





Transitioning South Africa to a cashless economy as a developing country


Mr. Sidze Benjamin Mutheiwana^a and Dr. Roelien Brink^a 

Department of Applied Information Systems, University of Johannesburg, Bunting Road Campus, Auckland Park 2006, South Africa.
bennsid@gmail.com 

 **Abstract:** The subject of Cashless Economies continues to be a topic of conversation as countries around the world seek to move more towards digital methods of conducting financial transactions. The purpose of this article is to determine whether transitioning towards a cashless economy could stimulate the overall economic development and provide more revenue for South Africa. A descriptive research approach was undertaken. The study was quantitative and it was used to uncover patterns and characteristics from the random population which undertook the study. Eighty participants took part in completing the questionnaire for the study. The results obtained showed a larger amount of the population being readier to transition towards a cashless economy. The results also indicated that security was a main concern to a larger audience, although even besides that the usage of mobile and internet transacting among all age groups and gender was significantly high. The findings show that government should pay close attention to cashless services as this may facilitate better tax compliance from all who are trading within the South African economy. Value was created by conducting research that could determine the effects of implementing cashless services and policies that enable such services in a country that is still regarded to be developing.



Keywords: bank; money; tax; policies; safety; technology; mobile 

1 Introduction

 Cashless economies describe the gradual or radical transitioning of the economic payment system having moved from being highly cash based towards alternative non-cash based methods. This allows for various types of transactions to be settled without the use of cash (Adams, 2012). Transacting without the use of fiat money but rather with digital currency has become an interesting topic. Cash based transactions were the main preferred method of payment as compared to cashless EFT, online payments etc. Many countries worldwide, still have a population who prefer to conduct the majority of their transactions by means of using physical cash (Optile, 2017). Often discovered, the drive as to why these countries still perform a large amount of their transactions in cash due to numerous factors such as the lack of national and international regulations that regulate and govern how fiat money is used, the amount of money that an individual is allowed to carry or even the quantity that can be in one's position (Mieseigha and Ogbodo, 2013). As of 2016, more than 7 international countries were identified as conducting more than fifty percent of their economic transactions by means of cashless services (Business Today, 2016). The latter countries are striving towards having cashless economic systems. These countries include France, Netherlands, Singapore, Sweden, Canada, Belgium and The United Kingdom. They are striving towards creating systems which would allow the conduction and settling of transactions to take place by cashless means of transacting (Business Today, 2016). They have implemented solutions that enable them to become the most highly recognizable cashless economies in the world (Thomas, 2013). In Africa, countries such as Somaliland, Nigeria and lastly Kenya, who were the founders of M-Pesa, are among the leading African countries driving a move towards cashless systems (Hughes and Lonie, 2007; Twomey, 2013). The drive towards being cashless has

risen due to a shift in the economic conditions of these countries and the introduction of policies that are being implemented in order to support such type of economies (Oluchukwu, 2014). Furthermore, some countries have benefitted from transitioning towards cashless economies. Benefits realized in countries such as Nigeria were faster means of transacting, decreased queuing and the improvement of hygiene due to reduced transmitted bacteria's from the circulation of physical cash etc. (Ejoh and Okpa, 2014). Furthermore, as much as the transitioning has been identified to be taking place in some of the African countries, there have been numerous challenges. The main challenge involves the lack of infrastructure within some African countries and which has in turn hindered their transition towards a cashless economy.



This article will provide insight to the findings of cashless economies and the characteristics that make ch economy. The uniqueness of the study can be gathered from the insight gathered as to whether South Africa's economic development would be stimulated given that the number of cash based transactions are reduced through the implementation of cashless supporting policies and solutions within the various economic sectors that provide value to the overall economic development of the country. Through the results gathered from the research study conducted, the value gathered from the study can explain how transitioning towards a cashless economy could potentially influences the economic growth of the country. The outcomes may further detail how the state can benefit through more structured channels of tax collection which can be direct result from imposed tax compliance expected from the citizens and those who operate within the country using cashless services. With our high unemployment rates, the outcomes of the study may provide insightful further information that explains how South Africa's employment rates could ultimately be affected by the implementation of cashless services. The research leading to this article was aimed at understanding whether South Africans and South Africa as an country is economically ready for a transition towards a cashless economy. The study will investigate the possibility in which a cashless economy could better the lives of the South African population through job development and more financial returns to the government which can ultimately provide better service delivery to the people. 

2 Research Questions

Is a Cashless Economy more likely to stimulate South Africa's economic development?

3 Theoretical Framework

This section of the paper discusses some of the identified theories from literature. These theories provide insight into countries that have become cashless economies, what they did to become such economies, challenges encountered during the transition towards a cashless economy and whether it is was of benefit for the economy by having these countries transition towards being cashless.

Ejiorfor and Rasaki (2012) define a cashless economy as an economy where purchases and transactions are conducted mainly by a means of cashless online modes, they further elaborate that such economies rarely make use of physical money (Coins and Notes). Rashmi further defines cashless economies as economies where all types of monetary transactions are conducted by means of cashless modes not limited to e-banking, Point of Sale transactions, EFT and many more (Bindra, 2017). Transitioning towards a cashless economy for a developing country can be of benefit as it has the potential to curb the black market, furthermore such an economy has the

potential of generating more revenue for the government by reducing tax avoidance from individuals and businesses that try and evade tax (Bindra, 2017).

Muyiwa et al. (2013) along with Yaqub et al. (2013) further gave a similar definition towards a cashless economy. They both defined it as an economy that doesn't refer to a total absence of cash transactions, yet rather an economy where transactions can still be fully conducted without necessarily carrying physical cash as a means of exchange for goods and services (Muyiwa, Tunmibi and Afaha, 2013; Yaqub *et al.*, 2013).

The definitions of the above will be used in this study as they all align to the same meaning that a cashless economy is one which still makes use of cash transaction while gradually transitioning towards cashless services. These theories work well by trying to transition an economy as South Africa towards a much more digital cashless environment. Muyiwa et al. (2013) and Yaqub et al. (2013) definitions are more relevant to this study, as they are firstly based on the African continent and secondly, economies that have started gradually yet still understand that a cashless economy does not equate to a total absence of cash transactions in that economy.

4 Literature Review

Cashless economies have been defined in various ways, mostly due to a researcher's subjective understanding of the topic. Cashless economies do not necessarily equate to the absence of cash circulating within the economy, rather these economies have alternative means of settling transactions for goods and services without making the use of physical cash (Muyiwa, Tunmibi and Afaha, 2013; Yaqub *et al.*, 2013). Adopting cashless policies and usage of transacting displaces the use of physical money, this in turn enables for various channels of transacting to be implemented and made use of e.g. Online Banking, Mobile banking and e-commerce. The adaptation of Point of Sale devices has also led more to the lack of need to carry around physical money through the enablement of credit and debit card transactions (Adams, 2012). Furthermore, the introduction of Electronic Fund along with real time settlement systems have provided channels in which people can transfer and immediately receive funds without the need of queuing at the bank and the delay of involved with it (Malik, 2014).

According to research, there are no countries that are fully cashless economies, there are countries such as Kenya, Nigeria, Somalia and South Africa that have already started their journey towards being cashless. In order to achieve this transition, countries such as Nigeria have policies in place that ensure drive towards going cashless, in turn, should people conduct transaction that might be of large amounts of money, these policies enforce penalties upon the individuals or corporate bodies (Adams, 2012). Literature shows that over the years, countries have engaged in developing infrastructure that is to stimulate the transition towards cashless economies. Sweden is one of the countries that has shown a transition whereby in the 1950s, the value of physical cash in circulation in the country amounted for ten percent of the overall gross domestic product, by 2011, the value had dropped to 2.6%, this gives indication that proper implementation of the right cashless service infrastructure ultimately can reduce the amount of physical cash circulating in a country (Dalebrant, 2016). South Africa's cashless economy accounts for about thirty five percent of the overall transactions that are made, South Africa along with Nigeria are 2 African countries that are moving towards a cashless economy (Matambo and Schaefer, 2013).

In order for an economy to successfully transition towards a cashless economy, there are guidelines that would be required to be followed. It is important to first measure the number of people within an economy which make use of banks. Once that is established, they can check whether the services that are provided are both affordable for the people and or are at least readily available when requested. Secondly, it is important that to evaluate on the types of businesses that operate in that economy. Once that is established, the businesses should cater for and measure exactly how this affects consumers who are most likely to prefer the use of cash. Thirdly, it is important that there is a good understanding regarding the number of merchants that can be implemented to provide easier cashless payment method that eliminate the need to use physical cash. Lastly, in order for good implementation to take place, it is important that an assessment is done to assess and understand whether these economies implementing cashless policies have the expected infrastructure in place, this should also be inclusive of the quality of infrastructure (Thomas, 2013).

There are number impacts on the economy which can result from the transitioning towards a cashless economy, although there have not been any conclusive evidence that the transition does indeed impact the economy (Tee and Ong, 2016). Commercial activities in an economy will not be restricted by operating times of financial institutions, in a cashless economy, commercial activities can occur more on a 24/7 day basis, thus in turn impacting on the overall GDP of a country (Matambo and Schaefer, 2013).


Cashless economies reduce the number of cash related crimes (Muyiwa, Tunmibi and Afaha, 2013). South Africa's economic crimes are amount the highest in the world, CIT heists increased to more than 140 CIT conducted in the first six months of 2018 (Pijoos, 2018; PWC, 2018), which indicate quite a significant problem of a cash based economy. With such crimes, this sort of problems have the potential of impacting the countries safety rates which ultimately may have a detrimental impact on economic investments that the country could have opportunities to. An implementation of a cashless economy can therefore reduce such occurrences, it can also drives financial institutions to reducing the cost of their services fees as there will be less use and need to manage fiat currency at their respective branches (Muyiwa, Tunmibi and Afaha, 2013).

5 Research Methodology


The study conducted followed a descriptive research design approach that was quantitative in nature. One of the key outcomes of a descriptive research is to uncover and summarize the different characteristics that exists within the population or the topic that is being studied (Dulock, 1993; Zikmund, 2003). This study seeks to uncover the readiness, influences, doubts and concerns of the South African population regarding going cashless, hence the descriptive research approach that has been chosen. To collect the data, a cross sectional approach was followed, data was collected by a means of sending out questionnaires to the population. Due to the research being quantitative and descriptive in nature, the questionnaire was sent out to the sample population by means of an online questionnaire, therefore only measuring the subjects once. Due to the nature of the study, the study was not aimed at picking up trends hence the questionnaire was not sent out at more than one point in time. This study was heterogeneous, therefore the study did not have any type of respondents that it seeks to look out for, therefore the questionnaire was distributed to a sample population that included and not limited to students, business owners, entrepreneurs and those who are unemployed. Convenience sampling was used where by, the sample that was easiest to access was the one which was requested to complete the questionnaire, hence the questionnaire was sent

out through a link which enabled easy access to the sample as it turned out least rigorous and costly (Marshall, 1996).

5.1. Sample and data collection

A survey that made use of a self-administered questionnaire was provided to the sample in order to gather data. The sample population used for the study were colleagues and students from the University of Johannesburg. al business owners who already have electronic methods of payments are also to be included in order to gather data regarding how they feel and perceive such as transitioning. Through the study, the population selected will be randomized, meaning that the research instrument will be provided to any of the above stated colleagues, friends, students, business and street business owners and those employees who already work in formal environments, irrespective of who they are or what they do, the research instrument will also be provided to all. There will be no controlled group for this matter, and no one from the sample group should or can be directly influenced since the research strategy is aimed at having the respondents fill out the research instruments online. From the 80 questionnaires that had been issued out to the population, 64 of the questionnaires can be used for the sake of data analysis for this article. The survey was designed in a way in which it would collect the most valid and reliable data from the population identified. The advantage of using this method in gathering data is that of which the researcher need not be present when the questionnaire is being filled out. Secondly, this method will enable for the data that has been collected to be quantified and then used to compare change against other researches that have been conducted.

5.2. Data Analysis and Synthesis

There were numerous methods considered for quantitative data analysis required through this study. These include the analysis of frequencies of variables, including the difference that exist between them. This form of analysis was applied to the data collected through the research process. Given the type of research that is being conducted, which is focused on the sample population, inferential statistical was used as an analysis method which was particular to the research projects that seek  to discover phenomena's from a sample population. Descriptive analysis is mainly focused on measuring an entire population characteristics and summarizing it, that can be achieved by rearranging the data, ordering it and manipulating it so that it gives of descriptive information (Zikmund, 2003). Inferential statistical analysis makes use of the collected information from the population to make estimations regarding the sample population that was identified, inferential analysis used ranking in order to sum up the overall analysis, it also takes consideration of statistical probability distribution based on the characters of the sample that was used whilst it also tries to the causality in the study by observing the dependent variable which is ultimately influenced by the Independent variable (Albrecht, no date). The inference of this sample population is derived from the researcher making use of the information that is collected from the sample. Furthermore, the data analysis is aimed at uncovering the different relationships and patterns by performing consistent multiple analysis on the data acquired and that which is being revealed through a constant analysis. While working with quantitative research, it is not common that there would be a need to use advanced modelling techniques in order to provide an explanations regarding how the collected data would address the research question. Inferential statistical analysis will provide descriptive statistics that can be used to provide justification as to how the sample population portrays an image of the entire population. Once the data that is to be acquired

from the quantitative research has been identified and structured, the data can then be reported by the use of graphs and/or charts (Golafshani, 2003). The advantage regarding inferential statistical analysis is that it makes use of a sample population to represent the total population that is being studied.

6. Assumptions

Assumptions in a research project can be regarded as things that outside of the researchers control, although these things are also important as they make the study and its importance a whole more relevant (Simon, 2011). Furthermore, assumptions have the potential to shape the overall outcome of a study, including the methodology that is being used as well as the questions that can be asked within the study. Below are some of the assumptions that were gathered for this particular study (Hathaway, 1995).



1. All participants who live in urban areas who will be taking part in this study are computer literate.
2. All participants who live in urban areas who will be taking part in this study have access to an internet connection and a smart device or computer which they will use to partake in the research.
3. People who reside in urban areas make use current cashless service options in place such as EFT, POS transacting and internet banking to fulfill their monetary transactions.
4. Street hawkers do not have access to the internet.
5. People who reside in cities and highly developed settlements make much more usage of cashless services unlike those coming from semi-urban to under developed areas.
6. Foreign and local nationals conducting business in informal areas do not make use of cashless service terminals due to the policies and costs involved for using it.
7. Black economy is formed up by people who are performing transactions of the radar so they do not get caught and their illegal transaction do not get traced.
8. Implementing cash less economy will reduce the number of jobs available due to service payment terminals replacing the need for cashiers.

7. Limitations of the study

The proposed study, just like many other studies, contained limitation that can hinder the best outcome which if they are not present, would result in much more beneficial outcomes. Quantitative research methods have numerous limitation and issues such as the validity, which is aimed at measuring the accuracy of the results gained from the participants. Validity also measures the manner in which the results gained from the study can be applied to other settings. Quantitative research methods have reliability limitations where by the results from the respondents might not be consistent even placed under the same condition, respondents will be from different financial economic backgrounds, different occupational status, have different economical perspectives and might multiple culture and believes. This research method also has generalizability limitations, due to the study being conducted over a large population that have multiple economic backgrounds, the study can be generalized only based on the number of respondents from the different economic groups that have fully participated, the study requires that the research is conducted equally among different participants who come from different economic groups and who are both employed and not employed, only then can the outcomes be generalizable of the entire population as they study would have covered a greater portion of the overall population of the country.

According to an observation of the study, there could be numerous limitations particular to the study. Since this study is going to be conducted mainly online, the first limitation that I might face is participant's lack of knowledge to computer literacy which is required to in order to fill the online instrument. Given the computer illiteracy rate in South Africa that has to be considered, a number of the participants might require being physically approached and requested of their time in order to partake in the research project. Due to the digital divide, there are still a large number of people who do not have access to computers, smartphones and the internet. Some of these potential participants can be accessed or else assisted in filling in the research instrument were possible, given this limitation, a solution would be providing them with physical copies of the instrument which they can then fill and return.

Through an analysis of the topic that is being studied, the researcher has come to find that there is a limitation of prior research on the study that that is being conducted. Currently, most of the discussed findings have mainly been of India and Nigeria as the two countries that are seen most to be doing research studies on topics that are similar to the one that is being conducted which in turn gives an indication that there is room for the study to be conducted whilst there are possible numerous avenues that can be tapped into. In order to address this limitation, through the study, literature journals will be sourced directly from different universities, use google scholar and the University of Johannesburg database. There will also be a need to do a lot more reading on previous works from other sources and try to see where their sources come from, in that way the researcher can find themselves tapping into literature that is somewhat in the same line with what I am doing whilst uncovering many more relevant information.

8. Ethical Consideration

In order to be aligned with proper research regulations and not to contravene any law protecting minors from conducting the study without obtaining consent. A consent form had to be fulfilled and agreed upon by all participants before they could partake in the study. This consent form also applied for minors, therefore the consent would require whomever was responsible for them to agree that the minor could partake in the study upon agreeing to the terms of the study. The Consent form required approval from the University of Johannesburg research committee, of which it was. Therefore any participant who wished to take part in the study first had to sign the Letter of consent in agreement to the terms stated on it.

9. Analysis and Discussion

This major purpose of this section within the paper is to highlight the findings that have been gathered from the survey regarding transitioning South Africa to a cashless economy as a developing country. The sample population size of this current study was 80 people, this included both males and females of different age groups. The gathered data from the respondents showed that there were 14 invalid responses, thus reducing the valid sample population to 64. The analysis that is conducted for this study is solely based on the valid fulfilled responses of the 64 respondents who are of different backgrounds including different marital statuses, educational backgrounds, expenditure groups etc. Seventy four percent of the respondents are between the ages of 19 and 34 years of age, with the remaining twenty six percent being of the ages 35 and above. The results of the study showed that a larger majority of the respondents were single individuals with those of ages 19 to 34 accounting for sixty five percent

of the entire population. The entire population had successfully completed, the results showed that more than 40 percent of the population had obtained an undergraduate degree, this is important when considering the time, ability and effort that would be required to ensure that the population is ICT ready and can learn to use the technologies required.

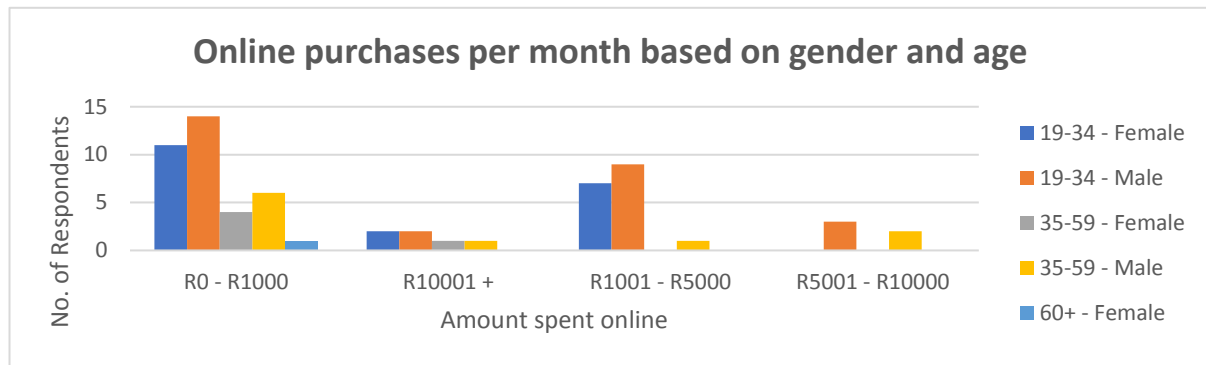




Fig 1. Online purchases based on gender and age 

The results of the study indicated that more than seventy seven percent of the sample population were employed, the remaining twenty three percent were unemployed, with a 1.57% unemployment difference between males and females. The results indicate that a larger amount of the population receives income, which ties back to the hundred percent obtained of those who have a bank account. Bank accounts are important and serve as a backbone to towards cashless economies, income on the other hand resulting from some sort of employment is key to enabling cashless forms of transacting. Ownership of bank accounts allow for online purchasing and electronic fund transferring, One of the fasted growing forms of trades to date is online purchasing, this offers consumers the convenience of shopping at any time of day at a place of their convenience (Katawetawaraks and Wang, 2011) The figure above show that sixty six percent of all online purchases are not of any amount more than R1000, with males between the ages of 19 and 34 being the highest users of online purchasing. Furthermore, it can be observed that the higher the value of online purchases that occur, the smaller the gap between males and females who are spending in that space, that can be seen by online purchases or R10000+ per month providing us with both three percent for males and females between the ages 19 – 34 seen to be transacting online. There is also a two percent online purchase presence of both males and females between the ages 35 – 59 that can be observed from the data obtained. Even though online purchasing and e-commerce transacting is still in its early stages, the above graph does show that people are slowly moving towards cashless ways of transacting. As the amount of mobile devices increase among the entire population, so will we see the increase in value and the amount of online purchases (Nielsen and The Nielsen Company, 2014).

The results obtained from the study further provided information regarding the concerns that were provided by the sample population which they faced about transitioning towards cashless economies. Seventy two percent of the respondents said that information security was their biggest concern regarding transitioning to a such an economy, South Africa is among the countries with the highest possible data breaches in the world, at more than 40% as compared to the other identified countries in the world (Ponemon Insitute and IBM Security, 2017). This high number can be associated with the fifty-six percent obtained where by the respondents said that they don't 

keep banking information in their mobile devices, this suggesting that the issue of security is one that needs a lot of attention before transitioning an economy towards it being completely cashless. Furthermore, the question regarding safety was posed as opposed to the overall concerns that were received, eight percent of the respondents mentioned that another one of their key concern was safety. The issues around safety lies in the fear that perpetrators could be fully aware that an individual could be carrying some sort of device or a card that contains much more money than if they carried physical cash, their safety could always be an issue.

As mentioned above, banks play a very important role in the implementation of cashless services. Without having a bank account, none of the population could be able to conduct cashless transactions, therefore it is vital and its importance is seen by all participants of this study having bank accounts. Large financial institutions as Banks play a very key role in implementing cashless economies. Banks act as enablers, money that the users have is usually stored in such financial institutions and in order to access this fund, users either make user of their cards or perform online transactins as mentinoed above. Ninety percent of the respondents in this study confirmed that banks will play a major role in transitioning towards a cashless economy, these banks are those that are to offer organizations Point of Sale devices which will enable people to perform cashless transactions, furthermore ninety two percent of the respondents believe that governement should work along with Banks in order to provide small to medium organizations with Point of Sale Devices which will enable them to provide cashless services to their customers.

One of the most important question posed in the study was whether the participants were ready to transition towards a cashless economy. Sixty four percent of the respondents responded by claiming that they were ready to transition towards a cashless economy, while the remaining thirty six percent said they were not. The high positive response of participants who believe they're ready to have the economy become cashless has a direct link to the ownership of bank accounts, the high percentage of those that already purchase product online, the high frequency of online mobile and internet bank users.


What does this all mean? The adopting of cashless services in South Africa will in turn enable the economy to generate more revenue, that can be traced and tracked. This is can be of benefit to the economy as it has the potential to eliminate the possibility of the black market which robs the economy of a large amount of money. This implementation can increase the amount of money that can be achieved from all the income tax received from all the various channels which currently aren't being complying due to tax evasion. A greater amount of the sample stated their readiness to transition towards a cashless economy. The availability of the well technological banking infrastructure in South Africa, along with the greater population owning bank accounts and in position of banking cards, has the potential to drive the economy towards being cashless, this drive can also be facilitated by the ownership of mobile devices which also add as contributors of cashless services to the people.

10. Recommendation for Further Research

The following recommendations can be put forward for related research in the cashless economy area.



1. There is a need to explore a wider population than that from this study. The wider population should include a more participants of different age groups, more especially ages 0-17 and 60+. A wider research on participants of different races and much more distributed location than Gauteng.

2. There is a need to explore how cashless economies can be integrated into rural areas that are extremely remote from any CBD.
3. There is a need to explore government ception of transition to such technologies. Furthermore, it is also important to understand how the governments level of readiness is regarding facilitating the process towards implementing cashless services.
4. It is important to assess the number of South Africans who do not make use of banking accounts in order to understand what challenges above those mentioned in the study, these people are probably facing.
5. There is a need to explore the different policies, government and financial regulations that need to be developed and implemented for this framework to be fully functional in an economy.

11. Conclusion

In conclusion, the results show that Transitioning South Africa towards a cashless economy is a process if undertaken, can be feasible especially during our current economic state. A greater majority of the respondents are educated and employed people, these are key drivers towards transitioning towards a cashless economy. Furthermore, everyone who completed the study provided feedback that they were all in position of bank account, mobile and cellular devices, these all constitute to the backbone of a cashless economy. These highlighted characteristics are all key drivers towards a cashless economy and of all South African respondents from the sample population, they can be quite representative of the larger population.

Although there were a number of concerns that the respondents provided, the overall feeling regarding transitioning to this new type of economy was positive. A considerable amount of the respondents believes that transitioning South Africa towards a cashless economy will indeed reduce the flow and amount of physical cash. This in turn serves as a positive component while trying to get rid of the black market. Secondly, this is also of value as the tax man can generate more income which subsequently which can be used for the overall growth and development of the economy.

There benefits of transitioning South Africa towards a Cashless economy as a developing country surpass the challenges and concerns that have been gathered from the sample population. Although the transition is one that will definitely take time to implement. South Africa already has banks that have great technologies and services implemented and being offered to their customers, these technologies and services can serve as supportive structures of a cashless economy, thus indicating that the infrastructure is already in place for the transition. Gathered from the respondents, it was clear from the data analysis conducted that South Africans show readiness for the transition towards a cashless economy. Irrespective of their concerns, a large number of the respondents showed their willingness to transition. To answer the question whether a cashless economy is likely to stimulate South Africa's economic development, the answer is yes. It was clear in the analysis that a cashless economy will stimulate the economic development of South Africa.

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