12% of the sample. This is in line with the demographic of the overall Nedbank Small Business customer base, where the majority of the small business operations are located in the Gauteng area.

Notable in this graphic is that respondents from all nine provinces were represented, giving a mix of location across the spectrum.

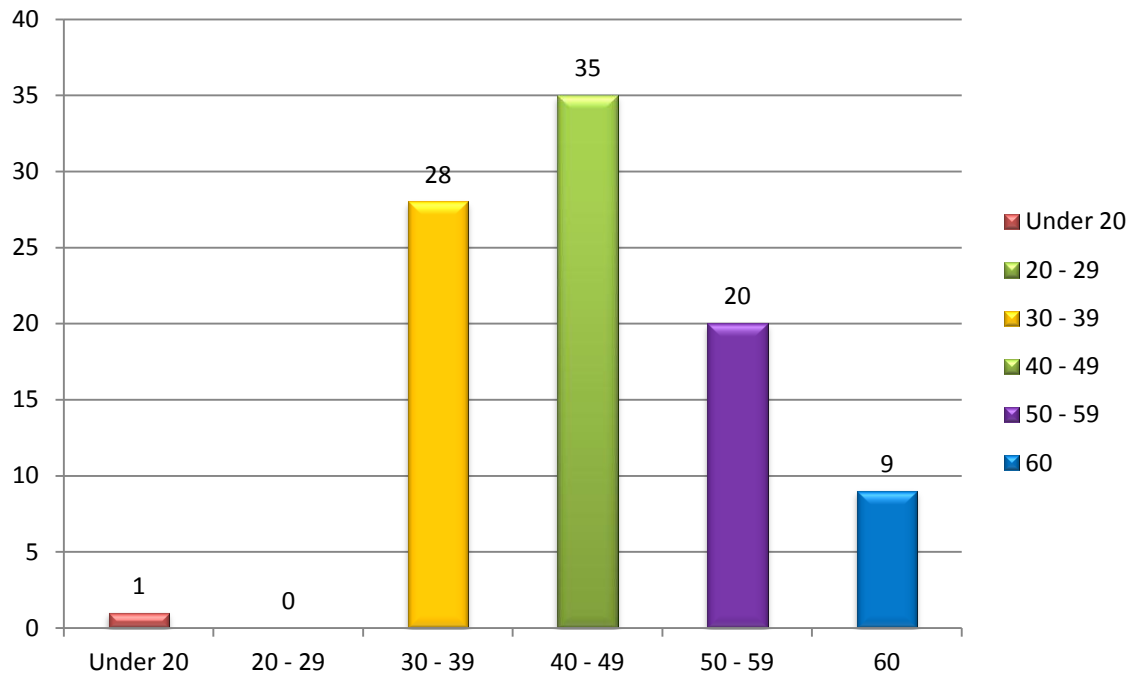
The question in the survey asked the small business owner to indicate where their business was located, but it is also quite possible that some of the respondents have operations that span across regions and have subsidiary office locations in multiple provinces.

Figure 5.4: Gender of business owner



Of the total of 93 complete responses gathered, 37 (40%) were female business owners and 56 (60%) were male.

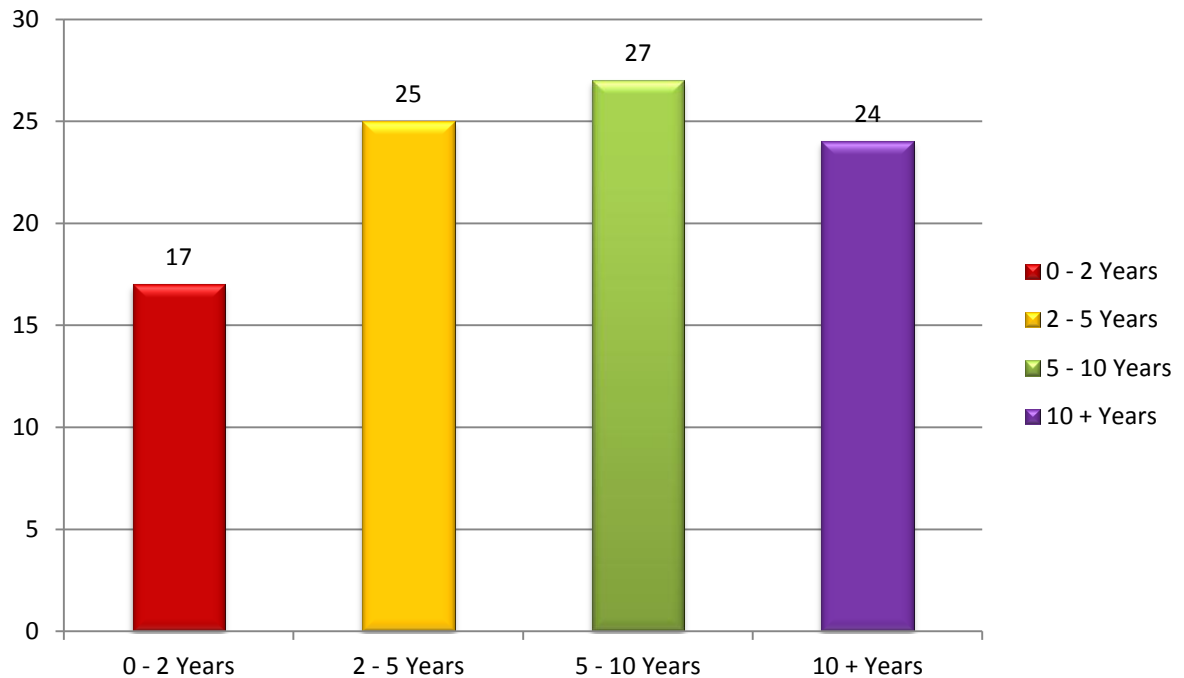
Figure 5.5: Age Group of respondent



The survey sought to understand what age group the small business owners fell into, as age is often considered an indicator for the willingness to adopt new technologies. Interestingly enough, there were no responses received between the ages of 20 and 29, with only one response coming in from a small business owner under that age group.

The majority of the responses came from the ages between 30 and 59, where 28 (30%) small business owners were between the ages of 30 and 39 years, the largest individual group between 40 and 49 years and 20 (22%) respondents between the ages of 50 and 59 years. 9 (10%) small business owners over the age of 60 also completed the survey.

Figure 5.6: Duration of the business



There was an even spread between those small business operations that are in their start-up phase all the way through to those that have been in operation for 10 years or more. The largest group was those that have been in operation between 5 and 10 years and are well established.

The duration of the business is an identifier variable that gives a key insight into the willingness of the small business owner to use a disruptive source of funding, as the business is well established and the small business owner is a consumer of the services provided by the bank already. This is typically a transactional account, paired with a loan product.

5.3 Method of testing the research propositions

Each of these tests makes use of a Chi Square test for the strength of a relationship between two variables. The p-value in the Chi Square test indicates whether or not you can reject or fail to reject the null hypothesis. If the p-value is greater than 0.05, then we can say that we fail to reject the null hypothesis.

This means that there is no or little correlation between the test variables and we cannot make any deductions about the willingness of the small business owner to shift away from mainstream delivery channels to the disruptive, online innovation.

Where the p-value is less than 0.05, we can reject the null hypothesis and this indicates a strong relationship between the variables. In this scenario, there is a correlation and we can deduce that the test variable has a sufficiently strong relationship with the test variable.

In each of the tests, three outputs will be illustrated to explain the result:

- 1 A results table to indicate the test outputs of the Chi Square
- 2 A frequency table to show the responses for the identifier and test variables
- 3 A graphical depiction of the relationship strength between the variables

While Chi Square tests were run for all of the identifier variables against all of the test variables, not all of these will be illustrated in this chapter. In many cases, the test failed to reject the null hypothesis and there was no relationship of any magnitude between the variables. Similarly, not all outputs where the null hypothesis could be rejected have been shown either. Certain outputs have been included where a strong relationship exists.

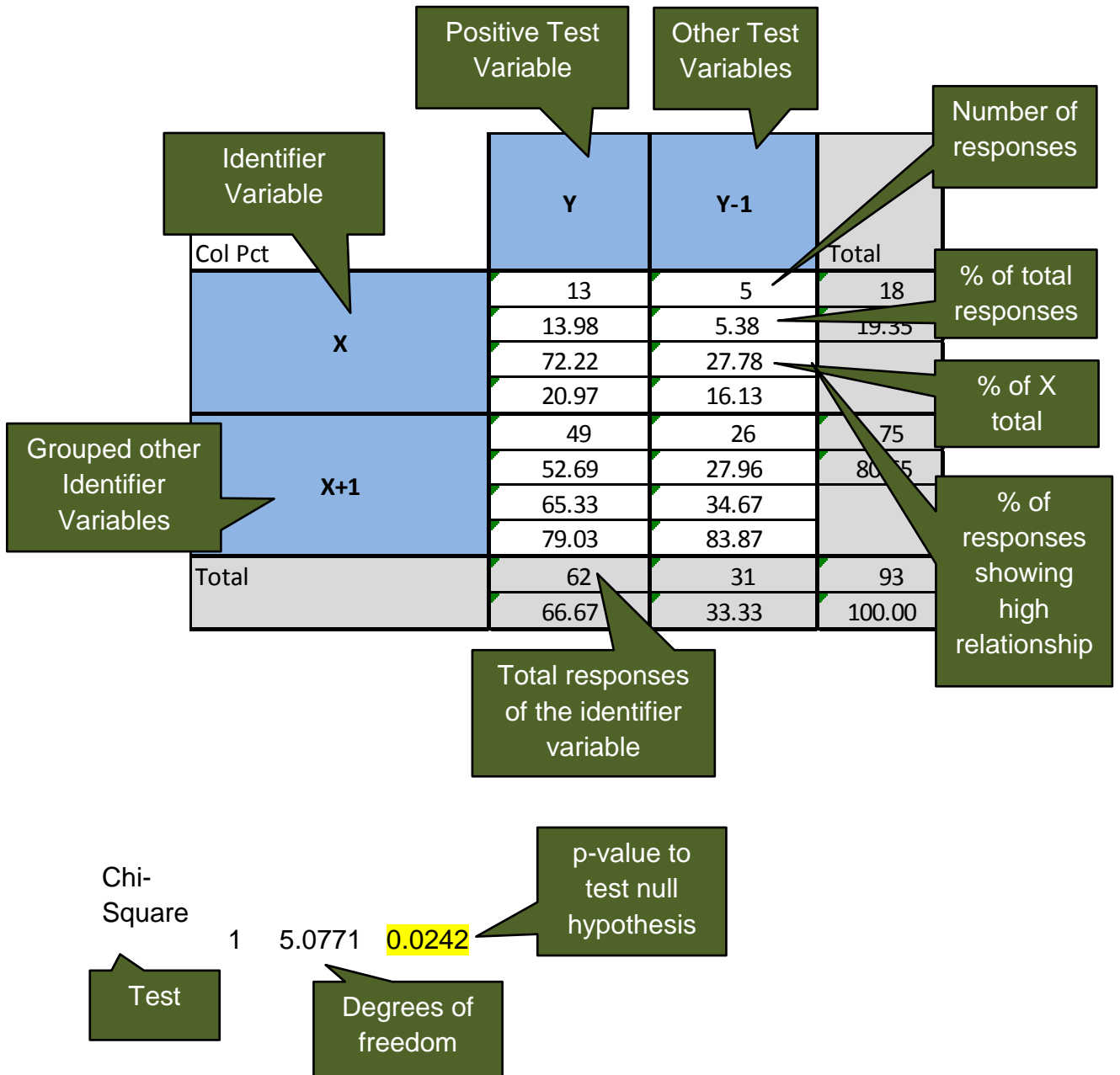
Figure 5.7 illustrates how to read the Chi Square results table for research propositions one and three and how to understand the outputs of the Chi Square test for variable relationship strength. It represents the format for all the relational tests run throughout the research paper.

Each of the Chi Square tables indicates the output of a test for one *identifier variable* (X) against the *positive responses* of the *test variable* (Y). Y represents the variable being tested against, for example in the *willingness to go online* question, Y is represented by “often true” and “without a doubt”, while Y-1 is made up by the responses for “neutral”, “partially true” and not true at all”. The positive responses (Y) are those in the Likert scale question that the Chi Square is testing for a strong relationship with. All the other identifier variables within the same category are reflected by X+1 (e.g. within the *industry types* category where X = Retail, X+1 would be all the other industries that are not Retail). Y-1 represents those responses in the test variable that are opposite to the hypothesis.

Due to the nature of the test and of the hypothesis, each variable within each category (e.g. Gender, age, industry type and business duration) must be individually tested as the X variable against each scenario of the test variable (Y). The *number of responses* illustrates how many times Y is selected by the respondents for X and similarly, how many times Y-1 is selected for X. The same applies to X+1 in each test, The *percentage of total responses* is the percentage of the 93 total responses that each test variable (Y) amasses against the variable X.

The *percentage of total* is the portion of responses for that specific variable that either Y or Y-1 has received. The *percentage of responses showing a high relationship* indicates what percentage of X the Y or Y-1 variable has shown has a strong relationship. Lastly, the *total responses of the test variable* indicates the number of times a respondent selected the test variable.

Figure 5.7: Chi Square test results



Highlighted in yellow is the p-value, which is the leading indicator for a strong association between the identifier (X) and test variable (Y) in each test.

5.4 Research Proposition One

5.4.1 Introduction

Small business owners are willing to adopt disruptive online mechanisms to access finance

In each of the tests run below, the relationship between the identifier variable;

- Industry
- Age of the small business owner
- Duration of their business
- Gender of respondent

Is tested against three key test variables;

- A willingness to go online,
- An appetite for innovation
- The need to sit with a banker face to face in order to get access to funding.

5.4.2 Relationship between Industry Type and Willingness to adopt

The below outputs are the result of testing the relationship between the ordinal variable, industry type, and the innovation test variable, willingness to go online.

Table 5.1: Frequency data for Retail vs Willingness to go online

Sum of Count	Column Labels	1	2	3	4	5	Grand Total
Row Labels							
0		7	7	12	23	26	75
1		1	2	2	4	9	18
Grand Total		8	9	14	27	35	93

	Not true at all	Partially true	Neutral	Often true	Without a doubt	Total
Not Retail	7	7	12	23	26	75
Retail	1	2	2	4	9	18
Total	8	9	14	27	35	93

Figure 5.8: Relationship between Retail and Willingness to go online



This allows for a correlated view to be displayed in Figure 5.8 in order to show the scale of importance of the identifier variable, “Retail” and the test variable, “willingness to go online”. The graph shows the strength of the relationship between the identifier and the test variable, where the maroon line indicates those responses submitted for the Retail variable and the blue line indicates those for all other industry types.

These are equally tested against the Willingness to go online and in this scenario we can see a low strength of relationship between the Retail small business owner and the test variable, while the other industries show a stronger relationship as a collective group.

5.4.3 Relationship between Education and Face to face

The below outputs are the result of testing the relationship between the ordinal variable, industry type, which in this case is the responses received from the small business owners in the education industry and the innovation test variable, having the need to sit face to face with a banker when engaging in a conversation about getting access to funding.

	Face to Face Char = (Moderately Important + Non-negotiable)	Face to Face Char = (Not important + Of some relevance + Neutral)	Total
Industry Type = Education	2	6	8
	2.17	6.52	8.70
	25.00	75.00	
	3.51	17.14	
Industry Type = Not Education	55	29	84
	59.78	31.52	91.30
	65.48	34.52	
	96.49	82.86	
Total	57	35	92
	61.96	38.04	100.00

Chi-Square 1 5.0771 0.0242

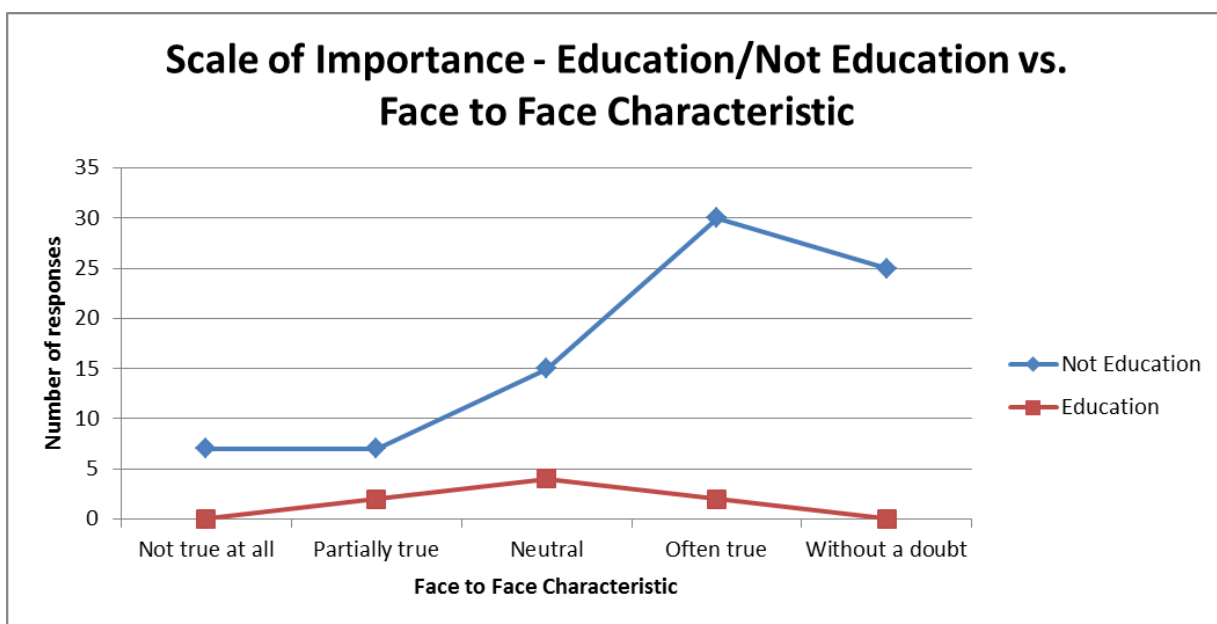
In this scenario, the results in the frequency table indicate that the p-value is less than 0.05 and, as a result; we can reject the null hypothesis. This means that there is a correlation between the “Education” industry type variable and the response where the small business owner indicated they would not need to sit face to face and have a reliance on a banker.

Table 5.2: Frequency table for Education vs Face to face

Sum of Count	Column Labels	1	2	3	4	5	Grand Total
Row Labels							
0		7	7	15	30	25	84
1			2	4	2		8
Grand Total		7	9	19	32	25	92

	Not true at all	Partially true	Neutral	Often true	Without a doubt	Total
Not Education	7	7	15	30	25	75
Education	0	2	4	2	0	18
Total	7	9	19	32	25	93

Figure 5.9: Relationship between Education and Face to face



The graph in figure 5.9 shows the strength of the relationship between the identifier and the test variable, where the maroon line indicates those responses submitted for the Education variable and the blue line indicates those for all other industry types.

These are equally tested against the face to face test variable and in this scenario we can see a low strength of relationship between the education industry type small business owner and the test variable. In this case, a low relationship indicates that the small business owner does not see value in sitting with a banker face to face and indicates a strong relational score to want alternative, innovative solutions. Interestingly, other industries show more inclination to use a banker face to face as a collective group.

5.3.3. Relationship between Age and Appetite for innovation

The below outputs are the result of testing the relationship between the ordinal variable, age, which in this case is the responses received from the small business owners who fall between the ages of 40 and 49, and the innovation test variable, appetite for innovation.

	Appetite for Innovation = (Often true + I love new things)	Appetite for Innovation = (Not true at all + Hardly ever + Neutral)	Total
Age = 40 - 49	29	6	35
	31.18	6.45	37.63
	82.86	17.14	
	39.19	31.58	
Age = Not 40 - 49	45	13	58
	48.39	13.98	62.37
	77.59	22.41	
	60.81	68.42	
Total	74	19	93
	79.57	20.43	100.00

Chi-Square 1 0.3731 **0.5413**

In this scenario, the results in the frequency table indicate that the p-value is greater than 0.05 and, as a result; we cannot reject the null hypothesis. This means that there is no correlation between the “Age” variable and the response where the small business owner indicated an appetite for innovation.

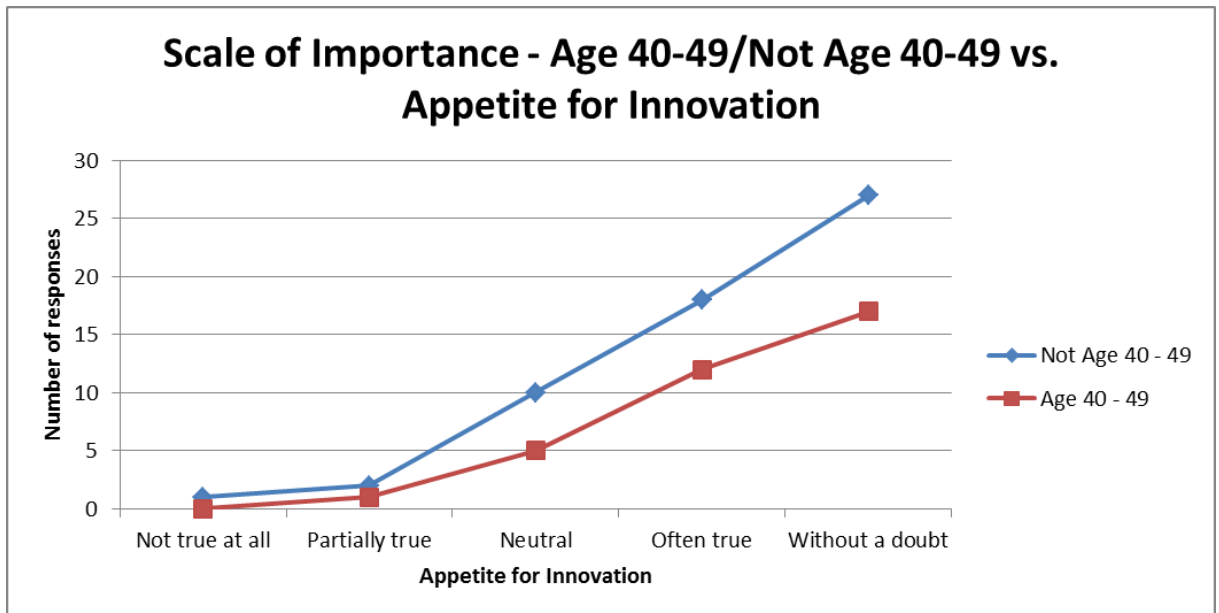
In fact, there was no scenario where the null hypothesis could be rejected when using the age variable as the identifier. This indicates that in no cases is age a key factor in this small business sample when trying to determine the willingness to shift from the mainstream delivery channel to the disruptive innovation.

Table 5.3: Frequency table for Age vs Appetite for innovation

Sum of Count	Column Labels	1	2	3	4	5	Grand Total
Row Labels		1	2	10	18	27	58
0		1	2	10	18	27	58
1		0	1	5	12	17	35
Grand Total		1	3	15	30	44	93

	Not true at all	Partially true	Neutral	Often true	Without a doubt	Total
Not Age 40 - 49	1	2	10	18	27	75
Age 40 - 49	0	1	5	12	17	35
Total	1	3	15	30	44	93

Figure 5.10: Relationship between Age and Appetite for innovation



The graph shows the strength of the relationship between the identifier and the test variable, where the maroon line indicates those responses submitted where age is between 40 and 49 and the blue line indicating those responses for all other age types tested in the survey.

In both scenarios you can see that no matter what the age group, all the small business respondents have shown an appetite for innovation, meaning that we cannot separate any specific age group from the rest.

5.3.4 Relationship between Business duration and Face to face

The below outputs are the result of testing the relationship between the ordinal variable, business duration, which in this case is the responses received from the small

business owners who have been running their small business for longer than 10 years and the innovation test variable, face to face.

	Face to Face Char = (Moderately Important + Non-negotiable)	Face to Face Char = (Not important + Of some relevance + Neutral)	Total
Business Duration = 10Yrs +	20	4	24
	21.74	4.35	26.09
	83.33	16.67	
	35.09	11.43	
Business Duration = Not 10Yrs +	37	31	68
	40.22	33.70	73.91
	54.41	45.59	
	64.91	88.57	
Total	57	35	92
	61.96	38.04	100.00

Chi-Square 1 6.2952 **0.0121**

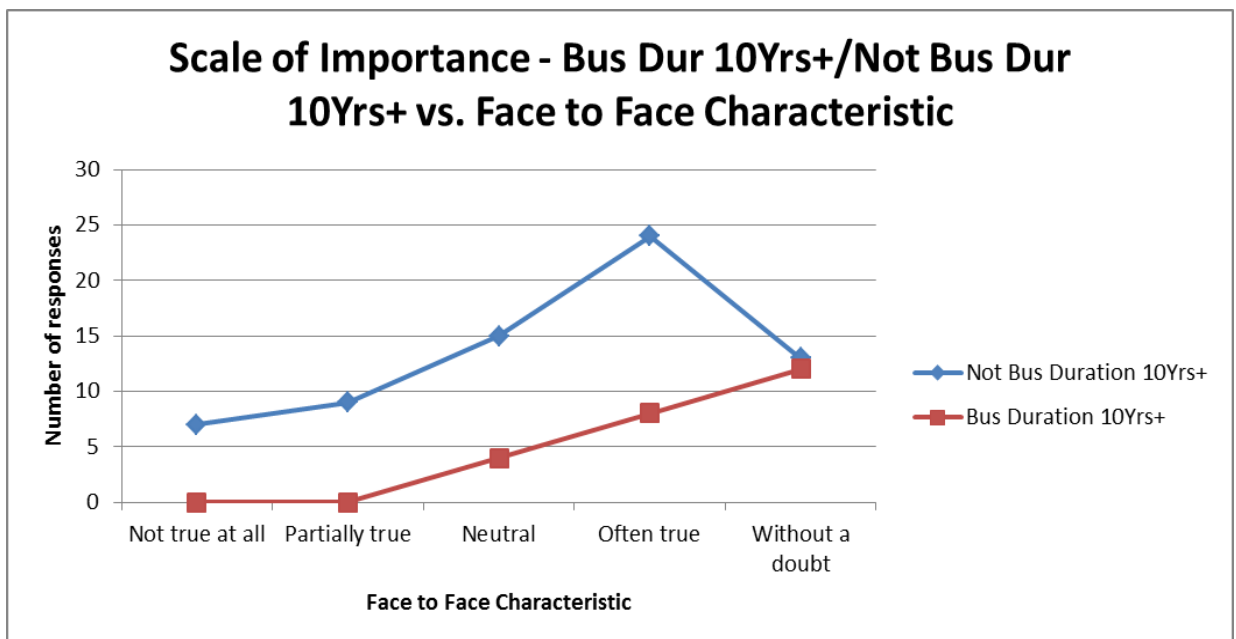
In this scenario, the results in the frequency table indicate that the p-value is less than 0.05 and, as a result; we can reject the null hypothesis. This means that there is a correlation between the “business duration” variable where the business has been in operation for longer than 10 years and the response where the small business owner indicated low appetite to sit face to face to get funding.

Table 5.4: Frequency table for Business duration vs Face to face

Sum of Count	Column Labels	1	2	3	4	5	Grand Total
Row Labels							
0		7	9	15	24	13	68
1				4	8	12	24
Grand Total		7	9	19	32	25	92

	Not true at all	Partially true	Neutral	Often true	Without a doubt	Total
Not Bus Duration 10Yrs+	7	9	15	24	13	75
Bus Duration 10Yrs+	0	0	4	8	12	18
Total	7	9	19	32	25	93

Figure 5.11: Relationship between Business duration and Face to face



In this scenario we can see a positive relationship between the small business responses in the sample where the duration of the business is longer than 10 years. In comparison, the other small business responses where the duration ranges from 0 to 10 years shows a weaker relationship.

5.3.5 Relationship between Gender and Face to face

The below outputs are the result of testing the relationship between the ordinal variable, gender, which in this case is the responses received from the female small business owners in the sample and the test variable, face to face.

	Face to Face Char = (Moderately Important + Non-negotiable)	Face to Face Char = (Not important + Of some relevance + Neutral)	Total
Gender = Female	17	19	36
	18.48	20.65	39.13
	47.22	52.78	
	29.82	54.29	
Gender = Not Female	40	16	56
	43.48	17.39	60.87
	71.43	28.57	
	70.18	45.71	
Total	57	35	92
	61.96	38.04	100.00

Chi-Square 1 5.4475 0.0196

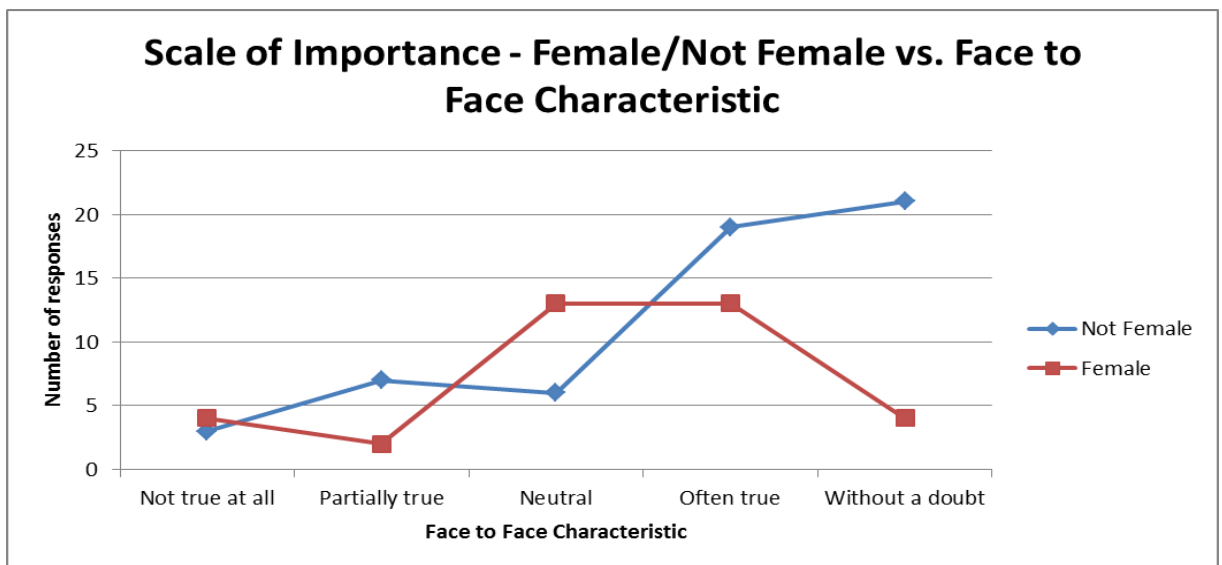
In this scenario, the results in the frequency table indicate that the p-value is less than 0.05 and, as a result; we can reject the null hypothesis. This means that there is a correlation between the “gender” variable for the female response set and the response where the small business owner indicated low appetite to sit face to face to get funding. In this case, both the male and female respondents indicated a strong inclination to be willing to adopt an alternative source of funding if it was made available. In this way, no deduction can be made around the strength of one gender over another when deciphering willingness.

Table 5.5: Frequency table for Gender vs Face to face

Sum of Count	Column Labels	1	2	3	4	5	Grand Total
Row Labels							
0		3	7	6	19	21	56
1		4	2	13	13	4	36
Grand Total		7	9	19	32	25	92

	Not true at all	Partially true	Neutral	Often true	Without a doubt	Total
Not Female	3	7	6	19	21	75
Female	4	2	13	13	4	36
Total	7	9	19	32	25	92

Figure 5.12: Relationship between Gender and Face to face



5.4 Research Proposition Two

The characteristics of a disruptive innovation are also important to small business owners when gaining access to finance

Research proposition two looked at the characteristics that were outlined in chapter two with regards to disruptive innovation (Harrison, 2010). These characteristics were included in the research survey to test the response of the small business respondent in relation to the level of importance of each characteristic when gaining access to funding. In some instances, the exact characteristic was listed, allowing the respondent to give a weighting score for the specific disruptive innovation characteristic, while not drawing any particular attention to it. In other cases, the disruptive innovation characteristic was renamed, while still capturing the essence of the characteristic, but making it more specific to the survey in question.

Table 5.6 shows the disruptive innovation characteristics listed in chapter two and their respective characteristics as included in the research questionnaire.

Table 5.6: Characteristics Matching

Literature	Research
Affordability	Affordability
Simplicity	Simplicity
Convenience	Convenience
Product Architecture Overhaul	Accessibility
New Business Model	Online
Differing Performance Parameters	Flexibility

Source: Author's own (2012)

Due to the questionnaire being specific to a small business owner's needs when gaining access to funding, the characteristics listed in the survey needed to be easily understood by each of the respondents. As a result, the usage of terms such as "product architecture overhaul", "new business model" and "differing performance parameters" needed to be aligned to the existing essence of the research.

The characteristic of *accessibility* was included, being representative of a new view of the traditional *product architecture*, which traditionally relies on the small business customer engaging in a face-to-face conversation with a relationship manager. *New business model* was adapted to *online*, reflecting the nature of peer-to-peer lending and of the disruptive innovation for the purposes of the research. Lastly, the *differing performance parameters* were captured as a holistic term, *flexibility*, to provide for a wider view of what the small business owner would require in the performance of a delivery channel for access to funding.

Tables 5.7.1 and 5.7.2 are an indication of the characteristic score count for each of the actual responses received from the small business owners in the research process. These show the number of responses per value on the Likert scale for each characteristic listed in question 9 of the research questionnaire.

Table 5.7.1: Characteristic Score Count

	Trust	Accessibility	Convenience	Simple	Security	Flexibility	Brand
Not important	3	0	1	0	2	2	4
Of some relevance	7	3	1	1	3	2	5
Neutral	6	6	6	13	9	10	25
Moderately important	31	39	38	35	17	40	36
Non-negotiable	46	45	47	44	62	39	23

Table 5.7.2: Characteristic Score Count

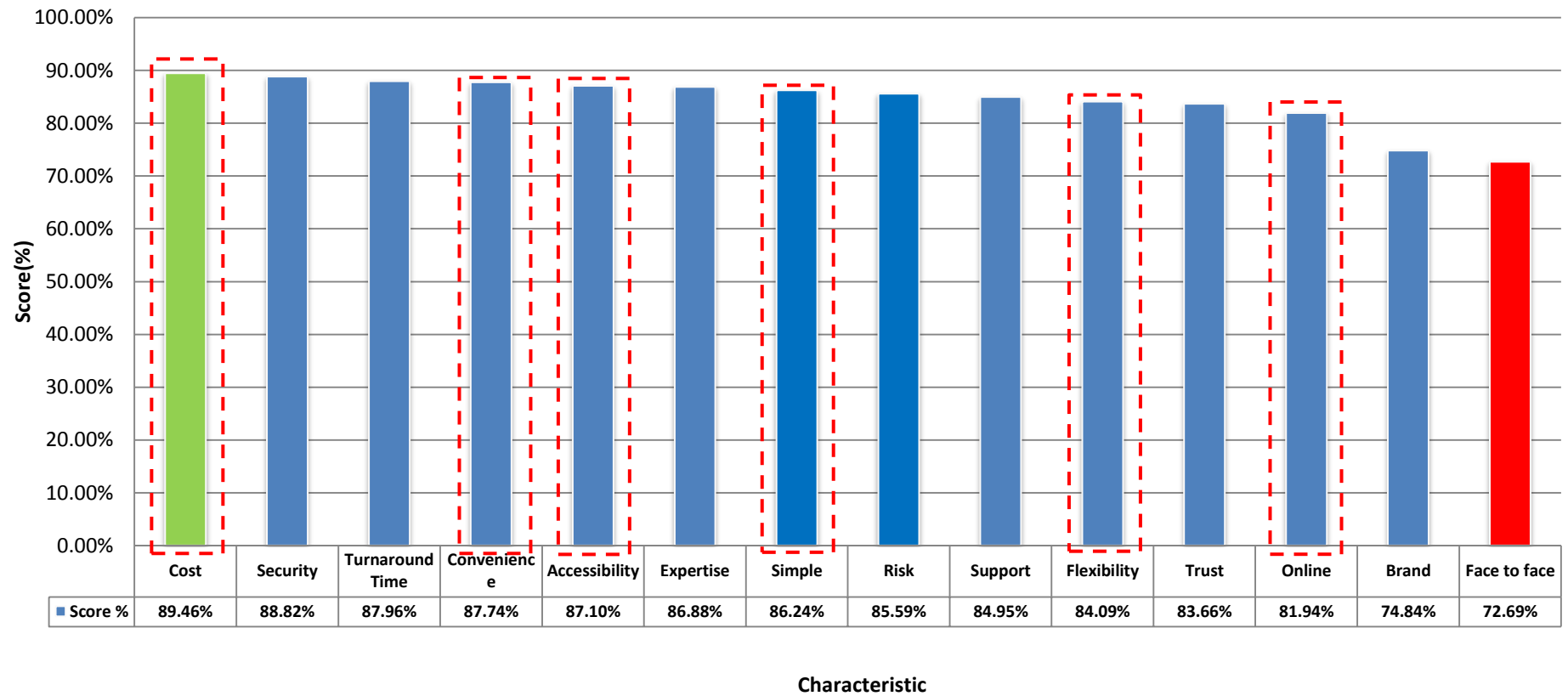
	Turnaround Time	Online	Risk	Face to face	Cost	Support	Expertise
Not important	0	2	1	7	0	4	2
Of some relevance	3	2	3	9	2	0	0
Neutral	5	17	10	20	6	10	7
Moderately important	37	36	34	32	31	34	39
Non-negotiable	48	36	45	25	54	45	45

Source: Author's own (2012)

Figure 5.13 illustrates the ranked score of each of the characteristics tested for in the research questionnaire as a consolidation of the data shown in tables 5.7.1 and 5.7.2. The highest ranked characteristic is cost, while the lowest is face-to-face. Each of the characteristics that matched those identified in the literature (see Table 5.6) is ring-fenced in red to show where they are positioned in the overall ranking.

Figure 5.13: Score per characteristic

Score (%) per Characteristic




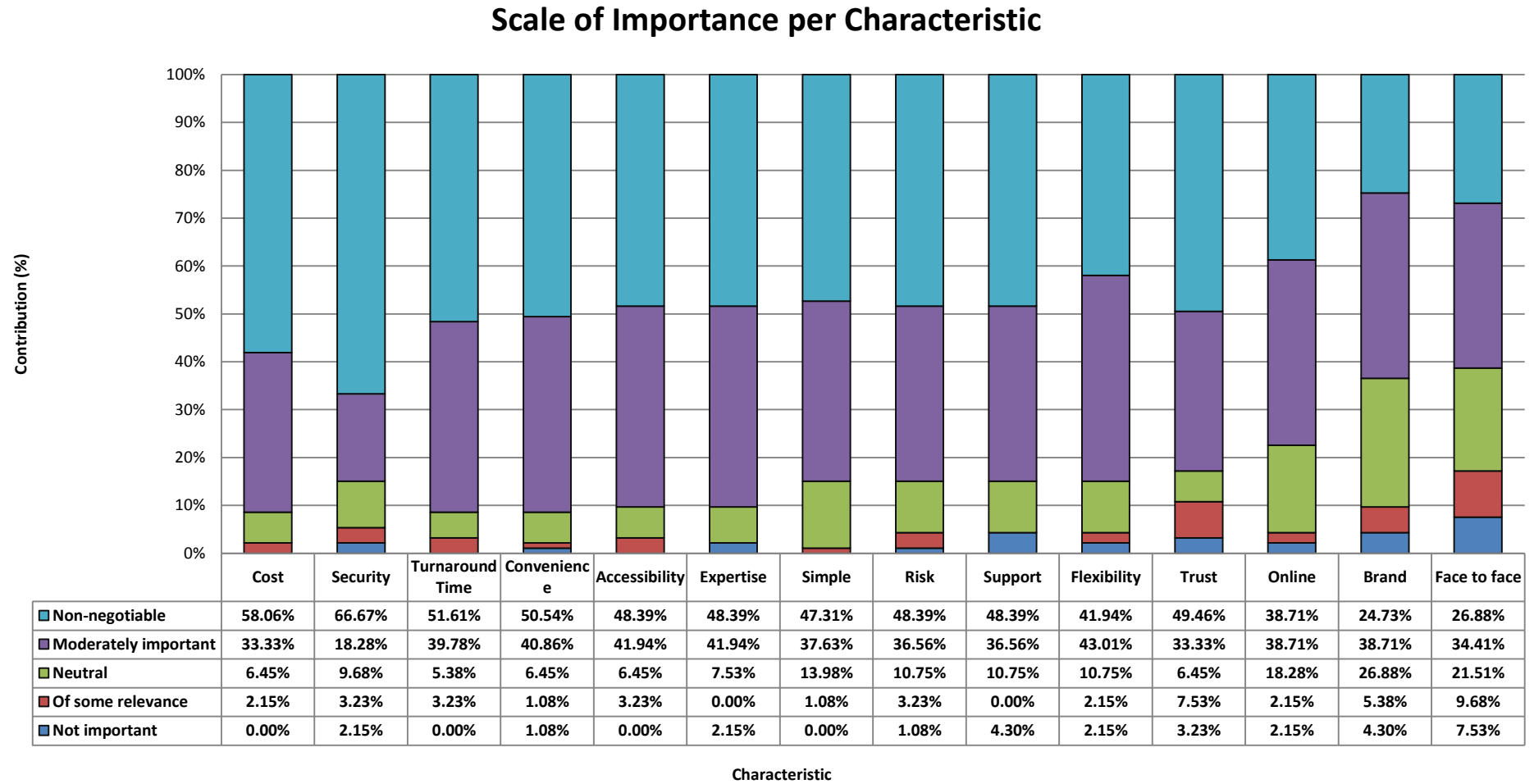
 Disruptive Innovation Characteristics

Figure 5.13 illustrated that five of the characteristics listed in the literature (Christensen & Raynor, 2003, Tellis, 2006, Harrison, 2010) overlapped with the characteristics selected as important to the small business owners. The only one outstanding was *online*, which was matched to the *new business model characteristic in table 5.6*. The lowest ranked characteristic, face-to-face indicates a low level of importance for the small business owner to sit with a relationship manager as a delivery channel.

Figure 5.14 delved deeper into the responses gathered for each of the characteristics listed and indicated the scale of importance for each response within each characteristic. In each of the bars, the blue and purple shaded areas represented those responses where the small business owner found the characteristic to be of importance to them. The green shaded area indicated a neutral response, while the maroon and dark blue was indicative of the small business owner finding that the characteristic was of little to no importance to them in gaining access to funding.

Figure 5.14: Scale of importance per characteristic



5.5 Research Proposition Three

Small business owners who have historically been able to use a bank to gain access to funding would not migrate to a disruptive innovation as a source of access to finance.

In proposition three, the research looks at those small business respondents who have utilised a traditional financial institution delivery channel to gain access to funds. This explores the theory of disruptive innovation where Christensen (1997) stated that the customer of the incumbent firm who made use of the existing mainstream delivery channel was less likely to adopt a disruptive innovation until the disruptive offering became a mainstream offering itself. Tellis (2006) supported Christensen by saying that the most profitable customers of incumbent firms were less likely to make use of disruptive innovations, creating the market for disruptive innovations to be adopted by under-served customers. In the case of the small business owners in the sample who have managed to use an existing delivery channel, these would be classified as the users of the mainstream, or incumbent delivery channel.

Schmidt & Druehl (2008) posited that incumbent firms were typically focused on satisfying their least price sensitive customers with incremental innovation in order to satisfy their needs. As long as the incumbent firm, per Christensen's model in figure 2.3, continued to update and innovate incrementally on its existing offerings, the more profitable portion of their customer segment would remain unaffected by any disruptive innovations that may enter the market.

As a result, the third proposition posited that small business owners who used a bank, being the mainstream, or existing, offering, to get access to finance when starting up their business or to get finance to grow their business are *not* likely to take up a disruptive innovation. Where the relationship exists and this proves to be the case, the theory will be confirmed.

The tests run below indicate the relationship between the identifier variable;

- First access to finance
- Access to finance for growth

And these variables were tested against three *negative* key test variables to reject the hypothesis for the third proposition;

- A willingness to go online,
- An appetite for innovation
- The bank must innovate more

In addition, the same identifier variables were tested against three *positive* test variables to confirm the hypothesis for the third research proposition;

- Only access finance through a bank
- Reliance on a banker
- Only interact with a bank

A *negative* test variable is one where the small business owner indicated a willingness to shift away from the traditional delivery mechanism and the strength of the relationship indicated an ability to reject the null hypothesis by stating that they would move to a disruptive delivery channel and effectively resulting in a challenge to the literature. A *positive* test variable was utilised to test equally for the willingness of the small business owner to remain with the traditional delivery channels, resulting in the literature regarding disruptive innovation remaining unchallenged and a failure to reject the null hypothesis.

Section 5.3 laid out the approach to understanding the outputs of each of the Chi Square tests for relationship strength in research proposition one. The same was

applied to research proposition three. In these scenarios, the only variance is that the frequency tables and the graphs for each test showing the strength of relationship were not illustrated in addition to the Chi Square tables.

As in research proposition one, not all of the tests were illustrated in this section, due to the fact that a number of the tests illustrated no recognisable relationship with the associated variables. As a result, only a selected number of the tests were included to show where an identifier variable and test variable had a p-value that allowed the null hypothesis to be rejected.

Research proposition three will illustrate the results of those tests run for small business owners who used a financial institution through an existing delivery channel to gain funding when they started their business, and similarly, when they were looking for funding to grow their business in relation both to the positive and negative test variables.

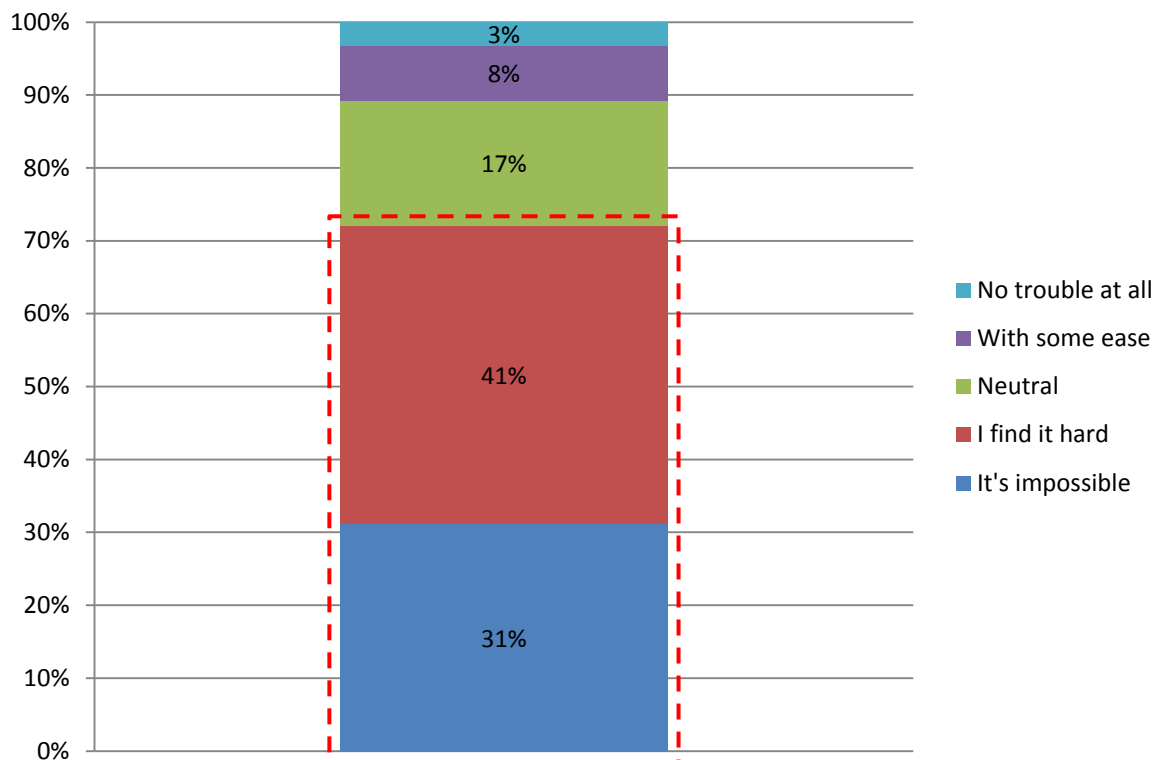
5.5.1 First access to finance

Question eight in the research survey asked the small business respondents how challenging it was for them to gain access to funding, whether to start up their business, or for growth. They were given a scale ranging from *its impossible* through to *no trouble at all*. Figure 5.13 illustrates the responses received, showing that 72% of the respondents found it very difficult to get funding.

This seems to challenge the literature in chapter one where South Africa was ranked number one for the second year running in getting credit (Doing Business, 2013). Figure 5.14 shows there is still a 75% response rate where small business owners are going elsewhere to get their business up and running. This poses a question regarding the accuracy of the definition of “getting credit” as per the Doing business survey and

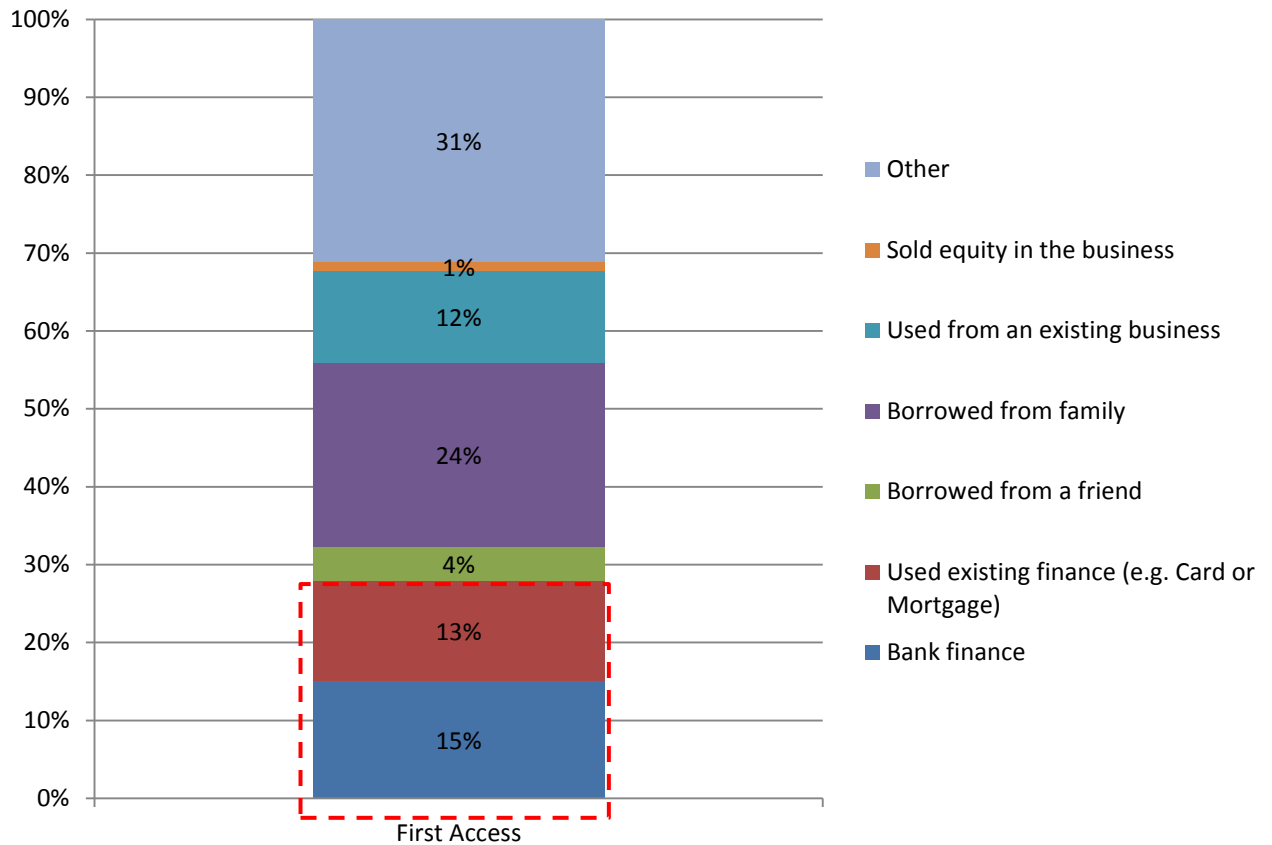
challenges perception versus reality, specifically when related to small business owners who may not have the appropriate credit history to secure credit through an existing delivery channel (Wang & Greiner, 2011).

Figure 5.15: Difficulty accessing finance



The survey questionnaire asked the respondents to give an indication of how they first gained access to finance. A number of options were provided. In figure 5.14 it can be seen that a collective total of only 25% of the small business owners who completed the survey actually gained access to finance to start their business by going through a bank.

Figure 5.16: First access to finance



5.5.1.1 Relationship between First access and Only interact with a bank

The outputs below are the result of testing the relationship between the small business owner who first gained finance for their business by going to a bank, whether through a new credit facility or through an existing one, and the innovation test variable, where the small business owner indicates that they are only willing to go to a bank when gaining access to funding.

In this case, the Chi Square test is searching for a relationship between the identifier and the test variable to confirm that we can reject the null hypothesis. This means that the research proposition is validated.

	Only Interact with a bank (Often true + I won't go anywhere else)	Only Interact with a bank (Not true at all + Sometimes true + Neutral)	Total
(First Access to Finance through Bank and used existing finance Card & Mort) Only Access Finance through a bank is very important	9	2	11
	34.62	7.69	42.31
	81.82	18.18	
	75.00	14.29	
(First Access to Finance through Bank and used existing finance Card & Mort) Only Access Finance through a bank is NOT very important	3	12	15
	11.54	46.15	57.69
	20.00	80.00	
	25.00	85.71	
Total	12	14	26
	46.15	53.85	100.00

Chi-Square
1 9.7584 **0.0018**

We can see that the p-value is less than 0.05, so we can reject null hypothesis. This indicates that there is a relationship between the two variables. For small business owners who first accessed finance by means of a bank and who viewed only accessing finance through a bank as very important, 9 respondents felt that they would only interact with a bank as it is very important to them.

For small business owners who first accessed finance by means of a bank who viewed only accessing finance through a bank as very important, only 2 felt that they did not view only interacting with a bank as important, they would consider other sources other than banks. For clients who first accessed finance by means of a bank who did NOT

view only accessing finance through a bank as very important, only 3 felt that they would only interact with a bank to be very important.

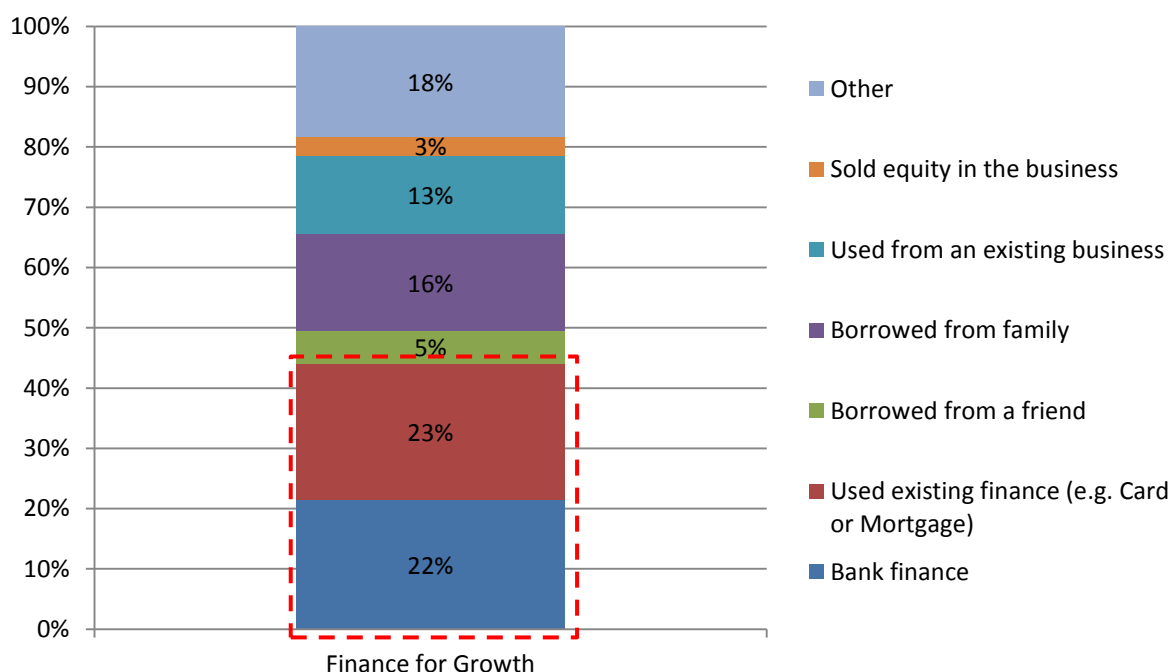
For clients who first accessed finance by means of a bank who did NOT view only accessing finance through a bank as very important, only 12 felt that they did not view interacting with a bank as important, they would consider other sources other than banks.

This indicates that the disruptive innovation theory is held true for this sample of small business owners, as they are more willing to continue utilising a bank to gain access to finance, than they would be to adopt a disruptive innovation.

5.5.2 Finance for growth

In figure 5.14 it can be seen that a collective total of 45%, an increase of 20% on the first access to finance response, of the small business owners who completed the survey actually gained access to finance when they wanted to grow their business by going through a bank.

Figure 5.17: Finance for growth



5.5.2.1 Relationship between Finance for growth and Reliance on banker

The outputs below are the result of testing the relationship between the small business owner who gained finance for growth for their business by going to a bank, whether through a new credit facility or through an existing one, and the innovation test variable,

where the small business owner indicates that they are reliant on a relationship with a banker when gaining access to funding.

In this case, the Chi Square test is searching for a relationship between the identifier and the test variable to confirm that we can reject the null hypothesis. This means that the research proposition is validated.

	Reliance on Banker (Often true + I have to sit with someone)	Reliance on Banker (Not true at all + Not really + Neutral)	Total
(Finance for growth through Bank and used existing finance Card & Mort) Only Access Finance through a bank is very important	13	2	15
	31.71	4.88	36.59
	86.67	13.33	
	54.17	11.76	
(Finance for growth through Bank and used existing finance Card & Mort) Only Access Finance through a bank is NOT very important	11	15	26
	26.83	36.59	63.41
	42.31	57.69	
	45.83	88.24	
Total	24	17	41
	58.54	41.46	100.00

Chi-Square 1 7.7117 0.0055

We can see that the p-value is less than 0.05, so we can reject null hypothesis. This indicates that there is a relationship between the two variables. For small business owners who accessed finance by means of a bank to grow their business, and who viewed going to a bank as very important, 13 respondents felt that their reliance on their banker as a part of that relationship was very important.

For clients who gained access to finance for growth by means of a bank who viewed only accessing finance through a bank as very important, only 2 respondents felt that their reliance on their banker was NOT very important.

For clients who financed for growth by means of a bank who viewed only accessing finance through a bank as NOT very important, 11 respondents felt that their reliance on their banker was very important. Lastly, for clients who financed for growth by means of a bank who viewed only accessing finance through a bank as NOT very important, 15 respondents felt that their Reliance on a banker was NOT very important.

5.5.2.2 Relationship between Finance for growth and Only interact with a bank

The below outputs are the result of testing the relationship between the small business owner who gained finance for growth for their business by going to a bank, whether through a new credit facility or through an existing one, and the innovation test variable, where the small business owner indicates that they are only willing to interact with a bank when gaining access to funding.

In this case, the Chi Square test is searching for a relationship between the identifier and the test variable to confirm that we can reject the null hypothesis. This means that the research proposition is validated.

	Only Interact with a bank (Often true + I won't go anywhere else)	Only Interact with a bank (Not true at all + Sometimes true + Neutral)	Total
(Finance for growth through Bank and used existing finance Card & Mort) Only Access Finance through a bank is very important	12	3	15
	29.27	7.32	36.59
	80.00	20.00	
	63.16	13.64	
(Finance for growth through Bank and used existing finance Card & Mort) Only Access Finance through a bank is NOT very important	7	19	26
	17.07	46.34	63.41
	26.92	73.08	
	36.84	86.36	
Total	19	22	41
	46.34	53.66	100.00

Chi-Square

1	10.7766	0.0010
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We can see that the p-value is less than 0.05, so we can reject null hypothesis. This indicates that there is a relationship between the two variables. For small business owners who accessed finance by means of a bank to grow their business, and who viewed going to a bank as very important, 12 respondents felt that they would only interact with a bank to get access to finance.

For clients who gained access to finance for growth by means of a bank who viewed only accessing finance through a bank as very important, only 3 respondents felt that only interacting with the bank was NOT very important.

For clients who financed for growth by means of a bank who viewed only accessing finance through a bank as NOT very important, 7 respondents felt that only interacting with a bank was very important. Lastly, for clients who financed for growth by means of a bank who viewed only accessing finance through a bank as NOT very important, 19 respondents felt that only interacting with a bank NOT very important.

5.5.3 Summary of research proposition 3

In both cases, where the small business owner, who for this test is the mainstream user as they gained access to finance through the traditional mechanism and through the incumbent firm, gained access to finance either for the first time or for future growth, the null hypothesis could be rejected. As a result, the proposition supports the theory laid out in the literature that the incumbent firm's most profitable customer's and those who make use of the incumbent delivery channel or offering are less likely to be willing to adopt the disruptive innovation.

6 CHAPTER SIX – RESEARCH DISCUSSION

6.1 Introduction

The previous chapter presented the results from the research process and the survey questionnaire. It laid out the descriptive data gathered from the small business respondents in a graphical manner and the outputs of the various statistical tests that were run to test each of the stated research propositions positioned in chapter three.

This chapter will discuss the findings in relation to the literature and will expand on the results captured in chapter five.

The research discussion will address each of the four parts, namely:

- 1 Descriptive display of the base
- 2 Research proposition one
- 3 Research proposition two
- 4 Research proposition three

Each of the research propositions was supported by the data. The results were in line with the literature, but also surfaced some new findings relevant to disruptive innovation in the financial services scenario. Each of the propositions will be discussed separately below, with tables to highlight where the data aligned or departed from previous research and models, where applicable, to illustrate additional considerations to the literature based on the research gathered.

The research questionnaire did not specifically reference the term peer-to-peer lending to the small business owners. The concept is considered to be either totally unknown or still relatively new to the South African market and due to the fact that the survey was conducted through anonymous email, the ability to explain what peer-to-peer is about, would have been restrictive. Further to this, it may have guided a biased

response in the data. As a result, more generic terminology was utilised to determine the willingness of the survey respondents to make the shift away from incumbent delivery channels, to a disruptive delivery channel.

In this way, the questionnaire referred to alternative, or disruptive, methods to gain access to finance. The characteristics were incorporated to add direction to the data gathering process and to test what the literature had depicted were the core features of a disruptive innovation.

6.2 Discussion of Basic descriptive data

The descriptive data in chapter five laid out an overview of the sample of small business respondents who had submitted a complete response to the research survey. Understanding their industry type, geographical location, gender, age and the duration of their business was both important in terms of ensuring a representative sample for the research, but also as inputs to the tests run in research proposition one. Each of these was referred to as an *identifier variable type* and would form the basis for the tests for strength of relationship to accept or reject research propositions one and three.

A wide range of industries were included, with a number (37%) of the respondents coming from industries outside of the nine already provided. Gathering the industry type allowed for a *strength of relationship test* to be run in research proposition one that might indicate a tendency for a specific industry to favour disruptive delivery channels over incumbent mechanisms and, indicate a higher strength for one industry type over another.

Of the sample data gathered, the small business owners were distributed throughout the nine provinces in South Africa. While a large portion (55%) of the respondents were

located in Gauteng, the geographic dispersion displayed in figure 5.3 was indicative of the demographics of national economic activity and ensured that the sample was representative.

The inclusion of the question for gender illustrated the number of small business respondents who were male (60%) or female (40%) and allowed for gender to be utilised as a variable in the test for strength of relationship (figure 5.4). While there was no previous research that could be included in the literature that would indicate the likelihood of any specific gender being more or less willing to adopt disruptive innovations, this test would be an indication of whether or not there was any bias towards one or the other with relation to getting access to funding.

Similar to the gender of the respondents, the age of the small business owner was not highlighted in any of the previous literature as a key driver for disruptive innovation adoption. Capturing age in the survey (figure 5.5) provided a view of the make-up of the sample respondents, as well as to test if there was, in fact, a willingness of any specific age group to shift to a new delivery channel when assessing disruptiveness in the financial services sector.

The last of the identifier variable types was the duration of the business since inception (figure 5.6). This provided a view of how established the small business was and would allow for each of the business duration categories included, ranging from 0 – 10 + years, to be tested to see whether or not more or less established businesses are willing to shift away from using incumbent delivery channels to access funding.

The importance of having a balanced mix within each of the identifier variable types as a result of the responses of the survey was critical in ensuring that the tests that would be run in each of the research propositions would be statistically relevant. Had there been an imbalance in any of the identifier variable types, or a dispersion that was

fundamentally different to what could be seen in the general economy, the hypotheses would be more difficult to accept with validity.

6.3 Discussion on research proposition one

Small business owners are willing to adopt disruptive online mechanisms to access finance

6.3.1 Introduction

The literature posited that disruptive innovations work best in emerging markets, where the consumer is more likely to shift away from the incumbent product or service in order to address an unmet need (Hart & Christensen, 2002, Harrison, 2010). The emerging nature of the South African market dictates that alternatives are required to stimulate competition and to more fully serve the market to generate growth. This rings true for both research proposition one and three, where information gathered from the research respondents was used to test their willingness to adopt a disruptive delivery channel.

In a market where the broader customer's needs are not met with an incumbent offering, Yu and Hang (2009) suggested that disruptive innovation served to broaden and develop new markets and provide offerings with new performance parameters, thereby disrupting the incumbent products. A disruptive innovation for the small business owner to get funding would allow a wider set of small business customers to have access to a delivery channel previously only accessible to customers who either had the history, resources or funds to access the incumbent product (Christensen & Raynor, 2003).

Yu and Hang (2009) posited that disruptive innovations experience a change in performance over time, indicating that, similar to the Gartner Hype Cycle (2012), only the some early adopters would shift to the disruptive delivery channel in its early phases. Due to the fact that peer-to-peer lending is not widely known or utilised in the South African context, the test for willingness to shift to this type of online platform might not be a definite indicator of willingness to adopt a disruptive delivery channel for finance. Christensen and Raynor (2003) pointed out that customers are more likely to shift once the innovation becomes more mainstream and they see that it is a better alternative to their existing delivery channel.

Research proposition one tests each of the identifier variables described in the descriptive statistics against the test variables in the questionnaire that indicate a willingness to make use of disruptive delivery channels for access to funding. In each of the tests, the relationship between the *identifier variable*;

- Industry
- Age of the small business owner
- Duration of their business
- Gender

was tested against three key *test variables*;

- A willingness to go online,
- An appetite for innovation
- The need to sit with a banker face to face in order to get access to funding.

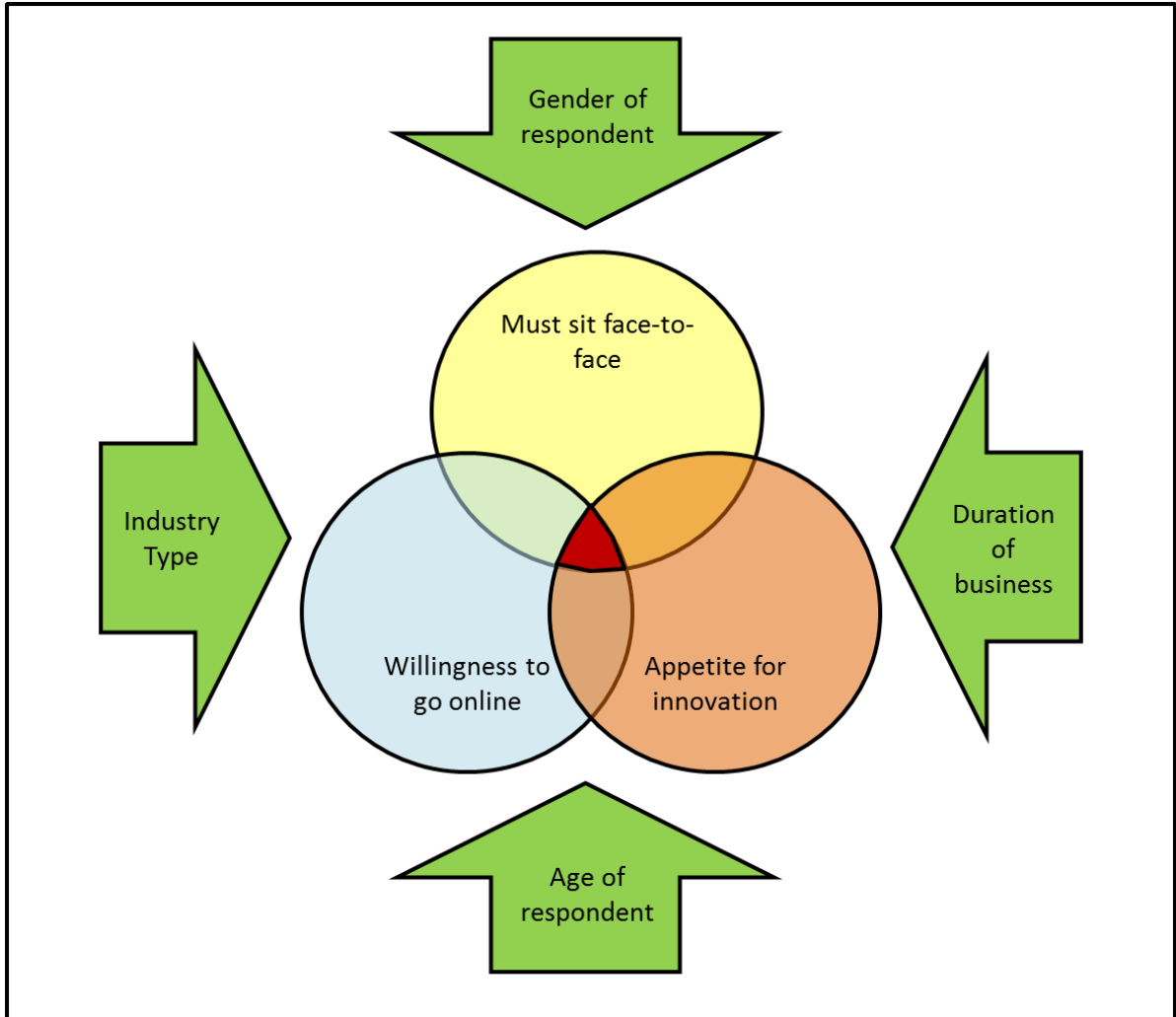
6.3.2 Discussion on Strength of relationship tests

The geographical location of the small business owner was not tested because of the fact that there was such a large portion of the small business respondents operating in Gauteng, and while all of the nine provinces in South Africa were represented, the representation from some of these was insufficient to test for any tangible results. As pointed out earlier in chapter 6, this was illustrative of the demographic dispersion of the economy, but did not allow for relevant statistical outputs to be achieved based on the size of the sample for the other provinces.

Each of the four identifier variables was tested for the strength of the relationship with each of the test variables. Selected relationships were captured in chapter five to illustrate where a relationship either allowed for the null hypothesis to be rejected, or where it failed to be rejected. It is important to point out that not all the test results were shown in chapter five, as a Chi Square test was run for each of the scenarios, this would equate to a total of 66 tests.

Figure 6.1 is an illustration of the four identifier variables that were used to test against each of the test variables. The test variables are captured in the overlapping circles in the centre of the diagram. A perfect fit, indicated by the red shaded area where each of the test variables overlap, for the strength of relationship between any sub-type (e.g. A specific age category or an industry type) within each of the identifier variables would have resulted in a resounding result for the willingness to adopt a disruptive delivery channel for access to funding. There were no scenarios where this occurred. This is further illustrated in table 6.1.

Figure 6.1: Identifier and test variables



Source: Author's own (2012)

Table 6.1 illustrates, by virtue of a heatmap, the result of test run. The p-values shaded in red are those where a strong relationship is indicated, allowing for rejection of the null hypothesis. All the remaining results, shaded from orange to blue, resulted in the null hypothesis failing to be rejected and indicated low to no strength in the relationship between the variables. The legend underneath the table indicates the ranges for the p-values of each test to dictate the colour coding of the heatmap, indicative of the strength of each tests relationship.

Table 6.1: Heatmap of summary P-Values for Strength of relationship

Test Variable		→	Appetite for Innovation	Willingness to go online	Must sit face-to-face
Identifier Variable	Industry Type	Retail	0.389	0.577	0.3172
		eCommerce	0.372	0.213	0.299
		Manufacturing	0.843	0.824	0.229
		Import/Export	0.417	0.37	0.805
		Wholesale	0.372	0.213	0.864
		Financial Services	0.372	0.213	0.299
		Agriculture	0.294	0.312	0.068
		Education	0.56	0.191	0.024
		Tourism	0.244	0.515	0.392
		Other	0.573	0.094	0.041
	Age	Under 20	0.61	0.577	0.43
		20 - 29	0.324	0.213	0.566
		30 - 39	0.473	0.82	0.871
		40 - 49	0.541	0.37	0.677
		50 - 59	0.957	0.213	0.468
		60+	0.888	0.213	0.759
	Gender	Male	0.449	0.88	0.019
		Female	0.449	0.88	0.019
	Business Duration	0 - 2 Years	0.725	0.704	0.795
		2 - 5 Years	0.604	0.74	0.36
		5 - 10 Years	0.77	0.628	0.078
		10 Years +	0.595	0.615	0.012

Code	p-Value
Cold	> 0.6
Lukewarm	0.2 - 0.6
Warm	0.05 - 0.2
Hot	< 0.05

Source: Author's own (2012)

As such, table 6.1 illustrates that a total of five tests were successfully able to reject the null hypothesis. In each of these cases, and as laid out in chapter five, a strong relationship was established. What can be seen as an output of the heatmap is that each of the tests that were successful in rejecting the null hypothesis for research proposition one, the test variable was *the need to sit face to face with a banker*. We can see that across the identifier variables for industry type, gender and duration of business, there are sub-types within the variable types that feel very strongly about not wanting to sit with a banker when accessing funding.

Each of the tests where the p-value sits within the orange range must also not be overlooked. These are, in some cases, only marginally outside the accepted range for the null hypothesis to be rejected. Had the sample size been slightly larger, these tests may also have resulted in a p-value of less than 0.05.

The area of the heatmap that indicates a need for further investigation is the intersection between the two identifier variables, *gender* and *duration of business* and the test variable, *willingness to go online*. In three of these instances, for both genders and the business duration sub-type of 10 years or more, there is a strong relationship when tested against the lack of desire to sit with a banker, and yet a very weak relationship when asked if they would go online. Added to this is the business duration sub-type of five to ten years which is only marginally outside the acceptable range. This posed a question of what type of delivery channel these respondents would respond to, but still indicated a willingness to adopt an alternate delivery mechanism than their existing banker relationship. Interesting to note was that the older the business, the more likely they were to want an alternative source of funding, assuming that once a business had become settled, they were more prepared to try alternative delivery channels.

The majority of the respondents illustrated a lukewarm tendency for the test variable *appetite for innovation* when tested collectively in their identifier variable types. The

same could be said for the willingness to go online, bar the two industry types, *Education* and *Other*. This seemed to indicate that these two test variables did not carry a strong enough weighting with the small business respondents to indicate an outright willingness to adopt a disruptive, online delivery channel for their funding.

6.3.3 Summary of research proposition one

Across the range of the strength of relationship tests it became apparent that there was no clear indication of a willingness to adopt a disruptive innovation delivery channel when gaining access to funding. However, there was a clear sentiment that the small business respondents would be more than willing to get finance without needing to sit with a relationship banker.

This meant that having a personal relationship with the lender of the funds is not as important a factor in the funding decision. This illustrated a tendency for the small business owner to be more willing to access funds from a lesser known source, while not yet convinced that they would do it through an online mechanism or be prepared to accept a totally new innovation in the process. This served to support Wang & Greiner (2011) when they posited that a shift away from institution-to-individual lending towards peer-to-peer lending is on the rise.

While not yet conclusive as an outcome of research proposition one whether small business owners would be willing to make use of a delivery channel like a peer-to-peer lending platform, the provision of such a platform would almost certainly serve to disintermediate the traditional financial institution from a portion of the early take-up customers (Schmidt & Druehl, 2008).

6.4 Discussion on research proposition two

The characteristics of a disruptive innovation are aligned to and are also important to small business owners when gaining access to finance

6.4.1 Introduction

Christensen (1997) introduced the characteristics of a disruptive technology, to be updated by Christensen and Raynor (2003) as the characteristics of a disruptive innovation, catering for a broader reach than just the technology segment. Research proposition two sought to understand whether or not the small business respondents found the characteristics laid out in the literature in chapter two of importance when gaining access to funding. In addition, it sought to rank the characteristics, disruptive or otherwise, that the small business owner found the most important.

These disruptive innovation characteristics were elaborated on by Tellis (2006), giving additional weight to the understanding of what a disruptive innovation was at its heart. Harrison (2010) investigated the role of disruptive innovations in emerging markets and how these characteristics would drive penetration of delivery channels and services at the bottom of the income pyramid.

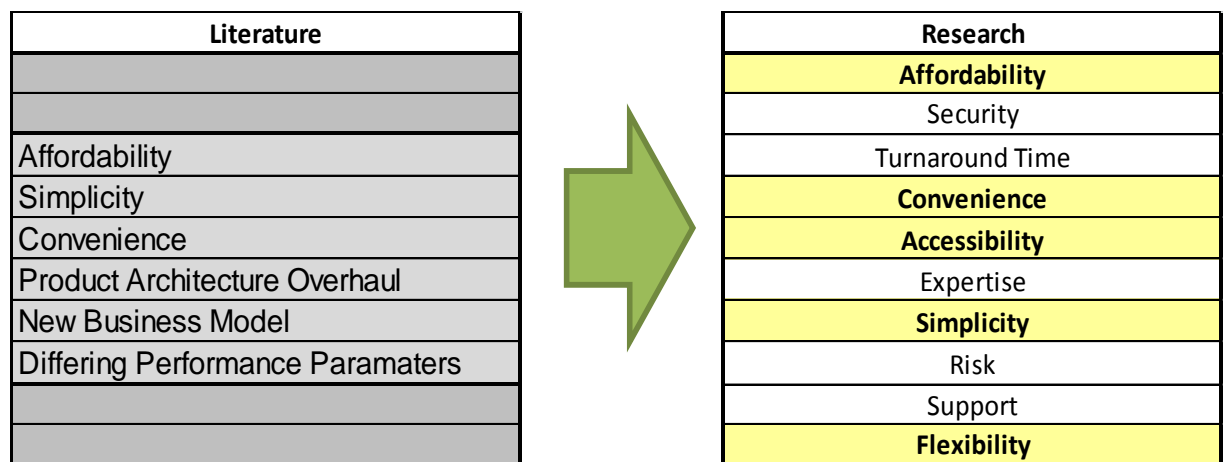
6.4.2 Discussion on the characteristic ranking

Chapter five positioned the outcomes of question nine of the research questionnaire, outlining the responses gathered from the small business respondents in terms of the characteristics most important to them when gaining access to funding. Table 5.6 indicated how the disruptive innovation characteristics (Christensen & Raynor, 2003)

were matched the characteristics listed in the research questionnaire. Table 5.7 was an illustration of the actual response count data gathered from the small business sample.

Figure 6.2 illustrates the correlation between the characteristics described in the literature in chapter two and the responses of the top ten characteristics as defined by the small business owners. The column entitled “Research” indicates where the disruptive innovation characteristics, per the matching in table 5.6, overlap with the characteristics in the literature. Here it could be seen that five of the disruptive innovation characteristics are considered to be of the ten most important characteristics to the small business owner. Only the characteristic for *new business model*, matched to the term *online*, was not considered within the top ten.

Figure 6.2: Characteristic Overlap



Source: Author's own (2012)

In addition to those characteristics highlighted in the literature, five additional characteristics were qualified in the top ten by the small business owners. These characteristics could be considered for inclusion when looking at disruptive innovations in the financial sector. This posed a question on whether or not there could be a consideration for a set of generic disruptive innovation characteristics, which may always be applicable when incumbent products and services are disrupted, in addition

to segment or industry specific characteristics. The nature of the disruptive innovation may play a role in these additional characteristics rising to prominence for the customer base.

The research seemed to indicate that security, turnaround time, expertise, risk and support were of similar importance to the characteristics of the disruptive innovations when gaining access to funding. This challenges the inclusion of only the generic characteristics in that the nature of the product or service might be of a higher risk, such as the process of lending or borrowing funds. Figure 6.3 posits that each of the existing, or base, characteristics of a disruptive innovation (Christensen & Raynor, 2003; Tellis, 2006) can be represented equally, or without one being more or less important than another. This illustrates that a wheel of characteristics could be utilised to display the generic list with each wedge carrying equal weight.

Figure 6.3: Wheel of generic disruptive innovation characteristics



Source: Author's own (2012)

To expand on the consideration regarding a new model for the characteristics of a disruptive innovation, the base characteristics must always sit at the core. These form the foundation and would not change, irrespective of the nature of the product or service that is the disruptive innovation. The additional characteristics would then form an outer layer and wrap around the core. These would change and evolve depending on the nature of the disruptive innovation and its application. The base needs would sit at the centre of the disruption, where the innovation and customer needs meet.

In the case of a disruptive innovation such as a peer-to-peer lending platform, key characteristics are highlighted in research proposition two. These would be essential to accelerating the shift away from the incumbent delivery channel, providing the platform for both the borrower and the lender to connect in such a way that the financial institution can be replaced (Freedman & Zhe Jin, 2008).

Figure 6.4 is an illustration of the amended wheel of characteristics, showing the core characteristics in the centre, with the additional characteristics specific to gaining access to funding wrapped around the inner layer. This outer layer could include fewer or more characteristics, depending on the nature or type of the disruptive innovation.

Figure 6.4: New wheel of disruptive innovation characteristics



Source: Author's own (2012)

6.4.3 Summary of research proposition two

Research proposition two supported the literature (Christensen & Raynor, 2003, Tellis, 2006, Harrison, 2010) in finding five out of the six characteristics overlapped as an output of the research questionnaire. Cost surfaced as the most important characteristic, indicating sensitivity for the small business owner around the expenditure required when gaining funding. Almost 60% of the respondents had listed low cost as a non-negotiable factor, with a total of just over 90% saying it was important to them. Equally, the second most important characteristic was security. A total of 85% of the small business owners indicated the critical nature of the need for security when completing the transaction for funding. This provides an insight into the

need for the provision of both a cost effective, highly secure delivery channel for the small business.

The existing characteristics that define a disruptive innovation appear to apply in the financial services segment, Yu and Hang (2009) elaborated on Christensen and Raynor's theory (2003) by stating that disruptive innovations experience a change in performance over time, indicating that an evolution of the characteristics of a disruptive innovation may make it more likely to be adopted. In the financial services segment, the characteristics indicated by the small business owners certainly shed some light into what could be considered key critical when interacting with financial products, services or delivery channels. The amended wheel of characteristics in figure 6.4 becomes an indicative model for the core and secondary characteristics that could define a disruptive innovation, with the flexibility for these secondary characteristics to change depending on the type or segment where the disruptive innovation is introduced.

6.5 Discussion on research proposition three

Small business owners who have historically been able to use a bank to gain access to funding would not migrate to a disruptive innovation as a source of access to finance.

6.5.1 Introduction

Research proposition three assessed the principle in the literature around disruptive innovation that users of the incumbent, or mainstream, product or service would be less likely to make use of a disruptive innovation until it has become a mainstream delivery channel on its own (Christensen, 1997, Schmidt & Druehl, 2008, Tellis, 2006). The small business owner who had chosen, and managed, to get their funding through a traditional financial institution was, in this scenario, the mainstream customer. It could

be posited that the remaining population of small business owners either were unable to access funds from the incumbent delivery channel or had chosen not to. In this case, they became the customer base more likely to make use of a disruptive innovation per the literature. This research proposition focused on the first group, the mainstream customer.

In chapter one it was illustrated that South Africa ranked number 1 in the Doing Business survey for getting credit (World Bank, 2013) and 39th overall out of the 185 countries included in the rankings. It was also highlighted that the role of small business was critical in contributing towards job creation, economic growth and equity in ensuring more equal income distribution (Global Entrepreneurship Monitor, 2010, Lewis, 2002).

6.5.2 Discussion on access to finance

The mainstream delivery channel, provided by traditional financial institutions, disqualifies many small business owners when attempting to gain access to funding due to the nature of the existing lending models and risk criteria (Kongolo, 2010, Wang & Greiner, 2011). This, combined with the response from the small business owners included in the survey, where only 25% indicated that they utilised a financial institution delivery channel when getting funding to start their business and only marginally more (45%) when seeking to grow their business, seemed to illustrate that getting access to funding was neither commonplace or an automatic choice. In addition to this, figure 5,13 illustrated that 72% of small business owners found it difficult to get access to finance. This supported the statement made by Lewis (2002) that most small business owners in South Africa rely on existing savings or borrowing to finance their small business.

In testing research proposition three, both negative and positive test variables were utilised. Rejecting the null hypothesis for a negative test variable resulted in the assessment that the small business owner would actually be willing to shift away from

the existing delivery channel. Rejecting the null hypothesis for the positive test variables indicated that the small business owners agreed with the position in the literature and were willing to stay with the existing delivery channel.

In each of the tests, only the small business respondents who made use of funding through the existing delivery channel, a traditional financial institution in the form of either bank finance or utilising an existing bank facility such as a card or a mortgage loan, were included. All other respondents were excluded from the strength of relationship tests as they had utilised other forms of sourcing for funding to start or grow their business.

None of the negative tests were able to reject the null hypothesis, indicating that those small business owners who had made use of the existing delivery channel were willing to shift away from the traditional channel. As far as the positive tests were concerned, in three cases the identifier variable resulted in a p-value of less than 0.05 against the test variable. These strength of relationship tests were illustrated in chapter five, where those users who accessed finance through the traditional delivery channel indicated a strong association with only wishing to interact with a bank and having a reliance on a banker. In both these cases, it was found that the small business owners considered their continued interaction with a traditional financial institution *very important*.

6.5.3 Summary of research proposition three

The tests run in research proposition three indicated that the principles unpacked in chapter two for disruptive innovation applied when assessed in the financial services industry as well. For both the negative and positive test variables, the outputs of the strength of relationship tests indicated that the small business owners who had already made use of the traditional delivery channel would neither shift away from it, nor show an inclination to no longer want to engage with the existing delivery channel. What would remain to be seen is the impact of a new disruptive innovation delivery channel being introduced and how long it would take for this same customer set to become

willing to shift away once it had become mainstream. This would further verify the literature, such that the mainstream customer shifts only to the disruptive innovation once it has, in itself, become mainstream (Christensen, 1997, Tellis, 2006).

6.6 Summary of chapter six

In each of the three research propositions it was indicated that the literature captured in chapter two remained relevant. While there were certain indications that the small business respondents would be willing to consider innovative delivery channels for funding, there was no clear indication that they knew what these might be and, as such, would consider adopting a disruptive innovation. In research proposition one, the sample of small business owners indicated that they were not overly willing to adopt a disruptive delivery channel, but would be willing to get finance without needing a relationship manager. This shed some light on the appetite for the small business owner to consider alternative delivery channels and, if they knew more about it, potentially shift to something like a peer-to-peer lending platform.

In research proposition two it became clear that the characteristics of a disruptive innovation were still important to the small business owners, but that when getting access to funding, there were other characteristics that also ranked highly. Cost was considered the most critical factor, but security was also listed very highly. When taking into account that the delivery channel is for funding to start up or grow a small business, this can be easily understood.

The additional characteristics listed by the small business owners served to posit that there could be an additional lens applied to the disruptive innovation characteristics. Figure 6.4 illustrated that when the disruptive innovation exists within a certain industry or segment type, in this case financial services, there might be secondary characteristics that apply to the disruptive innovation. Five characteristics were ranked highly enough by the respondents to consider them for inclusion.

Research proposition three again investigated the importance of the access to finance for small business owners in the context of the research positioning in chapter one and the literature from chapter two. When seeking funding for their small business, the respondents find it very difficult, but, true to the literature on disruptive innovation, those that had managed to get funding from the traditional delivery channel also indicated a willingness to continue using that delivery channel. These were considered the mainstream customers as per Christensen's (1997) original positioning of disruptive innovation theory.

The role of peer-to-peer lending platforms as a disruptive delivery channel for finance has not yet seen prominence in the South African context. When looking at the global environment, it cannot be underestimated that the growth of these types of platforms will spread (Meyer, 2007; Wang & Greiner, 2011). As they become more mainstream, they will continue to disintermediate the traditional financial institutions from the funding process for those customers who are willing to go elsewhere for their financing.

The research propositions discussed in this chapter are indicative of the literature on disruptive innovation where the mainstream customer is content with the incumbent delivery channel. However, there is a sense that with an alternative platform that meets the requirements for the characteristics they have classified as important, they would be willing to utilise it to get access to funding instead of the existing delivery channel. The introduction of a peer-to-peer platform that is, first and foremost, secure and cost effective would disrupt the traditional delivery channels.

7 CHAPTER SEVEN – RESEARCH CONCLUSIONS

7.1 Introduction

The previous chapter discussed the research findings in the context of existing literature on disruptive innovation and looked at the impact these might have on the small business owner being willing to shift to a peer-to-peer lending platform if it was available. This chapter will briefly review the reason for doing the research and the objectives that were set out at the beginning of the research project. A summary of main findings will be presented, including some recommendations for traditional financial institutions. The limitations of the research will be presented and suggestions for future research that have been unearthed during the process will be presented. Lastly, the research project will be concluded.

7.1 Research background and objectives

The research report investigated the national competitiveness in South Africa, discussing the goals set out by the National Government in the New Growth Path Framework (Republic of South Africa, 2010) and the ranking of the country in the World Bank and International Finance Corporations Doing Business rankings (2013). Further to this, the World Economic Forum (2012) showed that South Africa ranked as low as 95th in labour effectiveness, illustrating a need for an improvement in the creation of and productivity within the job market.

The importance of small business was introduced, notably in creating employment in the urban and rural workforce and driving sustainability in economic growth (Kongolo, 2010). The Global Entrepreneurship Monitor (2010) posited that the small and medium enterprise sector played an important role in addressing the challenges of job creation, specifically in developing countries, or emerging markets such as South Africa, where small business had shown to contribute substantially to job creation and the equality of income distribution (Lewis, 2002). The unemployment rate in South Africa was

assessed, where the most recent numbers indicated a quarter of the population was unemployed (Statistics South Africa, 2012).

Building on the foundation that small business was a driver for job creation and economic growth, the background for the research dove deeper into the ability for small business owners to gain access to finance. It investigated the challenges that the small business owner faces when sourcing finance through existing delivery channels, where credit history and the availability of collateral played a critical role in backing up the risk for traditional loans (Wang & Greiner, 2011).

Lewis (2002) posited that small business owners tended to rely on existing savings and borrowing from friends and family to finance their working and investment capital. This was illustrated in chapter five and discussed in chapter six. The number one position for *getting credit* from the Doing Business ranking (2013) was included in order to position the *perception* of the ease of doing business as a key foundational principle.

The concept of the funnel was introduced to illustrate that as the research dove deeper, the challenge for small business creation, growth and sustainability would become more apparent. In this sense, the need to either innovate the existing delivery channels or for the creation of disruptive delivery channels to provide access to this finance would become more essential. However, the creation of alternative delivery channels would depend on the willingness of the small business owner to utilise them, and in so doing, shift away from traditional mechanisms to gain access to funding.

7.2 Summary of main findings

The importance of funding for small business and the importance of small business as a cog in the economy was established in chapter one, while chapter two investigated the literature around innovation, but specifically disruptive innovation and the role that

peer-to-peer lending platforms have played in developed markets in bringing the investor in touch with the fund seeker. This type of disruptive innovation has seen rapid growth and has become a real alternative to traditional financial institutions as a delivery channel for finance, for both the individual and the small business.

The research process led to chapter six, where the outcomes of each of the research propositions were discussed in detail. The willingness of the small business owner to shift away from the existing delivery channels is not yet wholesale, but the risk for the traditional financial institution at this stage is that South Africa needs small business to flourish in order to create jobs and drive economic growth and, as such, needs mechanisms that can provide finance to both established small and medium enterprise, as well as those still looking to start out (Lewis, 2002; Kongolo, 2010).

In summary, the small business respondents indicated across the range of industry type, gender, age group and duration of their business that there was some appetite to shift away from their traditional banking relationship. They identified what types of characteristics would be required to ensure that a delivery channel for funding would meet their requirements and provide them with the appropriate sense of comfort that they could transact without concern. Lastly, it was shown that the literature was accurate in its summation that mainstream customers, those small business owners who had already managed to get funding from a bank, would be more likely to stay with their existing delivery channel than to immediately step away and try something else (Christensen, 1997; Christensen & Raynor, 2003; Tellis, 2006; Schmidt & Druehl, 2008).

What each of these findings illustrated was that while no viable alternative exists for the small business owner to get access to funding, indeed one that meets the needs of a business without extensive credit history or collateral, there would be less of an appetite, or incentive, to shift away from the traditional delivery channel. Yu and Hang (2009) posited that even if an inferior solution exists, market disruption could occur. This does not solve the challenge highlighted in chapter one, as only a limited number

of small business owners would succeed in gaining access to funding through the existing mechanism if all things remained equal. While mainstream delivery channels may be in place, the research has shown where the small business respondents find it increasingly difficult to get finance, that these can fall short of what is required (Yu & Hang, 2009).

An emerging economy, such as that of South Africa, requires disruptive solutions to meet the needs of the small business owner (Hart & Christensen, 2002). In order to increase the economic sustainability of the small and medium enterprise segment, alternative mechanisms to gain access to funding, in the beginning as well as the growth phase must be provided, and be readily accessible, to ensure that the economic growth expected of the segment could be achieved.

A peer-to-peer lending platform would not go about replacing the incumbent firms providing finance, but would generate an additional opportunity for growth, enlarging the existing market and sustaining aggregate demand for finance in the small business segment. (Harrison, 2010; Utterback & Acee, 2005). It would provide a platform that would be easily accessible to a small business owner. Hulme and Wright (2006) even suggested that customers would be likely to try peer-to-peer platforms because of a legacy of unethical investments and lack of transparency in the traditional financial sector.

The research has shown that while there might be a willingness to adopt a disruptive innovation were it to be made available, that there is not a conclusive willingness to move away from a relationship with a traditional financial institution, certainly not for those customers who have an existing relationship. This illustrates that a model may exist where the provision of a peer-to-peer, or similar, delivery channel does not seek to totally disintermediate the financial institution, but rather becomes a part of the total service offering. In this way, the financial institution would disrupt its own operation, rather than just mere incremental innovation on its existing delivery channels.

7.3 Recommendations

Following the findings of the research, it would be recommended that traditional financial institutions investigate and implement a disruptive delivery channel such as a peer-to-peer lending platform as part of their offering to the small business market. While these platforms have traditionally been created and operated in order to disrupt these very institutions, the findings from the small business owners indicate that while there is an appetite to shift away from the traditional banker model with face-to-face interactions, there is still a portion of the customer base who would only trust their financial affairs with a traditional financial institution.

The respondents of the survey want their bank to innovate more, to provide solutions that cater to their needs. Disruptive innovation serves to increase the provision of the delivery channel to the unmet customer and there is no reason that a bank cannot provide a platform to new and existing customers to do this. This would fundamentally disrupt the existing model of peer-to-peer lending, where the financial institution would be the provider of the platform itself to allow fund seekers to connect with potential investors. The outcomes of the research have shown that by providing a delivery channel that meets the characteristics highlighted as important to the small business owner, paired with the security provided by the incumbent firm, the likelihood of take-up would more than likely be increased. A bank would provide security to both the investor and to the small business owner in that it would add legitimacy to the transaction for both parties.

The business model for the bank would need to be disrupted internally, where traditional credit rule engines can no longer apply in order to facilitate speedy turnaround time for the transaction to take place. As such, the suggestion would be for the bank to do one of two things:

1. Provide the peer-to-peer lending platform as a white label solution to an external entity. In this way, the bank would facilitate the portion of the process that is an area of expertise for a financial institution, namely the facilitation of funds transfer, or the clearing of the transaction between small business owner and investor. They would do the necessary background checks on both parties and provide connection to registered legal parties to facilitate the contractual process in order to secure the loan. In this scenario, the pool of investors accessing the site would be determined by the owner of the platform so, as such, could be an open network, or selected by the operator of the platform.
2. The bank would provide the platform themselves, as a disruptor to their existing lending segment. This would mean that the peer-to-peer platform would be provided by the bank as an open social lending platform over and above its existing business model. No internal parties would be actively involved in the running of the platform, but the facilitation of the transfer of funds between parties would be done by the bank, as well as the provision of legal services to legitimise the transaction. The pool of investors would be monitored and vetted by the bank to add to the legitimacy of the platform.

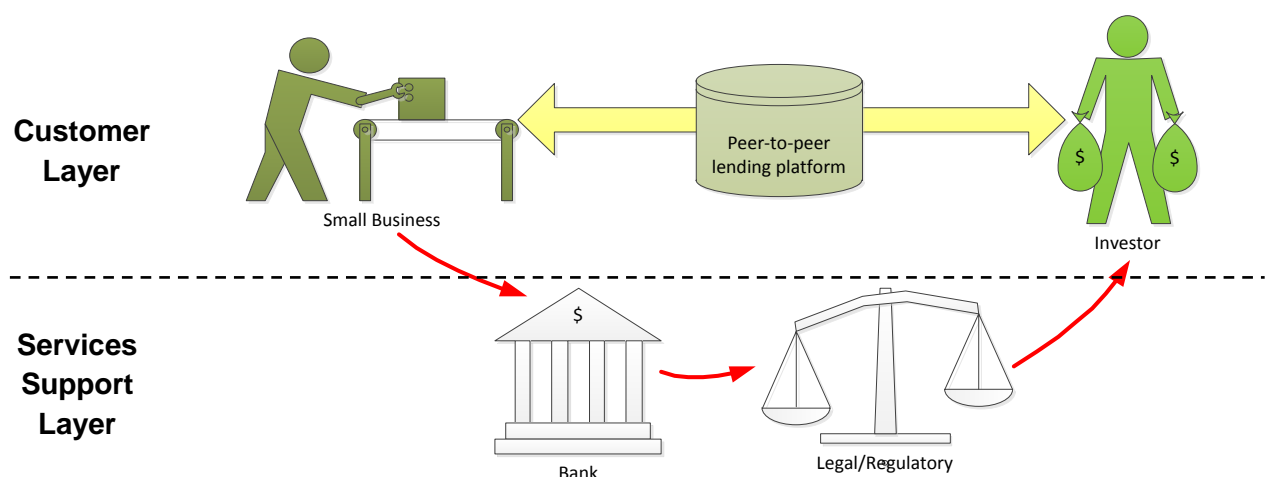
In both instances, the bank would provide the platform, facilitate the transaction and provide legal services, but in the first scenario, a peer-to-peer lending platform could be utilised within a large organisation to create a closed loop lending network and be branded for the company, or as a standalone business in the financial services industry, powered by the bank but run as a separate entity.

Peer-to-peer lending growth has escalated dramatically globally as per figure 2.4 and the financial institution that first chooses not to compete, but to support the trend, will gain both customer appreciation and an additional source of revenue over and above their existing market. This would challenge the definition of the small business customer within the ambit of the bank, as the customer would be both the small business owner with the idea and the investor looking to lend funds or purchase a portion of equity in a small business interacting through the platform.

Small business customers are looking for delivery channels to gain access to funds that meet the characteristics laid out in research proposition two, these can be factored into the design of a peer-to-peer lending platform and enhanced by the support and backing of a recognised banking institution. While the small business customer may not yet be willing to disengage from the traditional model, a less stringent, more open delivery channel still supported by and driven by a bank would service both the needs of the customer and the bank itself. This type of platform will be introduced and will become prominent in the local market in time, as the emerging nature of the economy dictates that alternative solutions must be provided in order to cater for the underserved. In this case, the solution for a traditional financial institution would be to disrupt from within, rather than be disrupted by an unknown external entity.

Figure 7.1 illustrates the key role-players in a bank operated peer-to-peer lending platform. The small business owner would engage directly with the investor and when an agreement is reached, either for lending terms or equity in the business, the bank would facilitate the transaction of funds and provide access to a registered panel of attorneys to ensure the legality of the transaction and the terms of the agreement.

Figure 7.1: Key role-players for a bank run P2P



Source: Author's own (2012)

7.4 Limitations of the research

The research specifically targeted the small business segment in order to address what was illustrated in chapter one as a deficiency in the South African business segment. The nature of national competitiveness and the role of the small business in creating jobs and contributing the economy formed the basis for the specific segment being selected as the research population.

Limitations to the research which may have contributed to even greater clarity in the findings are:

- Targeting only the Nedbank small business population as an extrapolation of the overall universe of small business owners in the South African context. While Nedbank enjoys over 18% of the market share, the remaining four large banks; Standard Bank, First National Bank and ABSA have a larger share of the market in the segment. Access to these customers would have been challenging considering the role the researcher plays in Nedbank and such a request would have been difficult within the competitive financial services landscape. The nature of the research, direct contact with the client, would have added to this constraint.
- Similarly, the research may have yielded different results had small business owners who had specifically chosen not to use a bank for finance been interviewed. Alternatively, small business owners who had wanted to use a bank, but had been declined for credit or transactional facilities would add to the sample. This cross-section of the small business industry would have introduced a response lens that customers who already use the bank may not have.
- The number of Nedbank clients who completed the survey questionnaire. While the small business segment is a sub-segment of the total consumer base and,

as a result, the total number of responses could be expected to be less than a mainstream retail consumer, a larger sample would have contributed to the statistical validity of the relationship tests illustrated in chapter five.

- The accuracy of the Nedbank client data housed within the customer information system (CIS). Chapter four positioned the research process and illustrated that the contact information housed for each small business client would determine the response rate for the survey. The volume of survey questionnaires that did not reach the intended small business owner was larger than had initially been anticipated. This contributed to a smaller final sample being realised as an outcome of the surveys distributed.
- Without a recognised local peer-to-peer platform in operation, the small business respondents would not have been able to contextualise this as an alternative to the traditional delivery channels.

7.5 Suggestions for future research

The research topic sought to investigate disruptive innovation as a mechanism for the provision of alternative delivery channels for finance for the small business owner. In addition, the concept of peer-to-peer lending and the role it might play in providing such a delivery channel. Both of these provide a relatively new spectrum of academic literature and future research, either collectively or independently would elicit interesting results.

An interesting avenue for future research would be to investigate the model posited in research proposition two, the *new wheel of disruptive innovation characteristics*. It would be specifically interesting to see how the secondary characteristics may change depending on the industry or offering type that the disruptive innovation is operating within. Indeed, clarification that there are bound to be specific secondary

characteristics, such as those identified for financial services, would be a topic for study on its own.

In addition, aligned to the recommendation for this research, a separate study focusing specifically on the success that a peer-to-peer lending platform provided or operated by a traditional banking institution could expect. This would provide further insight into the mindset of the emerging market borrower and would elicit in some clarity what factors would determine whether the bank would be more or less credible to the investor and the borrower than a standalone P2P platform.

Lastly, where this research was focused on the access to finance for small business owners, there are other factors that have an effect on the sustainability of a small business and that determine whether or not it will succeed. A study into those factors that specifically dictate success or failure and the sustainability of a small business operation in an emerging market economy would be of great interest. Over and above this, as peer-to-peer lending was a potential solution to the access to finance challenge, what other types of innovations or disruptive innovations could be sourced to solve for those additional factors once they are determined.

7.6 Conclusion to the research

Small business forms a cornerstone of an economy, even more so in an emerging economy where job creation and economic growth are of critical importance. The theory of disruptive innovation provides a mechanism to consider how to broaden the provision of products and services to underserved customers, both at the business and consumer level. In addition, small business operations require funding in order to be created and to grow, however this funding may not always be provided from the most obvious source.

Additional innovation in the delivery channels to provide funding to small business will undoubtedly be evolutionary and the concept of a peer-to-peer lending platform may very well be at the heart of this evolution. Incumbent players in the funding market will have to continue to innovate on their existing offerings to satisfy their mainstream customers, while potentially seeking to disrupt their own business models to provide simple, convenient and cost-effective delivery channels for alternative sources of funding. As an increasing number of small business operations seek to enter the market to target the unmet needs of the end consumer, as well as through the mechanisms put in place to sustain and grow the economy, the provision of these innovative mechanisms to serve these small businesses and assist them to grow into big businesses will be a competitive space in its own right.

This research has illustrated that there is an unmet need in the small business segment with relation to the source of funds provided. While there is not yet a clear view that these small business owners would be willing to utilise a disruptive online delivery channel at this point in time, as a platform of this type becomes more mainstream the sentiment may change. A visionary company would seek to capitalise on the opportunity and ensure that these challenges are both understood and can be addressed before the disruptive innovation is introduced elsewhere and usurps the incumbent delivery channel.

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9 APPENDICES

9.1 Questionnaire Cover Letter

Dear Nedbank Client,

Thank you for participating in this research. Completing the online survey will assist us in better understanding the characteristics important to our small business clients when seeking access to finance.

Your identity will be kept confidential and the survey will remain anonymous, both in its distribution and in the storage of the data. The survey should take no longer than 15 minutes to complete. All data gathered will only be presented in an aggregated format and not as individual responses.

Participation in the completion of the survey is voluntary and respondents can withdraw at any point without penalty to the consent statement. The response data provided will only be used for the dissertation, and will not be disclosed to any third party, except as part of the dissertation findings, or as part of the supervisory or assessment processes of the University of Pretoria, Gordon Institute of Business Science (GIBS) . If you have any concerns, please contact my supervisor or I. Our details are provided below.

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9.2 Research Questionnaire

1 What industry is your business in?	(Select appropriate option)
Retail	<input type="checkbox"/>
eCommerce	<input type="checkbox"/>
Manufacturing	<input type="checkbox"/>
Import/Export	<input type="checkbox"/>
Wholesale	<input type="checkbox"/>
Financial Services	<input type="checkbox"/>
Agriculture	<input type="checkbox"/>
Education	<input type="checkbox"/>
Other	<input type="checkbox"/>
2 Where is your business located?	(Select appropriate option)
Gauteng	<input type="checkbox"/>
Western Cape	<input type="checkbox"/>
Kwazulu Natal	<input type="checkbox"/>
Free State	<input type="checkbox"/>
Mpumulanga	<input type="checkbox"/>
Limpopo	<input type="checkbox"/>
Eastern Cape	<input type="checkbox"/>
Northern Cape	<input type="checkbox"/>
North West	<input type="checkbox"/>
3 What is your Gender?	(Select appropriate option)
Male	<input type="checkbox"/>
Female	<input type="checkbox"/>
4 What age group do you fit into?	(Select appropriate option)
Under 20	<input type="checkbox"/>
20 - 29	<input type="checkbox"/>
30 - 39	<input type="checkbox"/>
40 - 49	<input type="checkbox"/>
50 - 59	<input type="checkbox"/>
60 +	<input type="checkbox"/>

5 How long has your business been in operation?

(Select appropriate option)

0-2 Years	<input type="checkbox"/>
2 - 5 Years	<input type="checkbox"/>
5 - 10 Years	<input type="checkbox"/>
10 Years +	<input type="checkbox"/>

6 How did you first access funds for your business?

(Select appropriate option)

Bank Finance	<input type="checkbox"/>
Used existing finance (e.g. Mortgage)	<input type="checkbox"/>
Borrowed from a friend	<input type="checkbox"/>
Borrowed from family	<input type="checkbox"/>
Other	<input type="checkbox"/>

7 When requiring additional funding, how do you gain access to funds?

(Select appropriate option)

Bank Finance	<input type="checkbox"/>
Used existing finance (e.g. Mortgage)	<input type="checkbox"/>
Borrowed from a friend	<input type="checkbox"/>
Borrowed from family	<input type="checkbox"/>
Other	<input type="checkbox"/>

8 Do you find it challenging to gain access to finance? (its impossible, i find it hard, neutral, with some ease, I get it easily)

It's Impossible	I find it hard	Neutral	With some ease	I get it easily
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9 What characteristics are most important to you when seeking finance?

(Select appropriate option)

Where 1 = Of no relevance, 2 = Of some relevance, 3 = Moderately Important, 4 = Important, 5 = Non-Negotiable

	1	2	3	4	5
9.1 Trust					
9.2 Accessibility					
9.3 Convenience					
9.4 User Friendly					
9.5 Security					
9.6 Flexibility					
9.7 Brand					
9.8 Turnaround time					
9.9 Online					
9.10 Risk					
9.11 Availability					
9.12 Face to face					
9.13 Cost					
9.14 Support					
9.15 Expertise					



Characteristic Guideline

Trust in the provider of the finance
The source of finance is accessible
The source of finance is readily available
The process is easy to follow
Authentication and secure transactions
The process allows for variation in needs
Backed by a reputable brand
Getting finance is not time consuming
Finance is accessible through online channels
Getting finance must be a low risk transaction
Funds are made available in
Sourcing funds requires a personal touch
Cost is a measure of value
Readily available support at hand
Technical and financial expertise available

Please select the most appropriate for the below statements

Where 1 = Not true at all, 2 = Marginally true, 3 = Neutral, 4 = Marginally Important, 5 = Non negotiable

10 I would only access finance through a bank because I trust a financial institution

1	2	3	4	5
---	---	---	---	---

11 I would make use of online services to gain access to finance

1	2	3	4	5
---	---	---	---	---

12 I am always willing to make use of new innovations and consider myself an early adopter

1	2	3	4	5
---	---	---	---	---

13 I value the personal interaction that comes with applying for finance through a relationship manager (face to face)

1	2	3	4	5
---	---	---	---	---

14 I am only interested in having a financial relationship with a traditional financial institution (e.g. a Bank)

1	2	3	4	5
---	---	---	---	---

15 I place value in my bank offering value added innovative services

1	2	3	4	5
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9.3 Timeline for Research Project

Frequent supervisor meetings and feedback regarding progress is a feature of the timeline designed to meet the 7th November submission date. Saunders and Lewis (2012) identify the need to create a detailed plan in order to manage the timing and preparation to meet deadlines for the research project.

