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Market appetite and profitability for online balance transfer from gift cards into a bank account in South Africa

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0502936E

A consultancy report submitted to the Faculty of Commerce, Law and Management, University of the Witwatersrand, in partial fulfilment of the requirements for the degree of Master of Business Administration

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DECLARATION

I, Dylan Pillay, declare that this consultancy report is my own work except as indicated in the references and acknowledgements. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration in the Graduate School of Business Administration, University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in this or any other university.



Dylan Pillay

Signed at MIDRAND

On the 18th day of June 2019

DEDICATION

This Consultancy Report is dedicated to all young entrepreneurs who are passionate about disruptive innovation and believe that you can accomplish great things with limited resources.

ACKNOWLEDGEMENTS

I would firstly like to thank my research supervisor, Mr Tumelo Langa, who completed his Masters at the Gordon Institute of Business Science. He tried his best to avail himself when needed, even though he had a busy schedule with his current Business Development role at Microsoft. He allowed the research to be my own work but constantly provoked deeper analysis and different thought patterns from me.

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Finally, I would like to thank my family for the support they have shown me over the last year whilst writing this report. I would still be struggling if they did not clear my schedule to allow me to concentrate on this research report as well as allow me to attend the classes provided by Professor Anthony Stacey.

SUPPLEMENTARY INFORMATION

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† Including Executive Summary and References

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EXECUTIVE SUMMARY

Gift cards were invented to solve many problems within the financial sector. They largely do very well for the majority of its recipients within the government disbursement space, retail gifting, small marketplaces and the corporate incentive space. However, there is an adequate number of recipients that would prefer to have money in their personal bank account due to the shortcomings of the product. This consultancy report sought to find out how much money recipients would pay to transfer their gift card balances and if there is a revenue/profit opportunity.

This report was written to assist the management team from a technology enterprise, in deciding on whether they should move forward with this novel venture after one of their innovation team employees, managed to solve the transferring of gift card balances. The researcher's task was to advise them if adoption and the fee that customers are willing to pay will meet the requirements set out, given the parameters that they have provided us, which includes costs and expected revenues. If they do meet requirements, the researcher was asked to model the income statement to show projected profits of the venture. With this being a new venture, they also requested for information on any unknown factors that popped up whilst analysing the data.

The researcher set out by checking if there is indeed a sizable market that receive these gift cards, as volume of sales will be key to profitability in real terms. After finding that there is a R13 billion market in open loop gift cards (suitable for transfer). The researcher proceeded to model an online questionnaire of which it received 229 responses. A third of the population did indeed receive a gift card but none had received the gift card from the government disbursement channel which was a shortcoming in the data collection. This unfortunately reduced the target market from R13 billion to R8billion.

Despite the reduced target market, the findings from the data showed that at least 21% of the R8 billion market were willing to transfer at a 5% variable cost or a R50 flat fee. Due to the cost of sales incurred in the transfer, the higher of

the two values will be applied. This favourable figure came with the caveat that investment will need to be placed into marketing initiatives as well as a 5% increase in cost of sales due to the population unanimously opting for a real-time transfer of funds, instead of a delayed transfer that was cheaper. Options were put forward for marketing approaches as well as contact centre strategies, given the findings from the data as well as the literature review. These options for cost and gross profit were modelled using a Monte Carlo Simulation which revealed a R17.7 million profit. The project was also put through a Net present value calculation to ensure profits in the long run, of which it still exceeded expectations.

The final recommendation to the management team was to go forward with the venture whilst investing in marketing and on-boarding an in-house contact centre capability.

Keywords

Gift Cards, Shortcomings, Technology Adoption, Profitability, Marketing, Contact centre costs

TABLE OF CONTENTS

1 INTRODUCTION 11

1.1 SCOPE OF WORK 11
1.2 BUSINESS CASE 12
1.2.1 MARKET SHARE 12
1.2.2 SOLUTION DEVELOPED AND TESTED 13
1.2.3 ACCESS TO BASIC INTERNET SERVICES IN SOUTH AFRICA 13
1.2.4 CONSTRAINTS OF GIFT CARDS 14
1.2.5 OUTSOURCING CAPABILITIES 15
1.3 PROBLEM STATEMENTS 15
1.3.1 WILL THE TRANSFER UTILITY BE USED (ADOPTION)? 15
1.3.2 WHAT PRICE WILL THE CUSTOMER PAY AND COSTS INVOLVED (PROFITABILITY)? 16

2 LITERATURE REVIEW 17

2.1 TOPIC DEFINITION 17
2.2 ADOPTION 18
2.2.1 ACCESSIBILITY 18
2.2.2 TECHNOLOGY 19
2.2.3 KNOWLEDGE 22
2.2.4 MARKETING EFFORT 23
2.3 PROFITABILITY 24
2.3.1 PRICE POINT 24
2.3.2 COSTS 24

3 RESEARCH METHODOLOGY 27

3.1 HIGH LEVEL PLAN 27
3.2 QUANTITATIVE APPROACH 27
3.3 POPULATION AND SAMPLING METHOD 28
3.4 SURVEY INSTRUMENT 28
3.5 VALIDITY AND RELIABILITY 29
3.6 ETHICS 29

4 PRESENTATION OF RESULTS 30

4.1 SHORTCOMINGS OF THE DATA COLLECTION 30
4.2 FINDINGS 30
4.2.1 DATA PREPARATION 30
4.2.2 DEMOGRAPHICS BREAKDOWN 31
4.2.3 DIRECT INFERENCES 31

5 DISCUSSION OF RESULTS 36

5.1 INSIGHTS INTO DATA 36
5.1.1 SHORTCOMINGS 36

5.1.2 HYPOTHESIS TESTS 38
5.1.3 COMBINED HYPOTHESIS TEST 39
5.1.4 FIXED COSTS 39
5.2 BUSINESS IMPLICATIONS 40
5.2.1 TASK AT HAND 40
5.2.2 ADOPTION – MARKETING EFFORT 41
5.2.3 PROFITABILITY – FIXED COSTS 43
5.2.4 MONTE CARLO SIMULATION 44
5.2.5 NET PRESENT VALUE (NPV) 46
5.3 RECOMMENDATIONS 49
5.3.1 ADOPTION – MARKETING EFFORT 49
5.3.2 PROFITABILITY – FIXED COSTS 51
5.3.3 GO- NO GO DECISION 52
5.3.4 OTHER CONSIDERATIONS 53

CONCLUSION 54

REFERENCE LIST 55

APPENDIX 65

LIST OF ONLINE GIFT CARD MERCHANTS 65
GLOSSARY 66
HIGH LEVEL SOLUTION 67
DATA COLLECTION INSTRUMENT – ONLINE SURVEY 68

LIST OF FIGURES

1. Channel Split with Count…….. 31
2. Use of Card with small balance, Split Count……. 31
3. Original Take-Up of Transfer……32
4. Take-Up of Transfer after imposing a fee compared to Original Take-Up of Transfer……32
5. Take-Up of Transfer after imposing a fee as well as informing them of the constraints compared to Original Take-Up of Transfer……..32
6. Pie Charts for Real-time Transfer Option……33
7. Percentage Willing to pay – Histogram……33
8. Flat Fee Willing to Pay – Histogram……34
9. Combination breakdown of preferred query contact method……...35
10. Combination breakdown of preferred query contact method including number of employees required……..42
11. Monte Carlo Simulation Model……...44
12. Monte Carlo Simulation Model – Probability plots from Sales and Profit……...45
13. Net Present Value Calculation……...46
14. NPV Calculation……47
15. Marketing Options Weighted Comparison Table……48

1 INTRODUCTION

The South African banking landscape in the last decade has exponentially grown in terms of Financial Technology companies (Fintechs), digital banks and traditional banks (Collett, 2019; Timmis, 2018). There is still a vast population base that can't afford conventional bank accounts and opt to use prepaid methods in the form of cash, electronic wallets, money transfer, collective models (commonly known as stokvels) and prepaid cards (commonly known as gift cards) via government disbursements (Coetzee, 2009; Cranston, 2018). Clarke (2012), after writing an article based on the Global Prepaid Exchange, reported that, within the banked population, gift cards have also become a more frequent commodity, where it is received through corporate incentives and retailer promotions.

The ability to acquire gift cards as a retailer, corporate or the government, has become extremely convenient, with several companies offering the service in some shape or form (Ernstberger, McDowell & Parris, 2012; Wolfe, 2014). Due to the increased supply of this service, it has driven down the price of acquiring these cards and their administration, which encourages this alternative method of money disbursement.

The question is, does the gift card work for all its recipients? And if not, is there a revenue/profit opportunity in solving this problem?

1.1 SCOPE OF WORK

In this consultancy report, the researcher will explore the revenue/profit opportunity of performing the inverse of loading a gift card. The report looks at the appetite for transferring the balance out of a gift card into a South African Bank account, at a fee. Deposit mechanisms such as mobile wallets will not be explored in the report due to the dependency on a bank account verification check before transfer. If the appetite is significant (given the volume) at a price that allows profits to be made, then it will make sense for the management team

reading this report to take the project forward. Other considerations into profitability will include the support functions that will be needed and the alternatives that can be used to provide optimal profitability.

1.2 BUSINESS CASE

The rationale behind the project will be attributed to the theory of entrepreneurship and the identification and capitalization of an opportunity. Will the initiative run at a loss, given low margins/high costs; or are there factors that will allow us to believe that the initiative will make a profit?

1.2.1 Market Share

In a study done by Clarke (2012), the global prepaid exchange reports a R29 billion industry in the form of gift cards in South Africa. We will be dealing with a niche market as the gift card was intended to be targeted at the unbanked and as a gifting mechanism but a portion of the R13 billion (R16 billion are a closed loop market and can't be accessed, to be explained later) will still be a significant portion. Sidler (2016) mentions, that after pulling statistics from Standard Bank, a 54% year on year increase in gift card sales was reported. Standard Bank themselves believe in the convenience of disbursement of money with a gift card of which, they pay-out R1.5 million to their staff monthly in incentives via this product. Standard bank alone as a gift card issuer, distribute an average of 55000 gift cards per month bringing in a whopping R110m per month. This figure substantiates Clarke's (2012) figure of R13billion as if there are 10 issuing banks in South Africa each disbursing R1.32billion (R110million * 12) then it accounts to R13.2 billion in the open loop gift card industry (Minnock, 2017). A non-exhaustive list of online gift card distributors can be found in Appendix1.

1.2.2 Solution Developed and Tested

The preamble to this report, is that the solution for transferring these balances has already been developed by the innovation team of the enterprise who have requested this consultancy report, as it is something novel in the market (Pillay D, 2017). It will be on an online utility, that is secure to perform the transfer, by capturing the gift card details and the proposed bank account. See Appendix 3 for high level solution. It is important to note that the solution has been approved by the Payments Association of South Africa (PASA) in its current form and hence deviations from the solution will not be explored as it will require a re-certification exercise. The online solution relies on a mixed cost model of percentage of transfer, as well as a fixed fee for when the amount acquired through the percentage scheme is to too small.

The solution has passed the Payments Card Industry Data Security Standard (PCIDSS) regulatory requirements as well as the Protection of Personal Information (POPI) requirements. THE PCIDSS regulation was launched in 2006 by the five biggest payment global brands including MasterCard and VISA. The regulation was targeted at the card industry, which aims to protect the sensitive cardholder information and allows for a worldwide-accepted standard for multiple players to transact on (Nicho & Fakhry, 2013). The POPI act was developed in South Africa and was based on a thorough investigation of global privacy laws. The legislation will significantly influence the ways in which companies use, gather, save and distribute personal information of customers (De Bruyn, 2014).

1.2.3 Access to basic internet services in South Africa

With an oversubscription of mobile phones in South Africa with access to the internet, the utility will be accessible by all (Church, 2015; Cell phone usage in South Africa, 2015). The solution requires a small amount of data (less than 1 megabyte) and hence users will not be too concerned, given that it will cost less than R1 in data costs (Bester, 2018). However, even though the site will be easy to access, the question remains, will the intended customer know of this site? Marketing efforts will thus be required.

1.2.4 Constraints of Gift Cards

The purpose of the gift card was to remove cash from the financial ecosystem, which it does quite well but have inconsistent constraints as explained below (Roth, 2007; Balk, 2017). A user, upon receiving this card, is unaware of these constraints and not conscious of its weaknesses. These constraints differ from bank issuer to issuer and hence make the predictability of take-up difficult. Again, a marketing effort will be required to educate the user to entice sales.

a. **Security** - Once the card is lost or stolen, as a recipient, you will have no claim to it, as you would with your personal cheque or savings account.
b. **Cash Withdrawal** - Cash may not be drawn from an ATM or retailer using the card.
c. **Online transaction** - E-commerce purchases are not allowed due to the institution unable to verify the card owner.
d. **Interest** – More of an indirect shortcoming, but money in your personal bank account at most times gain interest whilst the gift card just merely cycles down after purchases.
e. **Expiration date** – Whilst your cheque card can be merely replaced once expired, a gift card will be rendered useless. The United States market reported on 2.66% of cards that expire of which converted into value in the South African landscape, equates to R34 million (Feinson, 2008).
f. **Exorbitant fees** – The issuing bank will charge high fees on gift card purchases knowing that the user will not mind, as it was free initially (a gift to him/her).
g. **Manageability** – There are no banking applications that will allow you to manage your funds as with your cheque or savings account product.
h. **Loyalty points** – With loyalty points on saving and cheque cards becoming increasingly popular, consumers will rather have the money in their current account to earn these points instead of not gaining any points through the gift card (Mulqueen, 2018; Gramigna, 2017).
i. **Acceptance** – The gift card is not accepted at all retailers and points of purchase, which make for an untrustworthy source of funds.

j. **Small Balances** – Typically, a small balance is left on the card after using it as much as possible. Most retailers are unwilling to perform a dual purchase to complete funds on gift card first and then allow you a chance to swipe the balance on your cheque or savings account.

1.2.5 Outsourcing Capabilities

With all online activity, there must a be client query option, where they would want to know more about the product or have encountered a problem. This function in the current world of doing business, can be easily outsourced (Chua, 2018; Bajaj, 2011). Outsourcing is by no means is a silver bullet, and hence a deeper understanding is required in this area.

1.3 PROBLEM STATEMENTS

To finally answer the question of whether the initiative will be profitable, we need to look at adoption and profitability as we have already established the existence of a R13 billion industry in open loop gift cards.

1.3.1 Will the transfer utility be used (Adoption)?

Even though we have a solution to transfer gift card balances, it is not a given that the customers will adopt the solution. The following drivers of adoption will require a deeper introspection (Prins & Verhoef, 2007; Ha, Canedoli, Baur & Bick, 2012).

a. Accessibility

   The potential customer requires access to the gift card before they can use the service. The distribution of these cards and the reasons for distribution will be critical to understand the target market.

b. Technology

   Given that this is an online service and solution, the factors that drive technology adoption is a key factor to this problem statement.

c. Knowledge

   The shortcomings of the gift card and the lack of knowledge for the potential customer may cause them to not use the service.

d. Marketing effort

   The advertising effort will go hand in hand with the knowledge theme as you need a medium to deliver the knowledge of the shortcomings.

The researcher's hypothesis is that if we receive at least 10% of positive respondents from those who have indeed received gift cards, then we will be able to explore the next section. The 10% benchmark was a requirement from the management who requested this as a baseline market share.

1.3.2 What price will the customer pay and costs involved (Profitability)?

If we have established the intention to use the service on the above hypothesis, we can then investigate the price point for the service and costs incurred (Barker, 2010).

a. Price Point

   The first hurdle was to check if the customer indeed wanted the transfer but to make profit they must also be willing to pay a fee for the transfer. If they are willing, what price allows us to pass the hypothesis outlined below?

b. Costs Incurred

   Apart from the direct cost of sales on the transfer, what other costs are likely to surface and how do we make a calculated choice to minimize expenditure and, in turn, keep profits high.

The cost for a transfer is 3% of transfer value or R30, depending on which is higher. In order for the enterprise to cover start-up costs and prove that the venture is worth taking forward, our hypothesis will take a 33% mark up on costs. Therefore, if they are willing to pay 4% for transfer or R40, depending which is higher, then we can go ahead with the venture. This benchmark was again, obtained from the brief.

2 LITERATURE REVIEW

The literature review is key to the problems that were identified in the previous section. The researcher has explored peer reviewed journal articles that encompass the problem statements, both directly and indirectly, and will follow a format of working through each sub problem, providing literature that build context, knowledge and application. Due to the innovative nature of the solution, novel venture and contemporary application; it required the review of other articles and statistical publications in other sections of the report.

To provide a better understanding of the concepts, the researcher has first defined the topic to provide context into the sub-problems that ensue.

2.1 TOPIC DEFINITION

Gift cards are commonly associated with the purchase of vouchers at retailers where they no longer provide you a paper-based voucher but load a set value onto a gift card of which you can use for gifting to friends and family. These gift cards are known as closed loop cards where the transaction that follow are only between cardholder and retailer.

In this report, we will not be looking at these gift cards, as the ability to transfer the funds is not possible without separate agreements from each retailer. We will be looking at open loop gift cards where it can be administered by a retailer, government entity or corporate business. These cards are loaded with funds and are issued by a South African bank. An entity will make a deal with a gift card distributor and load a float account (temporary account that is drawn down until is either reinvested in or closed) with a certain amount of money at the issuing bank. They can then issue cards to individuals up to the total value of that float value. Once the individual has the card, they basically perform Point of Sale (POS) purchases to the total value loaded on the card at places that accept the card. The card must be marked as VISA, MASTERCARD or AMEX (American Express) which are approved South African System Operators, for

the card to be deemed open loop as it needs to enter the South African Payments System and be approved by a bank, which is the issuer (Peter, 2018; Wigmore, n.d.).

The report will focus only on South African based bank accounts, due to the dependency in the solution, which requires a bank account verification to be performed first before the funds can be transferred. The verification is to ensure that the person making the transfer is indeed the person that owns the bank account where the money will be transferred to. In this way, any fraudulent activity will leave an audit trail behind. This South African verification service has been approved into the solution, whereby you will know if the account is under fraud review or any other unacceptable status. If the account is deemed a risk, then the funds will not be transferred. The Anti Money Laundering (AML) law prevents the transfer without due diligence being performed on a beneficiary account first (Raval, 2018; Hofmeyr, 2018). If the account was not scrutinized, then fraudsters will be able to buy gift cards with cash obtained illegally and transfer these into bank accounts.

The solution is also online-based to cater for ease of access while allowing for electronic payment instruction to be done in real-time. The online component could be in the form a common secure webpage or mobile application.

2.2 ADOPTION

2.2.1 Accessibility

Chakravorti and Lubasi (2006) portray the evolution of the traditional payment instruments which start from cash, to account based, to credit based and finally to prepaid payment products. They also argue that even though gift cards are becoming more prevalent in the world, they won't be able to replace regular accounts as they only work well when the recipient does not have a bank account; the payer does not have access to the payee's bank account; or the

payer wishes to have a level of control over pay-outs instead of their staff accessing the payer's bank account directly.

Gatney, Couper, Axinn, and Barber (2009) adds to the advantages with respect to incentive payments by corporates which include reduced incentive delivery cost, reduced administrative costs and the ability to track card use via the issuing bank. On completion of the research, the findings were that prepaid cards were a lot more cost-effective than the traditional form of payment instruments in the incentive delivery space. Anitsal I, Brown and Anitsal A (2011) portray how the retail space is using innovative ways to brand these gift cards and use it as a marketing tool, which is ever growing.

In the American market, there has been steady year on year growth from 1998 to 2005 which saw the estimation of gift card sales rocket from $12billion to $63billion (Offenberg, 2007). Given the trend, it would be roughly worth $168billion in 2018. This projection can't be directly inferred into the South African Market as the demographic and standard of living differ however credit cards took the same shape in growth as the American market when it was launched. Therefore, even though the numbers may the differ, a similar trend can be anticipated in the South African market.

2.2.2 Technology

Wentzel, Diatha, and Yadavalli (2013) explain the first use of the Technology Adoption model (TAM) that was created in 1989 which was based upon the perceived usefulness (PU) and perceived ease of use (PEOU). Using this basis, they went on to research the financial service adoption in South Africa and provided the insight that attitude towards the new technology had the most significance and this is driven through education. "Trialability", which is the need to experiment first, was highlighted by Brown, Cajee, Davies and Stroebel (2003) for increased adoption rates in the South African cell phone banking market. Users were afraid of the security around these online tools and would need to try it out first in a safe environment.

Brown and Molla (2005) investigated determinants of internet and cell phone banking in South Africa, not explicitly taking the TAM model into consideration. The study being more than 10 years old, needs to be questioned in terms of current day relevance to where there are more high-tech devices and speeds, however, their finding was that internet banking was more prevalent than USSD banking.

Technology adoption is at the heart of our analysis, hence requiring careful application to the report. Education around the offering will be critical to success given the cynical attitudes of the potential users. The offering must be able to demonstrate clearly what the application will perform and the consequences thereafter. There should be a demo mode which will allow the customer to test for themselves and gain a sense of trust.

Parente and Prescott (1994) in their study of technology adoption at a macro level, state that large investments must be introduced into the business sector to promote learning and technology adoption. Asongu (2013) who refers to the African context, states that there is growing role for informal finance, common western measurement tools will not be able to perform accurately given the environment and monetary needs to support this growing activity. From a macro-economic point of view, the reserve bank has recently embarked on a major project via its regulatory body, PASA, to improve our payments industry with financial inclusion being one of the key success factors (Mcleod, 2018).

Chigada and Hirshfelder (2017) state that South Africa has not taken on a trend of mobile banking as fiercely as compared to their neighbouring countries even though we have a high percentage of cellular users. We are possibly a victim of our own success as our banking eco-system is so strong, people are reluctant to use other forms of cash like “Ecocash” in Zimbabwe. Meso, Musa and Mbarika (2005) looked at consumer use of Information and Communication technology in sub-Saharan Africa. They concluded that with the ever-increasing use of mobile telephony and commerce, the diffusion into more sophisticated devices is imminent and m-commerce will be here to stay. Singh’s (2004) research was to investigate why only 22.6% of respondents banked online and what can be done to remedy this number. The trust issue was a major trend as

well as the poor speeds and user experience of the sites. The dynamic screen build of the site will allow for the evolution of m-commerce however; the issue of speed may still be a problem with the solution. The solution will have to stay as lean as possible to ensure quicker turnaround time for clicks on the application.

Gefen D (2000) provides research on why familiarity and trust is extremely important for customer engagement on e-commerce sites. Familiarity may be enhanced through marketing whilst trust is built on the first purchase and it takes the customer longer to pull the trigger in this respect. Luhmann's theory to trust is discussed and it emphasizes the need for trust to create a framework and understanding of the environment. Pavlou (2003) describes trust as a function of risk where consumers view the process in its entirety from informational to transactional and both should behave coherently in a solution. Corbitt, Thanasankit, and Yi (2003) go further by mentioning, people can trust sites when they are of high quality and efficiency. Competence (fulfil promises), integrity (consistent, reliable and honest) and benevolence (consumer interest ahead of self-interest) were dimensions found to ensure trust in e-commerce (Chen and Dhillion, 2003).

This may prove a tricky prospect for a company that is not well renowned and do not have a decent online presence. Alternatives may need to be investigated where the solution can be placed in a longstanding, trustworthy site. However, the disadvantages would be the compromised pricing and profit model. In terms of quality, the benchmarked standards will have to be set as a minimum requirement. Finally, the benevolence factor is an interesting one which will speak to the after sales support from the company for the consumer. The after sales must be of high quality and efficiency to remain attractive.

The Digital Age is upon us, people who purchase online want delivery as soon possible. If there are no tangible items they almost have an expectancy of "immediate." Yoffie (1996) explains the term digital convergence as the coming together of previously distinct products by using powerful technology. The prediction was the convergence will only accelerate in the decades ahead and they were quite right. These sentiments were shared by Merchant (2007) who

believed that we need to equip learning programs to deal with this new world of communication that is instant and demanding.

2.2.3 Knowledge

In a paper written by Horne (2007), she highlights some of the shortcoming of the card which include lack of security from the issuing bank, small balances (known as breakage) left over which averages around 12%, Issuers not allowing the card to be used at all stores as ultimately they make more profit when the card is not used fully, unwillingness or incapability of stores splitting point of sale transaction to first exhaust your gift card before using your personal debit/credit card, limits that exist at stores for purchases and finally the reluctance of providers of these gift cards to divulge all these terms and conditions at time of disbursement. These negative items, even though from an American context, still hold true in the South African context whereby the card has these shortcomings as highlighted by the article.

Choo (2008) looks deeper into the lack of security with these cards and outlines the money laundering capability with these gift card instruments. Terrorist groups will target holders of these cards to get them to mail, over the border, to finance terrorist activity and other criminal activities. It is the easiest way for illegal acts to be funded, leaving no trail of names behind.

Angelini & Gibson (2008) further substantiate this view in their article by saying, "*Banks and credit card companies offer customers the opportunity to buy and load gift cards with whatever amount the customer wishes, sometimes reaching US$1,000 per card. Gift cards can be purchased with dirty money, used in exchange for illicit goods, and sold on the Internet for less than the value stored on the card. With the criminals' use of the Internet, it becomes increasingly difficult to follow the money trail through multiple jurisdictions, companies, and people"* (pp. 67-68).

2.2.4 Marketing Effort

Chiang, Chhajed & Hess (2003) unpack the effects of direct marketing channels and its indirect effect to profits for a corporate institution who wish to increase sales. They argue that companies that open a direct channel to customers will increase their market share in that specific industry.

Nowak (1995) investigates into the matter of privacy when it comes to direct marketing and what is deemed acceptable and what is not. The first point that he brings to the fore, is the source of information used to obtain client information, which includes their name, cell phone numbers, email addresses etc. This source must be a direct consent from the consumer before the information can be obtained. The next point is on whether the consumer actually provided consent for marketing to be received and again, it requires direct consent from the consumer.

Rettie, Grandcolas & Deakins (2005) explored the effectiveness of text-based marketing (commonly known as SMS in South Africa) and its take-up as compared to other mediums. Due to its less intrusive nature as compared to telemarketing, it produces better results. Their study found a 44% take-up rate of SMS marketing. Steenkamp, Nijs, Hanssens & Dekimpe (2005) investigated advertising from a game theory approach and specifically what factors will cause a reaction from competitors and in what intensity. In a market of high perceived gains and high market share prediction, competitors will immediately strategize to compete. If they are well established, they will not mind under cutting the competitions price to gain a foothold.

When looking into our scenario, direct marketing through SMS' seem to be the best approach due to lower costs as compared to telemarketing or fully blown television campaigns. Given that this also a novel innovation in the space, you don't want your potential competitors to get wind too early before you acquired a substantial market share. However, there is the issue of not having the contact details of the recipient, due to the nature of a gift card disbursement and if we wish to obtain it, we will require agreements with the distributors which will not be cost effective due to the labour intense nature of this exercise.

2.3 PROFITABILITY

2.3.1 Price Point

Essegaier, Gupta and Zhang (2002) explain the different pricing choices available to a firm which include flat pricing, usage pricing and a hybrid model. Their findings were that capacity constraints and consumer heterogeneity are important determinants in the pricing decision. Depending on how limited the resource is, the firm can align its aggressiveness however, they should not forget the customer when taking an extremely monopolistic approach. Bapna, Goes and Gupta (2005) looked at the pricing methods for quality differentiated online services especially where the demand is unknown. They recommend that real-time services should use the Multiple Vickrey Auction approach (MVA) whereby the price should be set at obtaining the number of goods to be sold and then setting the price at the bid price where we have number of goods sold, plus 1.

In our pricing setup we have both a usage-based cost and a flat fee per transaction and hence a hybrid model makes sense for implementation. Even though the concept is novel in the market we should bear the customer in mind and not take an overly aggressive strategy. We do expect heterogeneity in the customer base and hence the pricing should be conservative. In terms of the auction approach, it is not applicable given the endless supply of the service.

2.3.2 Costs

The idea behind researching this topic would be that, people who have money saved, would not need the instant cash from a real-time transfer and would be much more comfortable to pay less for a delayed transfer. The converse also applies in that, people with no savings will look for instant gratification of funds. Case and Deaton (1998) describe the large social pension that is paid to the elderly in South Africa, which is almost twice the per median capita. Aron and Muellbauer (2000) mention that the low saving will increase in the next decade due to the state of AIDS in the country.

The large social pension pay-out confirms the poor saving culture in South Africa, whereby pensioners are unable to live on their own savings but rather rely on the government to survive. Savings is not something that is valued within the South African landscape and hence the real-time option will possibly be the popular outcome.

The costs are broken up into fixed and variable, whereby we know the costs at time of transaction however, we have not taken into consideration the need for a back-office administration function, and possibly a contact person for queries. The Ultimate decision would be to either hire locally or outsource the function. Dossani and Kenny (2003) looked at outsourcing to India and the cost saving gains that can be achieved. They argue that with the digital world upon us and bandwidth ever improving, it made sense to not pay exorbitant local wage prices but rather outsource these functions overseas.

Belcourt (2006) disagrees by saying that outsourcing has a negative impact on employee morale and performance. When structures are disrupted by outsourced workers, employees become resentful and tend to retaliate decreasing performance as a whole. She goes further by mentioning that outsourcing can lead to culture disintegration where employees feel alienated and has an effect of deskilling employees.

Cohen and Moodley (2012) in a paper around unemployment in South Africa state, "*An increased reliance upon outsourcing and sub-contracting arrangements has given rise to the growing 'casualisation' of the labour market and an unregulated and insecure labour force. 'Externalisation' in terms of which workers are supplied to a client by a third party by means of a commercial contract, has had a similarly detrimental impact on the labour market"* (pp. 322). The use of outsourcing, even though cost effective, is also counterproductive to our countries bleeding unemployment problem.

There is also a case for using technology in the form of online tickets for queries and chat bots for quicker assistance. In a case study done by Zaugg (2007), which looked into online complaint management, he found that in the next decade, online complaints will not completely replace traditional phoning

methods in general, but it will become the preferred method of interaction given that the company can provide a trustworthy and effective online platform.

Albornoz & Martin (2012) mention that online dispute systems should take careful care in tailoring it to the capabilities of a region, in their paper that looked at online dispute resolution (ODR) in emerging countries. They find that the use of ODR will speed up turnaround time and enhance the regions migration into a more digital economy.

Brett, Olekalns, Friedman, Goates, Anderson, & Lisco, (2007) investigated the language importance of online dispute resolution in the share trading industry. Their findings were that the use of certain words and grammar could be used to grade the priority of an online ticket. This article, in 2007 already, started touching on the artificial intelligence aspect of querying and more importantly to the research, the use of chat bots.

Dale (2016) defines chatbots as a form of achieving some result by conversing with a machine via a dialogue using natural language. He goes on by saying that this is not a new innovation and the chatbot craze existed before, however the environment did not allow for them to thrive. With the current mass availability of internet connected devices, there is a home for a chatbot now. Ivanov (2017) speaks of the benefits that chatbots bring to companies which include: driving down of labour costs, allowing for smaller workplaces and rent due to smaller staff compliment and improved logistics due to companies being able to be closer to their customer hubs.

3 RESEARCH METHODOLOGY

3.1 HIGH LEVEL PLAN

In order to ascertain the appetite in the market, the researcher will be administering a survey through a web link to various groups of individuals. The survey will be confidential and will try to encompass the different current target markets for gift cards. An online survey provides the advantage of gaining access to unique populations, quicker turnaround time to responses, cheaper costs, suitability to categorical answers instead of opinionated ones (Wright, 2005). Once the results are in, the researcher will use a couple of quantitative techniques to sort and interpret the data. Once interpreted, the researcher will be able to analyse the data and highlight findings with respect to the core sub-problems of the report. Finally, the researcher will look at the shortcomings of the research due to certain factors that were unable to be mitigated.

3.2 QUANTITATIVE APPROACH

The crux of the problem we are trying to solve is whether an online solution will be used by the potential customer and at what price are they willing to use this service. The solution is very much set in stone from the management who have requested this report, and therefore we are not trying to explore any alternative views or methods in this study. If the responses are poor in the sense that they will not use the service, then a follow up qualitative research method will be in order, to explore the reasons why. The researcher endeavours to test a few theories in terms of education and demographics to provide persuading factors. This method was chosen over a qualitative approach due to the hard data, passive interaction, large population and few research variables (Sogunro, 2002).

3.3 POPULATION AND SAMPLING METHOD

The population of people that would have received a gift card (sample frame) fall within one of four categories, namely: Government disbursements, Corporate incentives/Payroll, Retailer programmes and other (smallest spread population over travel, reloadable etc.). Once we have this data we will be able to run descriptive statistics over the data and pivot tables to check adoption rate and possibly the groups that are the most profitable. In terms of participation, there will be no monetary incentive due to the large number of respondents, the researcher intends on having the survey be rather short, taking a respondent no more than 5 minutes to complete.

These results will allow the company to know where their profits will come from and can position themselves appropriately with education in that segment. We can then take the groups and understand their pricing requirements. Once this is understood we will be able to perform a projection of the profits using a Monte Carlo simulation. Dizikes (2010), from the Massachusetts Institute of Technology (MIT), explains that Monte Carlo simulation is best applied when empirical data is accurate. The probabilities of take-up and at what price will be simulated to show a model of profit and importantly what would be the break-even point for the initiative.

3.4 SURVEY INSTRUMENT

The survey (Appendix 6.4) that was constructed in a systematic way as to address the problem statements that are defined earlier. There are overlaps on the problems that will allow the responder to seamlessly move from problem to problem. The survey was written to be as simple as possible for the reader with informational notes when required and should be completed easily with any discrepancies being eliminated during the pilot run. There is also a section on demographics in an attempt to find an answering pattern through descriptive statistics. Talikoti (n.d.) explains that obtaining a variety of responses can be tedious without using an online survey tool and hence to ensure we obtain a sample that is representative of the population we are using an online tool.

3.5 VALIDITY AND RELIABILITY

To enhance the validity and reliability in the report, the researcher has performed the following: he discarded respondents who actually never received a gift card, used simple wording to ensure no ambiguity is encountered (Wang, 2014); a pilot survey will be done first to ensure the survey is achieving it's intended goal with the researcher characterising the gift card type to ensure that a specific groups results will not be extrapolated to another, as they are fundamentally differently used and administered. Another vital question is whether the respondent has a bank account as without it, the solution simply can't work. To ensure that the respondent understands the subject matter there are certain groupings that ask the same question in different ways. In terms of external validity, it is not a given that this study can work in other geographic areas and hence it is explicitly locked into South Africa, however it can be applied to members of the population that meet the same demographic.

3.6 ETHICS

When looking at the government disbursement and payroll in corporates, it can be seen as unethical to issue them a gift card and then charge them to transfer it into a bank account. Even though this report only focuses on the transfer portion, the person will feel hard done by. A possible mitigating factor will be to request the issuer to fund the transfer as they should have paid the money into the person's bank account in the first place. A vouchering system may need to be added to the solution to accommodate this whereby the full balance is transferred. The government however does include an option for direct transfer which can be the education we provide the user after transacting, so that in future they can have an initial deposit (Ferreira, 2017). The unintended consequence that may arise is where people without bank accounts approach people with accounts and ask them to perform the transfer for them. This could open the door to fraudulent activity as well as incorrect reporting. Although credit and debit card fraud has come down in total in the last year, the online use of these cards have increased by 60.7% due to opening of issuing constraints (Pillay K, 2018).

4 PRESENTATION OF RESULTS

4.1 Shortcomings of the data collection

The survey that was administered, was meant to target three of the main channels that provided the gift cards, which included retail incentive, corporate incentive and government disbursement. However, possibly due to the fact that the survey was administered through an online link, the last channel of gift card provider, government disbursements, came back with a zero hit-rate. However, the open-ended channel of “other” was a more popular option. As per Clarke (2012), the “other” group will refer to travel, payroll, reloadable and remittances.

4.2 FINDINGS

4.2.1 Data Preparation

There were multiple steps that were needed before the researcher could bring the dataset into a normalized form for analysis. These steps were adapted from Hellerstein’s (2008) paper on quantitative data cleaning which sought to remove errors and other outliers which can cause integrity issues.

Step 1: Extract data from Survey Tool, “Qualtrics”, by exporting it into EXCEL.

Step 2: Apply headings to data and shape it into a table.

Step 3: Remove population where the gift card was never received. NB: The survey short circuited at this point as the researcher did not want hypothetical answers from people who never actually experienced using a gift card. Respondent count went from 229 to 80. Roughly, only 1 in 3 people received a gift card.

Step 4: Removed data inconsistencies and outliers which left me with 65 rows.

Step 5: Removed column “do you have a bank account” and column “do you shop online” as it was answered “Yes” for all rows. However, finding was noted to be unanimous for these factors for insights analysis.

4.2.2 Demographics breakdown

When looking at the initial 229 responses, it was heavily skewed in the Gauteng region at 73%. This skew-ness became even larger when looking at the 65 respondents who received gift cards at 85%.

The education demographic also had a large weighting towards educated people. Out of the 229 respondents, 74% received tertiary education, 20% matriculated and only 6% did not matriculate. From the sample that received gift cards, the number skewed further towards educated people with 86% receiving tertiary education, 13% matriculated and only 1% not matriculating.

Finally, the sources of income saw only 2% in the sample who received gift cards having a governmental source of income. This number rose to only 4% when viewing the entire sample. The other categories for sources of income included Investment income, profit from business, other and salary/wage. The salary/wage was the greatest segment making up 69% in the gift card received sample and 77% in the entire sample.

4.2.3 Direct Inferences

Firstly, let us look at the split between the three channels. The “Retail Stores” led the way at 27 with “Work Incentive” and “other” at roughly the same number.

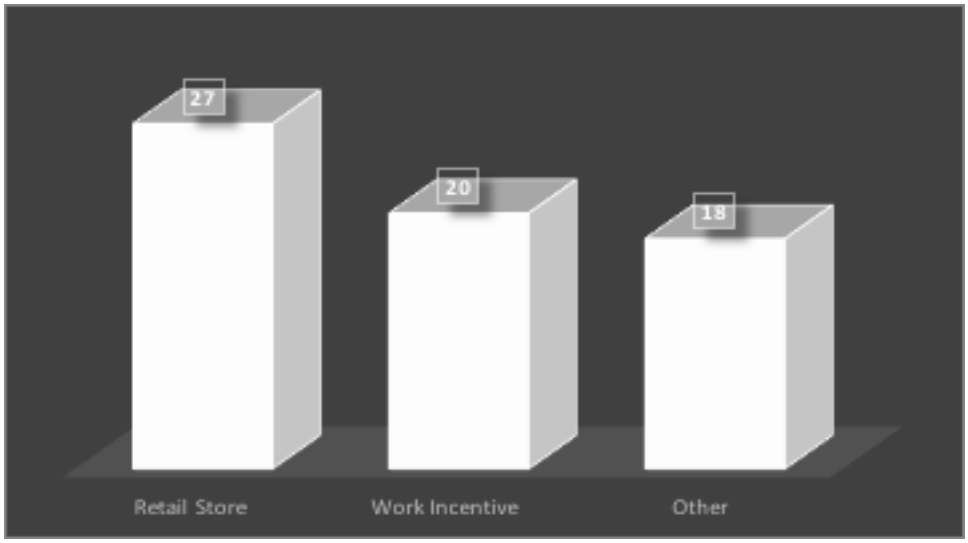

Figure 1: Channel Split with Count

The researcher aimed to understand how many people actually used the card until the funds were depleted in full. More than two thirds of the sample opted to leave the card at home instead of carrying when there was a small balance left on the card.

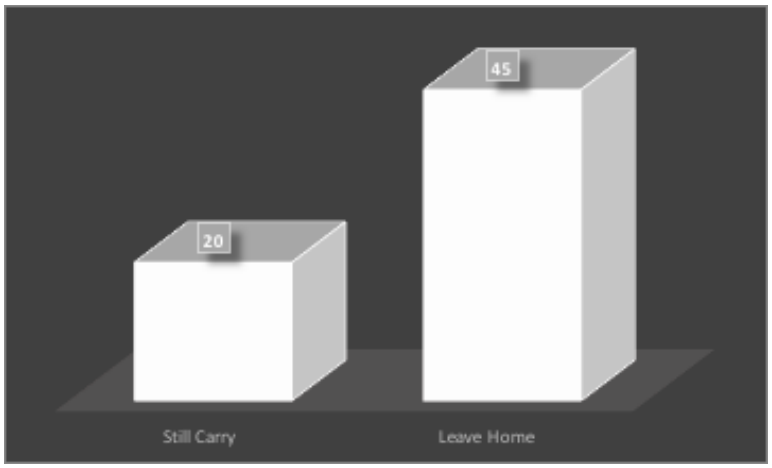

Figure 2: Use of Card with small balance, Split Count

The next trio of questions sought to find out on whether a person would consider a transfer, would they still consider if there was a fee and finally would they still consider a transfer if there was a fee, but they knew of all the constraints as highlighted in section 1.2.4. The following tabulations of results was produced after splitting per channel.

Even though the split was imposed, Weighted averages were still used to generalise inferences due to the similar behaviour of the variables under question. It can be clearly seen that after the customer is aware of the constraints, the willingness to transfer has increased. A concerted marketing effort will be required if we want to boost take-up from 25% to 49% on average.

	Orginal Sample	Will Transfer	% of Original Sample	Weighted Average
Retail Store	27	19	70	67%
Work Incentive	20	14	70	
Other	18	11	61	

Figure 3: Original Take-Up of Transfer

	Orginal Sample	Will Transfer	% of Original Sample	Weighted Average	Will Transfer for a fee	% of Original Sample	Weighted Average	Decrease in Take-Up	Weighted Average
Retail Store	27	19	70	67%	10	37	25%	-33	-42%
Work Incentive	20	14	70		4	20		-50	
Other	18	11	61		2	11		-50	

Figure 4: Take-Up of Transfer after imposing a fee compared to Original Take-Up of Transfer

	Orginal Sample	Will Transfer	% of Original Sample	Weighted Average	Will Transfer for a fee knowing Constraints	% of Original Sample	Weighted Average	Decrease in Take-Up	Weighted Average
Retail Store	27	19	70	67%	14	52	49%	-19	-18%
Work Incentive	20	14	70		10	50		-20	
Other	18	11	61		8	44		-17	

Figure 5: Take-Up of Transfer after imposing a fee as well as informing them of the constraints compared to Original Take-Up of Transfer

The next set of questions enquired on whether the customer will prefer real-time transfer into their bank account and if so, are they willing to pay a fee for the transfer. The real-time transfer will cost the business extra as opposed to delayed transfer and hence this question links directly into margin and profitability. Of the 32 that opted to take the transfer whilst paying a fee, 91% of them wanted a real-time transfer. Of that 91%, 66% were not willing to pay an extra fee for it. This is contrary to the fact that 92% of the population mentioned

that they saved regularly. The sample clearly does not see their saving habit having any bearing on instant gratification on a service.

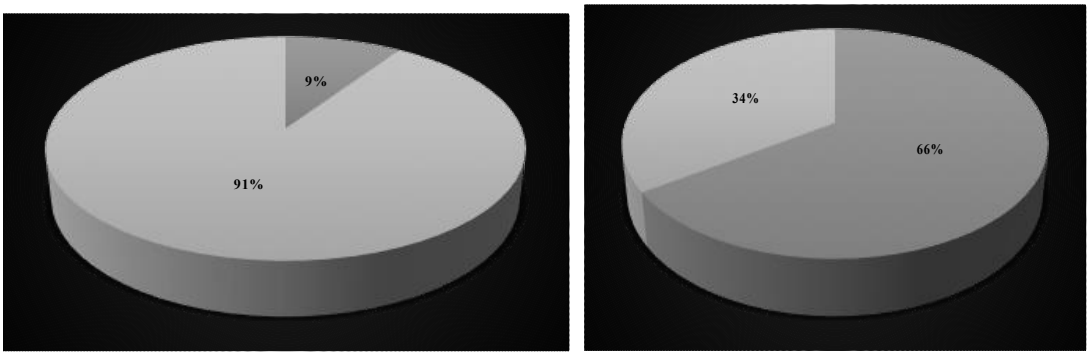

Figure 6: Pie Charts for Real-time Transfer Option

The next section was to ascertain what price are customers willing to pay for the transfer. This was broken down into a percentage of transfer option and a flat fee option. The options chosen were plotted into a histogram to see the distribution which revealed that customers mostly wanted to pay 5% per transfer or R50 per transfer, depending which one was higher.

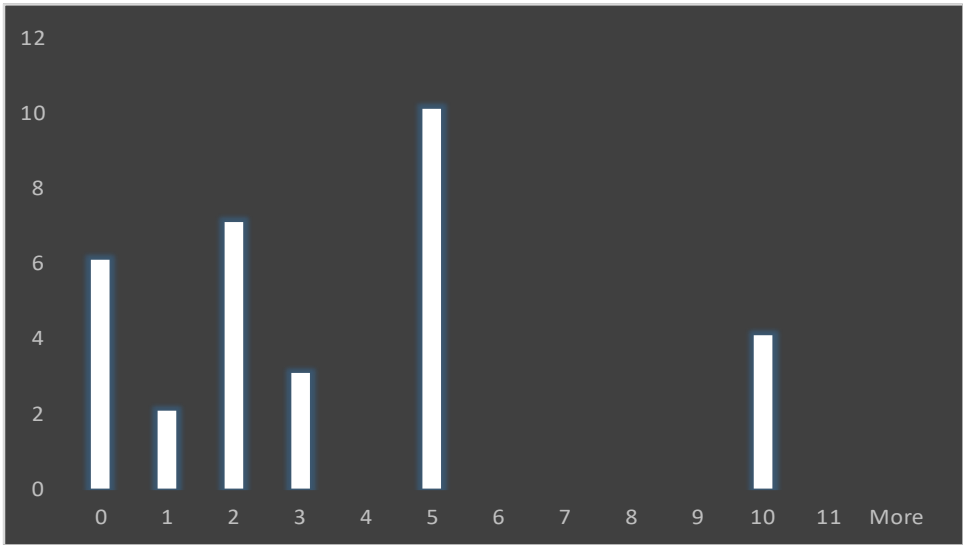

Figure 7: Percentage Willing to pay – Histogram

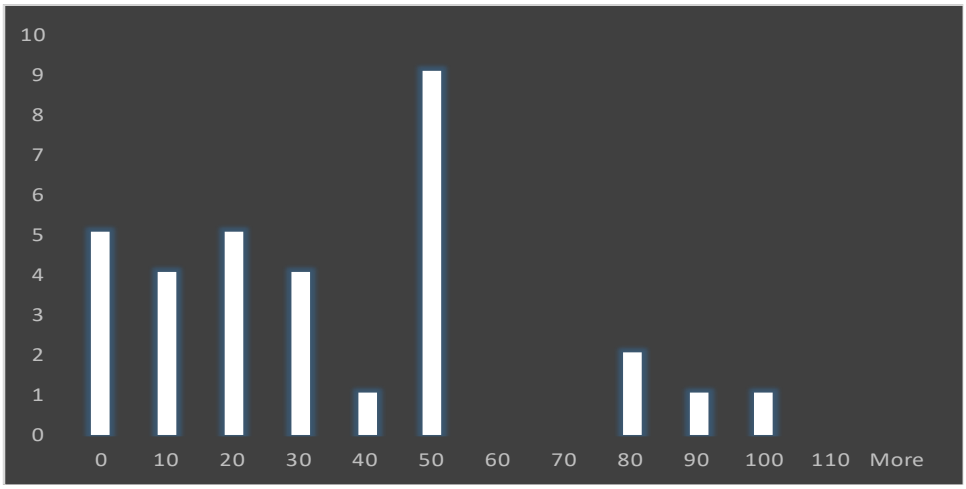

Figure 8: Flat Fee Willing to Pay - Histogram

The last set of questions spoke to the querying function of the business, where technology can only take you so far. You will need manpower to action queries, but the question is, do they also have to man the telephone which can lead to greater expenses via an extended contact centre cost. The researcher has plotted the permutations on the two questions to see the most pronounced to the least. It is also very important to note that the average turnaround time expected for query resolution from the sample was 1.5 days. A negligible count of respondents wanted to the turnaround time to be within the same day.

Option	Combinations		Count	Percentage
1	Log Online ticket	Chat bot	22	69
2	Log Online ticket	No Chat Bot	1	3
3	Call at my own cost	Chat bot	5	16
4	Call at my own cost	No Chat Bot	4	13

Figure 9: Combination breakdown of Preferred query contact method

5 DISCUSSION OF RESULTS

5.1 INSIGHTS INTO DATA

5.1.1 Shortcomings

From the demographics response breakdown, the respondents were predominantly from Gauteng, had at the least matriculated, and all had a steady source of income and did not rely on government aid. Wentzel et al, (2013) referred to technology adoption being higher in educated people and in line with their findings, the less educated did not opt to click on the link or it never reached them.

According to Brown et al (2005), early adoption is preferred on smart devices and hence users of feature phones would be least likely to try the survey. Serrao (2014) further emphasizes the dominance of Gauteng and mentioning it being the most economically advanced and educationally advanced to the rest of South Africa. This leaves us with a dilemma as we can't make inferences to the entire population based on a skewed Gauteng only sample, which clearly has an advantage over the other provinces. However, if we can find that most of the gift cards are administered in Gauteng then it places a proportionality to the discussion which makes inferences to other provinces a little more digestible.

It was no surprise that there were no responses from the government disbursement channel, it motivates towards the fact that technology adoption rate in this channel is very low. Therefore, even though the researcher will not be unpacking this section due to the lack of data from the survey, it already gives you an inclination that take-up of an online solution will also be poor. A more qualitative approach may possibly be needed to unravel the feelings of government disbursement recipients who are the predominantly the elderly and the less fortunate. This also provides reference to the dilemma above, as it looks as though Gauteng is dominated by corporate and retail incentive gift cards.

With the lack of secondary data to support the Gauteng gift card breakdown, we will have to make a calculated assumption that the economic hub is the largest recipient of retail and corporate incentive gift cards. This assumption can be further substantiated by the fact that 34% of respondents did receive a gift card which is very high; the normal take-up rate is around 24% (Calculation below) when you factor in the average gift card price with the South African population.

Take-Up Calculation:

- ✓ Fact1: R13 billion worth of open loop gift cards in circulation (Clarke, 2012)
- ✓ Fact2: Average Price of gift will be an average of government disbursement of R1720 and average gift card price of R1000 which equates to R1360. (Old Age Pension, 2019; Sidler, 2016)
- ✓ Derivation 1: R13billion / R1360 will provide a theoretical value for the number of gift cards issued which equates to 9.55million gift cards.
- ✓ Fact3: 70% of the of the South African population are adults equating to 40.4 million people (Mid-year population estimates, 2018)
- ✓ Final Derivation: The number of South Africans that have received a gift card out of the adult population will be 9.55million/40.4million which equates to 24%.

Other factors that persuade us to the dominant Gauteng economic status was the fact that all respondents who received a gift card had a bank account and shopped online. Therefore, even though our study has totally missed the government disbursement sample, we can project the corporate and retail sample to the population. This brings our target market from R13bn to R8bn after removing government disbursements (Clarke, 2012).

5.1.2 Hypothesis Tests

Our first test was to ensure that we at least obtain a 10% take-up from those who have received gift cards. However, this number needs to be adjusted due to the lack of government respondents which reduced our target market from R13 billion to R8 billion. The adjustment will have to see an increase in the 10% as the market share has diminished and hence our new hypothesis will be set at 16.25% to reach R1.3billion of the market from the R8bn share.

After unpacking the respondent's data, even before they were knowledgeable of the shortcomings, the respondent's had a 25% take-up rate. This already a 54% higher take-up than that was hypothesized. After factoring in the shortcomings, the take-up rate shot up to 45%, which sees a 176% higher take-up than that was hypothesized. This provides us with clear justification that the adoption portion has passed, which allows us to begin looking into profitability. The clear gain from the marketing effort simply can't be ignored. It basically doubles take-up and was the driving factor for a fee take-up in the next section.

The second test was to at least obtain a 4% variable costing or R40 flat fee depending on which was higher. However, this test will also require adjustment since the population had a landslide vote towards real-time transfer as a preferred option and not wanting to pay a fee for it. 91% of respondents opted for real-time transfer and 66% of that 91% were not willing to pay a fee. This will cost the company an extra 0.5% of variable costing and R5 on the flat fee which brings the new hypothesis to 4.5% of variable costing and R45 on the flat fee. When analysing the histograms for the mode (highest occurrence of a value chosen) we see that the population opted for a 5% variable cost and R50 flat fee which passes the hypothesis test.

5.1.3 Combined Hypothesis Test

At first glance, this should be an overall pass, but it will be prudent of us to combine these two tests to see if we still have a viable business. The new hypothesis question will be:

Is there a greater than 16.25% adoption rate whilst willing to pay a variable cost of greater than 4.5% or a fixed flat fee of greater than R45?

When looking at the variable costs, we have 14 respondents that are willing to pay 5% or more which equates to a 22% take-up rate. – **PASSED.**

When looking at the fixed costs, we have 13 respondents that are willing to pay R50 or more which equates to a 20% take-up rate. – **PASSED.**

5.1.4 Fixed Costs

From the previous section, we have derived that a marketing cost is inevitable to ensure we pass the hypothesis test. As per the literature review, a full-blown marketing drive will not be in our best interest before we obtain market share and hence a direct marketing approach seems more fitting. However, we have a major challenge on our hands as we don't have the contact details of the recipients. We will unpack the different options to address challenge in the next section and quantify a cost.

From the data, it was surprising to note that nearly 70% of the sample opted for a non-immediate approach by wishing to log a ticket or chatting to a chatbot. (a computer program designed to simulate conversation with human users, especially over the Internet) Here again, this speaks to the skewness in the sample set, whereby most users are educated and, in most instances, technologically inclined. This finding may not be projected onto the less educated in the government disbursement category. In the business implications section, we look at the workforce that is required to service this requirement from the sample.

Another surprising fact is that their preferred turn-around time of 1.5 days is not congruent with their earlier need for real-time or instant gratification. This may be from past experiences dealing with other query channels. However, the finding that is congruent with the sample (92%) currently having a “saving” character trait. People who are banking on that money to be immediately transferred will certainly not be impressed with a 1.5-day waiting period if there was a glitch in the system.

5.2 BUSINESS IMPLICATIONS

Given that we know all the parameters and findings from the data, we now need to understand how we relate this back to the business.

5.2.1 Task at Hand

This report was written to assist the management team from an enterprise, in deciding on whether they should move forward with this novel venture after one of their employees from the innovation team managed to solve for the transferring of gift card balances. The management team advised us that it will cost them R3million in start-up costs to take the theoretical solution live after paying for software development costs, various licences and upfront vendor integration. They advised that their cost of sales per transfer would be 3% of transfer value or R30 flat fee depending of which is higher. They were looking to make a 33% profit (hence we set our hypothesis at 4% and R40) to gain shareholder buy-in. They currently do have a back-office staff for contact ability and financial services departments as well. They were looking at sales to the value of R1.3 billion which is roughly 10% of the open loop market. Our task was to therefore advise them if adoption and the fee the customers are willing to pay will meet the requirements set out. And if they do meet requirements, model the income statement to show projected profits of the venture. They also specifically asked for any unknown developments that may occur and finally provide a recommendation after performing market research.

5.2.2 Adoption – Marketing Effort

An unforeseen cost that arose was the need for marketing to firstly, educate the potential customer on the shortcomings of the card and secondly, provide the potential customer with the link to perform the transfer (which is essentially the secure site to perform the transfer as well as education on the shortcomings). There are thus a few options that the business can adopt to meet this marketing need given that they don't have the contact details of the recipient of the card.

Option 1: Derive a listing of all distributors of the gift cards in South Africa and create an information sheet that they can use as an annexure on distribution of the card. This approach may work but you are not guaranteed that the recipient of the gift card will receive this information sheet as it needs to pass through the Retailer or corporate first. The other cost ineffective problem is to create a sales network to strike deals with the various distributors. To compound the problem, with the rate that these distributors are increasing, it can't be a once off exercise. According to Walberer (2018), there are many forms of pay constructs that exist for a sales team which include: Gross margin plan, tiered commission plans, multiplier plans and straight commission. The most common being a gross profit plan whereby a sales agent will receive 5% to 10% of gross profit. With our gross profit around R32million (as per simulation model below), the worst-case scenario will see **R3.2 million** as a fixed cost for a sales team.

Option 2: A better option would be to strike deals with the large corporates and retailers who dish out these cards to include an information sheet. This is a better option as you know that the institutions have a higher level of accountability than in option 1 but you still have most of the same drawbacks which include high cost of sales network and an ongoing initiative. This team, as in option 1, will need to have a greater reach due to the increased number of corporates and retailers as opposed to distributors. However, the commission structure will remain the same which see the option also costing around **R3.2 million** rand.

Option 3: The most difficult option to start off with but will produce the best results in terms of cost effectiveness and once off effort. You are going to have to approach the regulator, PASA, and convince them of the need for customers to know the potential shortfalls of the card. Due to the fact that no institution has their details, the only sure-fire way of achieving this, is to place the warning on the card itself. However, the regulator will not agree to place your link on the card but will rather offer their website to ensure credibility. Your task will be to then tender on their site for the first company to perform the transfer. This exercise may seem cheaper and a once off cost but to pass laws in the payments industry takes time and resources and therefore at least a **R2.5 million** budget should be allocated for this venture. This will be based on an hourly worst-case rate of around R2500 over 6 months for a corporate lawyer (The South African Law Firms Hourly Rate Survey Results, 2010; Gefen N., 2013).

Option 4: The business could also opt for a marketing campaign that is non-targeted to gift card holders only but to the entire population in the hope that the gift card holders will receive the message. The various media platforms may include: television, radio, print, billboards, online social platforms and roadshows. A marketing campaign will most certainly bring the desired education across with respect to the shortcomings of the card. A venture like this is commonly referred to as an 'Above the Line" marketing campaign (Manral, 2011). Leone (2018) suggests that marketing budget should be around 9.6% of revenue, which equates to around **R9 million** for this venture, given our simulation model.

The options put forward are not core to this report but was something that arose out of the data collection. There is certainly more research that can be put into this area, but the researcher thought it prudent to frame the possible options to provide a recommendation later in the report.

5.2.3 Profitability – Fixed Costs

With nearly 30% opting for preferred query resolution of the well renown “call in” scenario, one could easily write them off as the majority opted for online methods. However, the gift cards are administered quite frequently to repeat clients and hence you want to be able to cater for them as well. The researcher has plotted the below workforce map against combination breakdowns to explore the different options.

Option	Combinations		Count	Percentage	no. of Employees required
1	Log Online ticket	Chat bot	22	69	**0**
2	Log Online ticket	No Chat Bot	1	3	**0**
3	Call at my own cost	Chat bot	5	16	**2**
4	Call at my own cost	No Chat Bot	4	13	**2**

Figure 10: Combination breakdown of Preferred query contact method including number of employees required.

With option 1 and 2, there is no direct communication with call centre staff and hence none are required. This can only be done as the corporate already has a back-office staff financial administration compliment to service these query requests and merely update the online ticket.

Option 3 and 4, we would not need two employees each, but merely two will cover both options as it is the “call in” option. The software should be built pretty well but there are unforeseen incidents that can occur (Network outage as an example) and hence a person should be stationed on the phones. The request for two people was to have back up when one person is not available which could be due to a whole host of reasons which include: sickness, holiday, studying etc. The outsourcing option is also available to gather and log phone in queries but for a corporate that already has an established call centre, many of the costs are already absorbed like rent, workstations, utilities and management (Fichera, 2015). With the most experienced call centre agents earning no more than R20k per month, the two agents will cost the corporate roughly R0.5m a year.

After looking into the cost of Chatbots, Ismail (2018) mentions that it would cost around $3k for a system on a small site. This equates to roughly R45k which will not make a major difference to our calculation and can be absorbed into the development costs.

5.2.4 Monte Carlo Simulation

The next portion of the brief at hand, will be to model the income statement for the business in which each line item will be explained in detail. The researcher will then use the Monte Carlo simulation tool to project the profits which is based on randomization and upper and lower limits set. Boyle (1977) explains this simulation to be well suited for a model of a few variables (like the one we are working with) and once–off scenarios (like an income statement that we are working with).

1. Sales Revenue

   The sales revenue for the model requires three parameters, namely the minimum amount, most likely amount and the maximum. For the minimum and most likely, the number will be adopted from the hypothesis test passing at 21% (average of variable and flat fee base) which provide us with a figure of R84 million (R8bn*21%*5%).

   For the maximum figure we will predict that the bucket before the 5% (those who chose 3%) will be able to stretch their arm and still take up the transfer. The new number will be 17 (14 + 3), which will give us a 26% take-up which equates to a sales figure of R104 million (R8bn*26%*5%). Yes, this is ambitious, but it is the upper bound we are setting with data to back up our decision.

2. Cost of Sales

   This will be set at 65% as the cost of transfer is 3.5% (3% from the brief added to 0.5% from the addition of real-time transfer) and the sale is 5%, therefore (3.5/5*100) equates to 65%.

3. Fixed Costs

   This will be a function of marketing (estimated at R2.5million earlier), payback on initial costs of development (R3million from the brief) and finally the call centre agent employment cost (estimated at R0.5million). All these costs will have to be settled in full in year 1. Therefore, both the minimum and maximum will set at the sum of these costs which equate to R6million.

4. Total Expenses

   Cost of Sales + Total Expenses

5. Pre-Tax income

   Sales – Total Expenses

6. Taxation

   Tiered scale with upper cap set at 28%, which is the South African business tax rate (Lamprecht, 2019).

7. Net Income (Profit/Loss)

   Pre-Tax income - Taxation

Simulation Model

		Budget	Simulation	Random number			
Sales revenue		R 90 666 667	R 87 429 408	0,3135	Minimum	R 84 000 000	
					Most likely	R 84 000 000	R 84 000 000
Less:	Cost of sales	R 58 933 333	R 56 829 115		Maximum	R 104 000 000	R 87 429 408
	Fixed Costs	R 6 000 000	R 6 000 000	0,5859	Minimum	R 6 000 000	
					Maximum	R 6 000 000	
	Total expenses	R 64 933 333	R 62 829 115				
Pre-tax income		R 25 733 333	R 24 600 293				
Less:	Taxation	R 7 205 333	R 6 888 082				
Net income		R 18 528 000	R 17 712 211				

Tax table			
Threshold		Margin rate	Taxation
R -1 000 000	R -	0%	R -
R 70 700	R -	7%	R 1 717 071
R 365 000	R 20 601	21%	R 5 110 012
R 550 000	R 59 451	28%	R 6 793 533

Figure 11: Monte Carlo Simulation Model

From the Simulation mock-up, it can be clearly seen that both the budget column and the simulated column produce a positive net income. The researcher actually ran the model multiple times to try and get the lowest Net income so that we don't try and inflate figures due to a lucky random number drawn. The return on investment (ROI) for the simulation produces a 317% return based on R6 million investment that is required to get the initiative going.

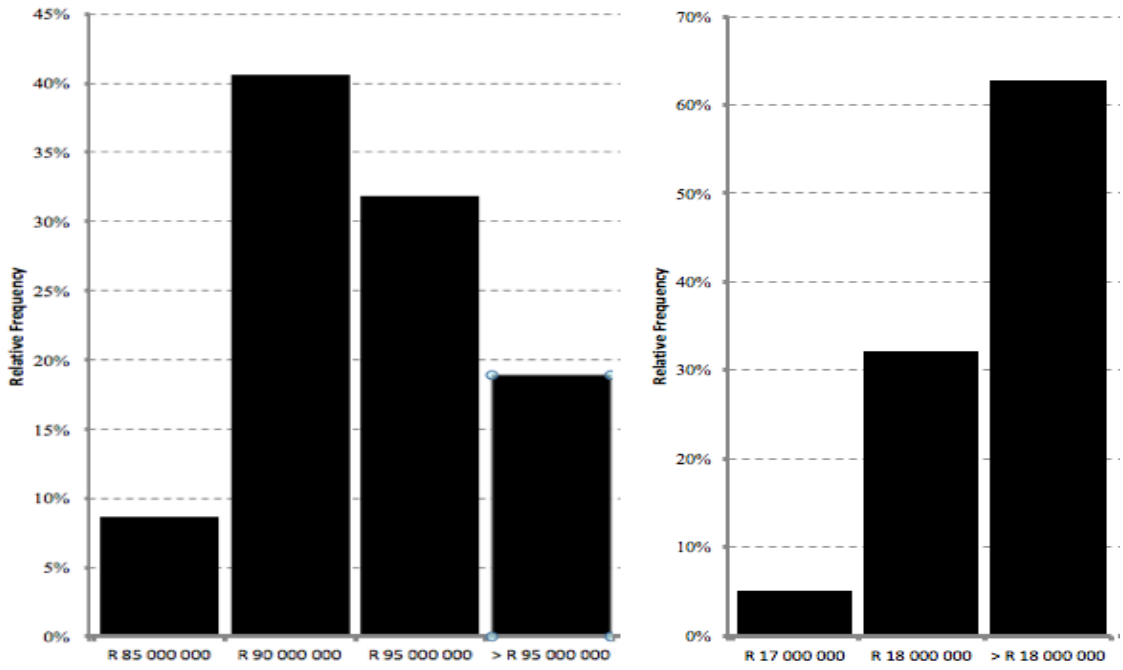

Figure 12: Monte Carlo Simulation Model – Probability plots from Sales and Profit

When looking at the probability plots for Sales and Profit there is a more than 90% probability of obtaining sales revenue of greater than R90million and a greater than 95% probability of making at least R18million rand in profit.

5.2.5 Net Present Value (NPV)

Up to this point we have been looking at the projection on the first year only, however business investment should take a long-term outlook on their investment and the future cash flows it will bring. The rule in financial accounting and business is that if we can project the future cash flows then we can discount them back today and see if our investment is worth taking on. This

calculation is commonly known as the Net Present Value and is commonly used to evaluate ventures (Gallo, 2014).

$$\text{Net Present Value} = \sum \frac{\text{Year n Total Cash Flow}}{(1 + \text{Discount Rate})^n}$$

Where "n" is the year whose cash flow is being discounted.

$$\frac{FV_1}{(1 + \text{Discount Rate})^n}$$

Where "FV" is the projected cash flow for each year and "n" is the number of periods out the cash flow is from the present.

Figure 13: Net Present Value Calculation. *Adapted from "A Refresher on Net Present Value," by A. Gallo (2014), 19 November 2014, Harvard Business Review. Copyright © 2019 Harvard Business School Publishing*

We are going to make a three-year projection as our assumption is that this innovation will be improved upon within those three years and a new projection will be required.

1. Discount rate

   The discount rate considers the time value of money. As an example, R1 today has less buying power a year from now due to inflation. We have opted to apply the government bond coupon rate (7.045%) as our discount factor due it's extremely low risk profile (South Africa Government Bonds - Yields Curve, 2019; South Africa – Government Bonds, 2019).

2. Cash Flow 0 – Initial investment

   The initial investment was the licence link on the regulator's website and the development costs which equate to R5.5 million.

3. Cash Flow 1

   As seen in simulated income statement, the business brought in R17.7 million at the end of the first year and had to pay salaries to the value of R0.5 million, leaving a cash flow of R17.2 million.

4. Cash Flow 2

   In order to gain an understanding of year 2, we have to make some assumptions. The assumptions will that we will hold onto our current market share from year 1 and continue to sell the same in year 1. Once again, we have a salary cost with a 10% increase, equating to R0.55 million. This produces a cash flow of R17.15 million.

5. Cash Flow 3

   In year 3, the prudent action will be to re-negotiate costs with the vendor for the service. Given a two-year track record and steady volumes, we can make a case for a decrease in costs from 3% to 2.5%. This will bring our cost of sales down to 60% from 65%. We will still be working on the assumption that we retain the same market share and contact centre salaries at a 10% increase equating to R0.6 million. This will now equate to an increased profit and cash flow of R21.7 million. Net cash for the period will therefore be R21.1 million.

NPV				
Period	0	1	2	3
Cash Flow	-5,5	17,2	17,15	21,1
Discount Factor	1	1,07045	1,145863203	1,226589
Discounted Cash Flow	-5,5	16,06801	14,96688258	17,20217
Sum of Discounted Cash Flow	42,7			

Figure 14: NPV Calculation

We are taking a conservative approach and not increasing market share in real value terms based on the fact that we rather project on a worst-case scenario instead of prematurely basing numbers.

After plugging in the numbers into the formula, we see a positive NPV of 42.7, which provides a good indication that the project should be taken forward. As even after we have factored in the discounting of our cash against the national government rate, we still are better off investing in this venture.

5.3 RECOMMENDATIONS

The ultimate goal of the recommendations section is to provide the corporate with a recommendation on whether to go ahead with the project or to hold back their investment. The knowledge that we have built up in the previous sections allows us to make a calculated recommendation. However, the form of marketing that should be acquired for a positive decision and the form of call centre agent function that should be adopted will be key to our final recommendation. These sub-plots will be unpacked below before we make our final recommendation. Lastly, we will look at other considerations.

5.3.1 Adoption – Marketing Effort

When looking at the different options, it would be best to draw a comparison table to critically evaluate using pros and cons.

Option	Description	Cost per year	Pros		Cons		Final Score
			Description	Score	Description	Score	
1	Sales Team for Distribution Channel	R3.2 million	a. Low Threat of competition retaliation	3	a. no guarantee that corporates and retailers will permeate the information to gift card holders on instruction from the Distributor	-5	-6
					b. Continuous effort	-4	
2	Sales Team for Retailers and corporates	R3.2 million	a. Low Threat of competition retaliation	3	a. Large Sales Team management	-2	0
			b. guaranteed that corporates and retailers will permeate the information to gift card holders	3	b. Continuous effort	-4	
3	Payments Regulator to enforce message on gift card	R3 million	a. Low Threat of competition retaliation	3	a. Timelines Uncertain	-5	9
			b. Once off effort	4			
			c. Cheapest Option	4			
			d. guaranteed that information will be permeated to the gift card holder	3			
4	Above the Line Marketing Effort	R9 million	a. No Management required	2	a. High Threat of competition retaliation	-3	-6
			b. guaranteed that information will be permeated to the gift card holder	3	b. Most Expensive Option	-4	
					c. Continuous effort	-4	

Figure 15: Marketing Options Weighted Comparison Table [Min -5; Max 5]

The scores applied can be seen as subjective but there was a process applied to it provide the least subjective outcome which includes a narrowed scale of 1 to 5, brainstorming before assigning numbers, dealing the largest and smallest weightings first and checking the scores in relation to each other. There is also a clear distinction between 1st and 2nd place as compared to the rest which tell us that even if there was bias in the weightings, there is large canyon before 3rd place comes into contention.

As seen from the comparison table, our winning option is getting the payments regulator to enforce a shortcomings link on gift cards. However, just recommending this option alone is risky due to undefined turn-around time of this task. It could take as little as three months or as much as two years. We can gain a sense of comfort though that it will come through due to the current contravention of the Consumer Protection Act (CPA). Consumer right number 5 clearly outlines that suppliers should not mislead consumers of prices, nature, properties, advantages and limitations of goods/services (Your Guide to Consumer Rights & How to Protect Them, 2019; About the Consumer Protection Act, 2017). The business can't place all its eggs in this one basket. The runner up in starting a sales team for retail and corporate network requires more effort but is not that more expensive and should be considered as a plan B.

Steenkamp, et al (2005), outlined the importance of competitor retaliation especially when projected profits are enticing and hence we are ruling out option 4 in the short run. This can be explored at a later stage when we have a lion's market share and have built good relations with customers and suppliers. Option 1 is the riskiest and unappealing because we are unsure that our efforts are making a difference. Patterson (2004) says "*If a company doesn't identify and track important performance measures, it increases its risks.*" This increase in risk is not sure which efforts are affecting your bottom line and hence when profits take a downturn you don't know which metric to adjust.

<u>Recommendation:</u> Apply maximum effort in getting the regulator to force issuing banks to get shortcomings link printed on gift cards whilst tendering for transfer rights on the unbiased regulator link. If the exercise does not bare any fruits by the end of the second quarter, double up your efforts on striking deals with the retailers and corporates that administer the card. When the regulation is passed, (based on CPA) then stop the sales network.

5.3.2 Profitability – Fixed Costs

Even though 72% of the population opted for combinations where staff are not required, one can't simply ignore the 28% who would like to call in to get their query resolved. Johnson (2017) in a Harvard business review article, states that a study done by google sees almost 60% or respondents wanting to talk to an actual person than a computer program. This is in almost complete contrast to our findings in the data. This could be attributed to the highly educated sample, but one does not know for sure. Therefore, both these arguments can't be ignored. Yes, we are trusting that chatbots and technology will do the heavy lifting but there should be some sort of human on the other side for customer satisfaction. The last thing you need as a fledgling project is bad publicity which will render our projections futile.

The next dilemma is whether we go with an outsourced call centre staff or hire permanently into the company. Given the below three reasons, the researcher recommends hiring instead of outsourcing:

1. Belcourt's (2006) findings was that outsourcing is counterproductive in an environment where full time employees reside. The enterprise already has a call centre function and hence this finding directly applies.
2. The issue of unemployment is one that burdens our country and companies should play their part in alleviating the problem (Cohen et al, 2012).
3. When tendering for the licence with the regulator to apply your transfer service on their website, you will have to provide evidence on what jobs

your initiative is creating. They will not be impressed with an outsourced function and may be reluctant to play ball.

<u>Recommendation:</u> Build system with online ticketing and a chatbot that feed into your current financial administration department as well as hire two permanent staff for the contact centre query role.

5.3.3 Go- No Go Decision

It is easy to say pull the trigger on the project given the findings, but you have to weigh up your options first. You can't go into a board meeting pitching one project and expect buy in, your immediate response will be, "What are the alternatives?" An NPV like exercise needs to be performed on other initiatives to make the most informed decision.

The next area that was quite pronounced in the findings is the price sensitive nature of the respondents to the transfer. Percentage changes in the price saw leaps in the potential market share and therefore the enterprise should continuously try to pass economies of scale gains, as a price cut to the consumer.

This report was written within the parameters of a boxed solution which give us little wiggle room for further analytics. The enterprise should critically evaluate this solution and seek ways to better it in an incremental fashion, as when the competition gets wind of the profits, they will innovate on your solution.

<u>Recommendation:</u> Invest into Project by applying earlier recommendations after evaluating it against other projects (NPV). Strive to bring the transfer price down by passing economies of scale gains onto consumer in the form of decreased transfer costs. Finally, seek ways to better your solution to gain more market share and even possibly open new markets.

5.3.4 Other Considerations

Before we jump into the final decision, even though there is no data in our sample to back it up, the government disbursement has a large enough market share to place specific effort into research on how the corporate can tap into this market. Due to the lack of education in this category and their unwillingness to adopt technology, both a different data collection instrument will be required and perhaps something other than an online solution will be best to serve this market. This government disbursement conundrum just touches the surface of the unbanked wicked problem that exists in South Africa. This provides an opportunity for not only businesses to embark on further research but also academically as well.

The business by not targeting this segment, will have to forgo a potential huge market share of almost 40%. Yes, this may require a different solution and possibly new certification, but one can't simply ignore a possible R250 million revenue opportunity (R5 billion * 0.5%).

<u>Recommendation:</u> Invest into research on the government category for gift card transfers into a bank account or a wallet.

CONCLUSION

Moyo (2019) who interviewed the CEO of Kalon Venture Partners, Clive Butkow, who sits on the boards of many of the companies invested into, reported on the trends that the South African Economy was currently experiencing from a digital point of view. Butkow mentions "*I believe fintech companies that help solve issues around fraud and KYC (know your customer) will feature prominently, especially in South Africa, which has the continent's most advanced financial system but has very high banking fraud statistics.*" The environment for Fintechs is ripe for the taking, if they can produce transparent, affordable services that solve actual problems of the South African consumer.

I believe that the Enterprise in question have uncovered a gem of an innovation in terms of practicality, solution and money-making opportunity and have ticked all the boxes laid out by Butkow. However, they need to play the correct cards at the correct time to maximize on profits. In this research report, the researcher outlined the customer value proposition that is present from the positive adoption statistics, modelled profit from the take-up price points and provided a strategy that will allow them to set a base to work from. Conventional thinking will dictate that this a no brainer, and the management team should dive in head first.

Unfortunately, the reality of the matter is that, we are living in exponential times, and the frequency and volume of potential disruption is an ever-present danger (Post, 2017). The management team need to stay agile and be ready to react to threats from potential competitors. Yes, even though we used many worst-case scenarios and still ended with a sizable profit, it gives us a strong level of comfort that the venture can be successful; there is still the unpredictability of the market and its various influencers. The investment into research on the government disbursement channel will give the enterprise a strong contingency plan if events don’t play out as planned.

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APPENDIX

LIST OF ONLINE GIFT CARD MERCHANTS

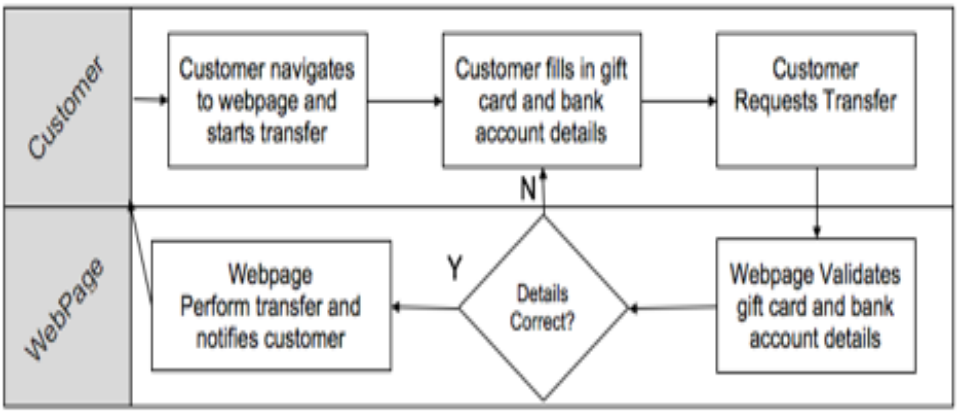
1	https://www.giftbucks.co.za/gift-cards-buy.asp
2	http://www.giftcardsa.co.za
3	http://saprepaidcreditcards.com/cards/view/226
4	https://paydna.co.za/cards/pay
5	http://paycorp.co.za/card-programmes/tutuka/
6	http://www.flexpay.co.za/about/
7	https://www.partnerplus.co.za/cardterms
8	http://www.tutuka.com/
9	https://www.egifts24.co.za
10	https://www.mycard2go.com/en/
11	https://prepaidfinancialservices.com/en/products-instant-issue
12	https://www.paypal-prepaid.com
13	https://visacard.giftcardstore.ca

GLOSSARY

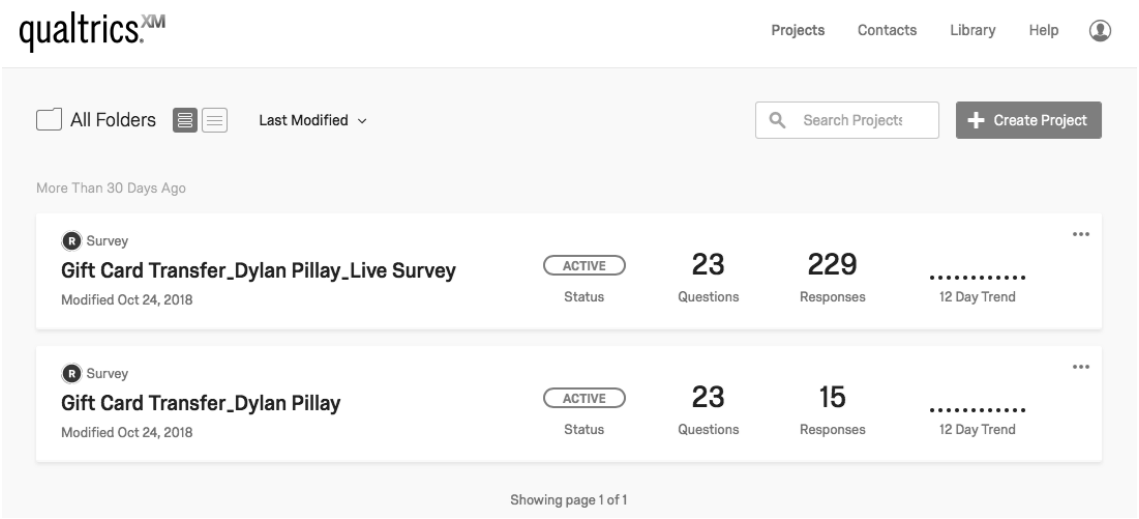
Term/Acronym	Description
Stokvel	Savings account or nominated holder of funds where members deposit a periodic sum of money that can be accessed at different times according to the terms of agreement.
Electronic Wallet	A non card based store of money that can be accessed with a security pin at certain retailers, ATMs and pay-points.
AVS	Account Verification check - it is a service that is offered in the payments industry of South Africa to verify account numbers against South African ID numbers, emails addresses and mobile numbers.
PCIDSS	Payments Card Industry Data Security Standard – A set of standards that need to be adhered to by entities wishing to transmit financial transactions.
POPI	Protection of Personal Information – South African institutes are to be responsible when collecting, processing, storing and sharing another entity's personal information.
Closed Loop Gift Card	A type of gift card that is pre-loaded with funds that can only be used at specific retailers or their affiliates. It will not have the VISA, MASTERCARD or AMEX branding on it (The only three international card service operators). Predominantly issued in the retailer

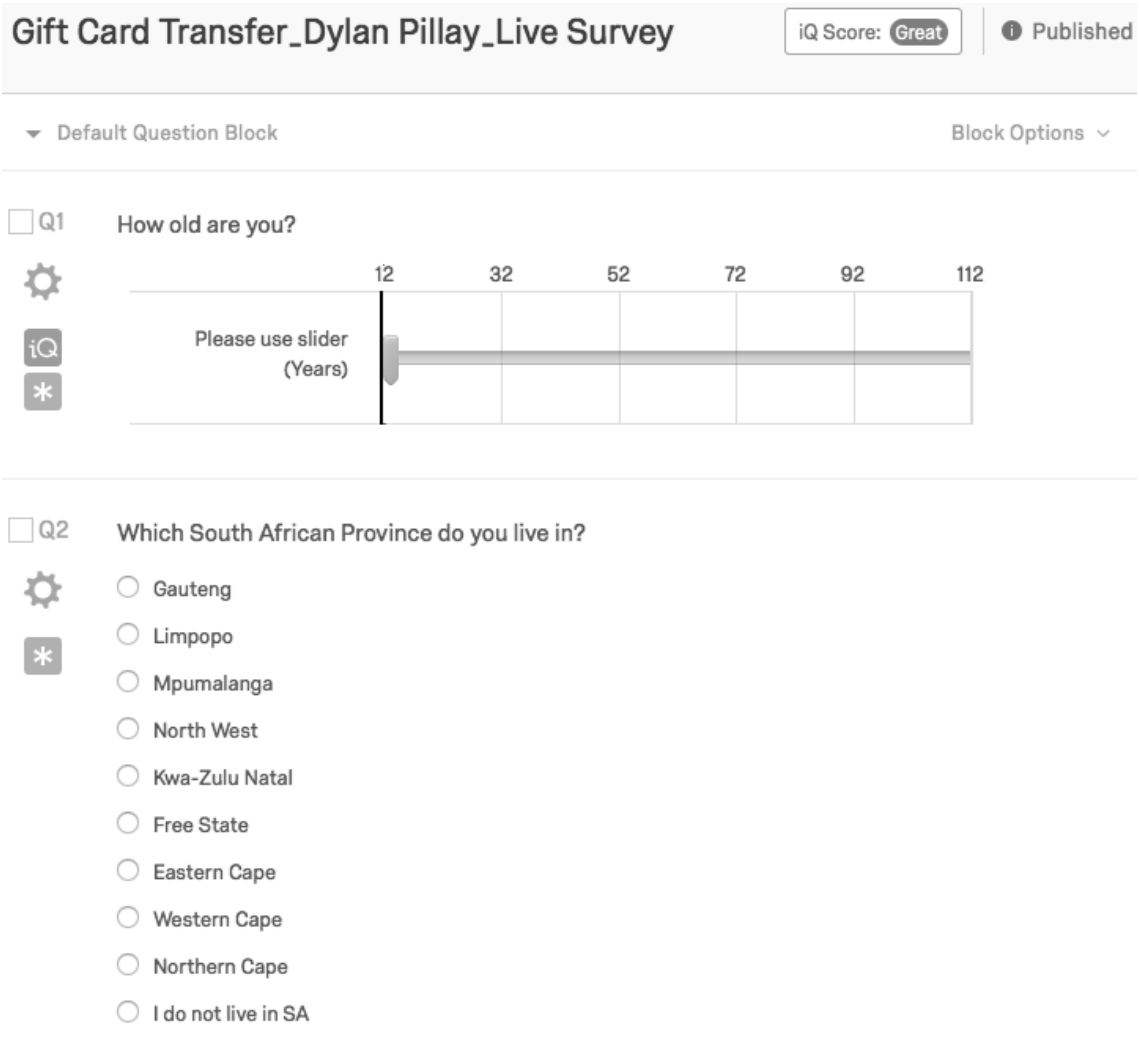
	space.
Open Loop Gift Card	A type of gift card that is pre-loaded with funds that can be used at a variety of stores and terminal pay points. These cards with be branded with VISA, MASTERCARD or AMEX on the face of the card. Predominantly issued in the corporate, government and retailer space.
Chat Bot	a computer program designed to simulate conversation with human users, especially over the Internet.
USSD	unstructured supplementary service data – commonly used to type short codes to service provider for utilities to be used. E.g. *100# for a data balance check.

HIGH LEVEL SOLUTION



DATA COLLECTION INSTRUMENT – ONLINE SURVEY





Q3 Level of Education?

- Not Matriculated
- Matriculated
- Tertiary Education

Q4 What are your sources of Income? (One or more)

- Salary or Wage
- Profit from Business
- Government Grant
- Investment Income
- other

Q5 Have you ever received a prepaid or gift card with a VISA or MasterCard logo?





- Yes
- No

Condition: Yes Is Selected. Skip To: End of Block. Options

Condition: No Is Selected. Skip To: End of Survey. Options

Import Questions From... | Create a New Question

Add Block

Block 1 Block Options

Q6 Which Channel did you receive it from?

- ○ Retail Store
- ○ Government Grant
- ○ Work Incentive
- ○ other

Q7 If there was a balance of less than R10.00, would you still carry it on you or would you leave it at home?

- ○ Still carry
- ○ Leave home

Q8 Would you prefer to use the funds on the card until you get as close as possible to R0.00 or would you rather transfer the balance on receiving it to your bank account?

- ○ Use funds on card
- ○ Transfer to my bank account

Q9 Would you prefer to use the funds on the card until you get as close as possible to R0.00 or would you rather transfer the balance on receiving it to your bank account and pay a fee?

- ○ Use funds on card
- ○ Transfer to my bank account and pay a fee

Q10 Would you prefer to use the funds on the card until you get as close as possible to R0.00 or would you rather transfer the balance on receiving it to your bank account and pay a fee given the below shortcomings on some of the cards:

- Security | If the card is stolen, there is no claim to the funds
- Withdrawal | The funds can't be withdrawn from an ATM
- Online | No online purchases can be made from this card
- Interest | No interest is earned on the balance
- Loyalty Points | There are no loyalty points earned when funds are used
- Acceptance | The card is not accepted at all stores
- Part Payments | Retailers are not willing to take part payment from card to use the full balance

- ○ Use funds on card
- ○ Transfer to my bank account and pay a fee

Q11 Do you have a South African Bank account?

- ○ Yes
- ○ No

Q12 Do you bank or shop online?

- ○ Yes
- ○ No

Q13 Will you transfer the funds from the card (by entering the card details) into your bank account on secure website?

- Yes
- No

Q14 Will you transfer the funds from the card (by entering the card details) into your bank account on your personal banking website?

- Yes
- No

Q15 Do you save money?

- Yes
- No

Q16 If you transfer the funds to your own bank account, would you want the funds to be available immediately?

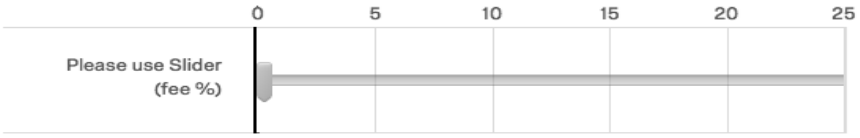
- Yes
- No

Q17 If you transfer the funds to your own bank account, would you want the funds to be available immediately given that it will cost you R50.00 more?

- Yes
- No

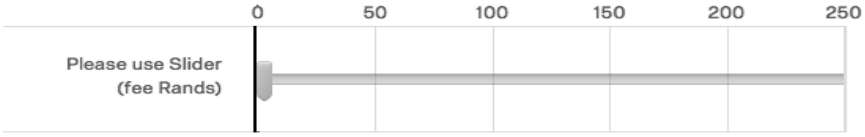
Q18 What will be the maximum percentage you will be willing to pay for the transfer?
Example: R1000.00 card at 10% fee, will get you R900 transferred.

NB: if 0% chosen, then you are not willing to pay for transfer.



Q19 What will be the maximum Rand Value fee you will be willing to pay for the transfer?
Example: R1000.00 card at R50 fee, will get you R950 transferred.

NB: if R0 chosen, then you are not willing to pay for transfer.



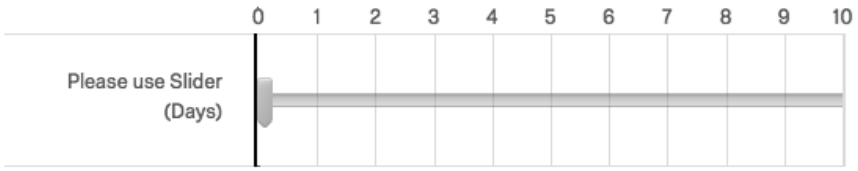
Q20

If answered 0% and R0.00 for the fee in the above questions, will you transfer for free?

- ○ Yes
- ○ No
- ○ × Does not Apply

Q21

If the online transfer does not work, what would you expect the maximum turn around time for correction be?



Q22

For queries on correction, would you rather call in on your own cost or log an online ticket for a call back?

- ○ Call at my own cost
- ○ Log online ticket
- ○ other

Q23

For queries on correction, would you prefer to chat via text messages at no cost?

- ○ Yes
- ○ No