BINDURA UNIVERSITY OF SCIENCE EDUCATION

FACULTY OF COMMERCE



ASSESSING THE IMPACT OF MOBILE MONEY ON FINANCIAL INCLUSION DURING COVID-19 IN HARARE, ZIMBABWE

BY

B190419A

A DISSERTATION/THESIS SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE BACHELOR OF COMMERCE (HONOURS) DEGREE IN BANKING AND FINANCE OF BINDURA UNIVERSITY OF SCIENCE EDUCATION. FACULTY OF COMMERCE.

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DEDICATION

A dedication to myself for having come thus far and conquered all the obstacles that threatened me from reaching the promised land. Life tested me but I prevailed.

In God We Trust Always
THE FAITH NEVER SLEEPS

ABSTRACT

The study was conducted to assess the impact of mobile money on financial inclusion during Covid-19 in Harare, Zimbabwe. The research was necessitated by the unexpected blackswan event which transformed people's lives overnight and thus had a bearing on their access to financial services during a time when Zimbabwe was going through the first phase of its National Financial Inclusion Strategy (NFIS) program. Due to the characteristics of mobile money, it was expected that this mobile service provider-initiated platform could help people effectively transact as well as send money to each other hence contribute to people's levels of financial inclusion during this trying time. The research was conducted using descriptive analysis that involved questionnaire surveys as well as secondary quantitative data from the Reserve Bank of Zimbabwe for the period under study which was analysed through regression analysis to establish the influence of mobile money on financial inclusion. A sample size of 138 respondents was used with 110 participants answering/ returning the questionnaire. Research findings were analysed further and presented using SPSS, bar graphs, tables and pie charts. The significance level of the analysed data was 0.000<0.05 making the model valid as its value was less than 0.05. The study concluded that there was a strong positive relationship between mobile money and financial inclusion during the Covid era in Zimbabwe as people could easily use it to transact, send or receive money as well as pay for basic utilities in the comfort of their homes with the need for entering long queues to collect money or make payments reduced at a time when physical contact and travelling were limited and discouraged. The study recommended that mobile network operators do more to incentivize users so that they can use mobile money as a saving and borrrowing platform especially low-income earners who might not have access to bank accounts whilst lobbying government to improve people's levels of financial literacy by including it in its curriculums. Finally, more efforts could be concentrated on digital financial services as they have demonstrated that they are the future and can prove to be highly beneficial in times of global crisis.

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CHAPTER I

INTRODUCTION

1.1 Background to the Study

Financial inclusion has been shown to improve the lives of communities as well as have a bearing on their economic growth and social wellbeing. Thus, it is no surprise that various governments have placed it at the top of their agendas with the National Financial Inclusion Strategy by the Zimbabwean government a particular case in point. The advent of mobile money with mobile network operators taking the lead role has led to drastic improvements in inclusion with various previously excluded societal groups allowed access to financial services and facilities that were once out of reach. This is illustrated by the 2014 FinScope Consumer Survey which attributed a 31% increase of proportion of people who had access to formal financial services, an improvement from the 38% noted in 2011 to 69%.

A Postal and Telecommunications Regulatory Authority of Zimbabwe (2012) report pegged the mobile cell phone penetration at 97% presenting an opportunity for both telecommunication and financial service providers to welcome technology as a portal for service delivery through mobile payment systems. Scardovi (n.d.) noted that technological innovations such as the invention of mobile wallets and mobile-based merchant payments solutions could quicken the migration towards cashless societies, to which Gross et al (2012) added that these could foster financial access and inclusion. The difficulty of penetrating remote areas faced by banking institutions due to limitations such as," price, inadequate infrastructure, geographic restrictions, low population density, and low-income levels (Munalye, 2015)" has paved the way for mobile money platforms which offer convenience over the traditional way of banking by reducing customers visiting branches and large bank queues (Thornton and White, 2001). Reed et al., (2014) as referenced in (Mavhiki et al., 2015) posited that most individuals did not own bank accounts, but their high likelihood of having a mobile phone had opened up a gap for the mobile network operators in the financial services sector.

Zimbabwe's mobile network operators launched their mobile money platforms namely Ecocash, One-Money and TeleCash in 2011 with Ecocash becoming the dominating platform having amassed a whooping 2.3 million registrations just 18 months from its introduction, a figure which outnumbered traditional bank accounts in Zimbabwe at the time (Levin, 2013). Research has shown that mobile payment systems initiated by MNOs can be a more effective tool in leading the drive for financial inclusion when compared to traditional banking models due to their less stringent Know-Your-Customer (KYC) and Anti-Money Laundering (AML) requirements which ease the registration processes for users. The provision of e-money services in addition to mobile financial services to low-income groups could potentially reduce their exploitation by informal traders whilst promoting integrity of the financial system and extending reach to those in remote areas (RBZ, 2021). As digital financial services allow easy access, product market fit and affordability (IFC, 2018), they also present Zimbabwe's disadvantaged groups with the chance to take part in its conventional financial economy (Chitimira & Torerai, 2021).

The last decade saw the proliferation and widespread usage of mobile money platforms leading developing economies such as Zimbabwe to seek membership in the AFI resulting in the first phase of the National Financial Inclusion Strategy (NFIS) being conducted. It singled out financial inclusion as a tool for economic viability and growth through focus on the main excluded groups which were MSMEs, the youth, low-income earners and women. It also sought to promote a synergistic relationship between mobile network operators and banks which has successfully been implemented as both service providers are able to conduct fund transfers seamlessly with each other.

The NFIS (2016-2020) has spearheaded and acted as a guideline to financial inclusion efforts in Zimbabwe with progress having been made on different levels most notably the integration of the Zimswitch platform from which virtually all payment systems flow. However, as the first phase of the strategy came to its conclusion a number of unforeseen circumstances have reversed some of the progress made towards inclusion whilst also changing the ways by which people transact and carry out their businesses. The Covid-19 pandemic took everyone by surprise, limiting in person contact thus forcing the providers of financial services to adopt new ways to keep in touch with clients as well as remain in business. The financial climate has also deteriorated, consisting of a parallel market with different exchange rates for cash and mobile money. The hyper-inflationary environment whilst not peculiar to Zimbabwe, provides a new dimension which changes the outlook on Zimbabwe's financial inclusion situation and needs to be analysed in order to make recommendations for the second phase of the inclusion strategy.

1.2 Statement of the Problem

Various scholars have championed mobile money as a key enabler to economic growth and poverty reduction. With its mobile subscription rate pegged at 24.3 million in March 2020 and its mobile penetration rate at 94.4% in 2021, it continues to be the most efficient and accessible means by which various groups of society can be assimilated into the formal financial economy. The Covid-19 pandemic took the world by storm at the end of 2019 causing global pandemonium as it peaked in 2020 causing governments to react by imposing lockdowns which effectively limited movement and various means by which people could carry out business as well as transact. Various societal groups were affected particularly in developing economies such as Zimbabwe that have less well-developed structures unable to withstand such shocks. ZIMSTAT (2020) as cited by the (Chronic Poverty Advisory Network, 2022) reports that extreme poverty in Zimbabwe increased from the 30% reported in 2017 to a staggering 49% during the pandemic whilst food insecurity was at 70%. According to the (Chronic Poverty Advisory Network, 2022) the main affected groups were the youth, women, farmers, school children and the chronically ill whilst most business owners went out of business as they were forced to shut down. To date the total number of cases are at an estimated 259,356 and deaths at 5,622 (John Hopkins University, 2022). No one came out unscathed in one way or another but virtually everyone owned a mobile phone and for many, this was the only hope for access to financial systems of any sort. This study seeks to analyse how mobile money impacted financial inclusion during the Covid-19 pandemic.

1.3 Research Objectives

This study aims to assess the current impact of mobile money on the level of financial inclusion in Harare, Zimbabwe. Other research objectives include:

- To determine how Covid-19 has affected the usage of mobile money
- To find out what determines the borrowing behaviours of mobile money users during Covid-19
- To ascertain how hyper-inflation and the parallel market has affected the usage of mobile money during the Covid-19 era

1.4 Research Questions

The main question is: How is mobile money currently impacting the level of financial inclusion in Zimbabwe?

Other questions to be answered are:

- How has Covid-19 affected the usage of mobile money in Zimbabwe?
- What determines the borrowing behaviour of mobile money users during Covid-19?
- How has hyper-inflation and the parallel market affected the usage of mobile money in Zimbabwe during Covid-19?

1.5 Significance of the study

Academia

This study will contribute to the existing body of knowledge on financial inclusion by providing a Zimbabwean perspective which will facilitate further research on financial inclusion in Zimbabwe.

Government/Policy makers

This research will help policy makers in mapping a way forward in the push to make financial services available to everyone. It is also beneficial as mobile network operators are an avenue through which government earns revenue thus any progress made by mobile money in extending its reach is a win for government. Moreover, it aids it crafting financial service sector responses to global calamities as well as setting up future precautionary measures that prepare nations against such events. Finally, the information can be used as input for the second phase of NFIS.

Customers/users

Customer requirements and needs provide opportunities for mobile network operators to capitalize on and thus benefit from. Success of mobile network operators and their platforms depends on how they can tailor them to customer requirements.

Mobile Network Operators

Through this body of knowledge on financial inclusion, service providers can come up with strategies on how to capture the unbanked and include them into the formal financial economy.

1.6 Assumptions

The following was taken into account whilst conducting the research:

- Respondents knew what mobile money is and how it works.
- Respondents have access to/ own a mobile phone and are registered with a mobile service provider.
- The respondents will provide authentic information which is free from bias.
- Sample used would be an accurate reflection of the population

1.7 Delimitations of the study

The study only focuses on the impact of mobile money services provided by the major telecommunication service providers in the country namely Ecocash, Telecash and OneMoney therefore the study will not be extended to mobile banking and other telecommunication providers that do not offer financial services such as Tel-One and ZOL.

1.8 Definition of terms

Mobile transactions – this relates to transactions carried out using mobile tools and technology. In addition to mobile payments, it also encompasses all other mobile transactions made possible by technology, whether or not they contain monetary values.

Mobile payments – are those that are made or enabled via handheld devices and digital mobility technologies, with or without the aid of mobile telecommunications networks. Although not always connected to banks or financial organizations, these payments constitute digital financial transactions. There are numerous mobile payment schemes in use across the globe.

Mobile banking – a collection of mobile banking services, including mobile payments, transactions, and other banking and financial services linked to customer accounts, can be referred to as mobile banking. These services can be offered with or without the direct involvement of traditional banking institutions and involve the use of portable devices connected to telecommunications networks.

Mobile money - electronic money, which is primarily digital, is the same as mobile money or mobile cash and has characteristics linked to mobility and portability. Because it can mimic the key characteristics of traditional money, such as liquidity, acceptance and anonymity, it can be distinguished from other forms of electronic payment (such as credit cards, debit cards, and smart cards).

1.9 Summary

The first chapter introduced the research question under study, shedding light on the dependent and independent variables whilst outlining the research objectives to be looked at in the study. Key definitions were given particularly for terms mostly used within the context of mobile money which are used interchangeably and are likely to be confused for instance mobile money, mobile payments and mobile banking. It also sets the foundation for the second chapter which contains an extensive literature review of the relationship between mobile money and financial inclusion as well as developments that have led to the current state of mobile money in the Covid-19/ hyper-inflationary environment which characterizes the economy at the time the research was conducted.

CHAPTER II

LITERATURE REVIEW

2.0 Introduction

This chapter provides an extensive literature review of financial inclusion and mobile money, shedding light on the various opinions of scholars well versed in the subject. It establishes a theoretical framework which shows the various theories underpinning the relationship between the two variables under study and then proceeds further to give a historical background of the two with a particular focus on Zimbabwe. As the chapter proceeds, it goes on to demystify preconceptions about mobile banking and mobile money, develops a conceptual framework of the research components then concludes with an empirical review of past studies and their respective conclusions.

2.1. Theoretical Framework

2.1.1 The McKinnon- Shaw Hypothesis

McKinnon (1973) proposed a complementarity hypothesis which assumed that economic agents were limited to self-financing and that productive investments had considerable indivisibilities (Simatele, 2021). It is these indivisibilities that required that potential investors accumulate funds until they were sufficient enough for required investments. His model did not distinguish between savers and borrowers. Shaw (1973) 's hypothesis however, did not make self-financing a prerequisite for investors but linked them and savers through intermediaries in the form of financial markets (Simatele, 2021). He adds that financial markets are fragmented due to information asymmetries which are minimized by financial development. As per the theory, reduced fragmentation lowers borrowing costs, increasing access for the poor to credit and savings options.

McKinnon (1973) and Shaw (1973) seem to emphasize the need to develop a strong savings culture among the financially excluded as they try to explain the finance-growth nexus. Their hypothesis expresses that

when financial markets are fully functional and interest rates are positive, the poor can have access to resources that are more relevant to their needs (Simatele, 2021). Their theory of financial liberalization asserted that it could promote domestic savings and consequently investment leading to economic growth. The implication was that savings were discouraged by low or negative real interest rates leading to slow economic development (Mkalipi, 2020). In a nutshell, the McKinnon-Shaw hypothesis identifies savings, credit and payment systems as avenues via which finance may have an impact on poverty.

2.1.2 Vulnerable group theory of financial inclusion

This theory stresses that financial inclusion efforts should be concentrated and focused more on the marginalized groups which include the young, women, the elderly and the poor who are more the sensitive to economic hardships (Ozili, 2020). It is their vulnerability which makes them a priority target for inclusion into the formal sector which can be achieved through social cash transfers from the government into their accounts creating a ripple effect of convincing other vulnerable groups to enter the formal financial sector as a means of gaining access to these funds too. The theory recognizes that certain groups are at a disadvantage and is an effort to close the inequality gap by allowing them access into the formal financial sector.

Some merits of this theory according to (Ozili, 2020) are a reduction of exclusion to financial services by targeting vulnerable groups for financial inclusion and how it is potentially cost-effective when targeting only the marginalized population groups for inclusion as compared to doing so for an entire population. On the other hand, this theory is flawed as it does not prioritize financial services access for everyone which should be the ideal situation. Moreover, focusing on the most disadvantaged to achieve financial inclusion may result in income inequality if vulnerable people have better access to financial services than others, and it could result in increased social inequality if social policies are created to favour vulnerable people only (Ozili, 2020).

2.1.3 Special agent theory of financial inclusion

This theory posits that delivery of financial inclusion to those excluded can be inhibited by complexities related to those whom it is intended hence special agents to deliver financial inclusion to members of the excluded groups are required. According to this theory, "the special agent must : (i) be a highly skilled and

specialized agent (ii) understand the peculiarities of the excluded population; (iii) understand the informal financial system that currently exists in the communities where the excluded members of the population reside; (iv) identify opportunities for improvement through innovation; and (v) come up with a way to incorporate the local financial system into the formal financial sector as put forward by (Ozili, 2020)." This theory is based on the principal-agent relationship. The national government, a foreign government, or foreign organization frequently serves as the principal, whilst a local bank, non-bank institution, or even better, a mobile network provider, frequently serves as the special agent.

2.1.4 Social theory of money

This theory, which adopts the viewpoint that money is a social construct, might be closely related to the classical and neoclassical theories of money (Dahlberg, 2015 in Mishra, 2021). Money is a social construct that is constantly renegotiated and constructed via the interactions between monetary institutions and other social institutions (Smithi, 2000). Consequently, it is feasible to renegotiate with economic institutions such like a banking order to offer financial services that are socially useful (Dahlberg, 2015 in Mishra, 2021). In order to describe the factors that influence mobile payment systems, this theory has mostly been applied.

It is significant because it shows how crucial it is for organizations to spot underserved societal sectors and offer suitable financial services in those places (mobile money). According to the social theory of money, this study supports the idea that mobile money should be considered as a substitute that aims to address the shortcomings of traditional banking institutions that have led to a number of people being financially excluded.

2.2.0 Financial Inclusion

The term financial inclusion means "the effective use of a wide range of quality, affordable & accessible financial services, provided in a fair and transparent manner through formal / regulated entities, by all Zimbabweans" according to (RBZ, 2016). It goes on to add that it "entails access to and usage of a wide spectrum of products and services provided by various players in the financial services sector, including banking, insurance, pensions, capital markets, microfinance, developmental financial institutions and payment systems." Alternatively, (Sarma, 2008) highlights the multiple dimensions of financial inclusion as a "process that ensures ease of access, availability, and active usage of the formal financial system for

the people of an entire society and economy." Rasheed et al., (2019) identified it as a powerful tool for inclusive growth in countries as it empowered businesses and individuals alike to access financial systems. Thomas & Hedrick-Wong (2019) as cited in Rasheed et al also linked inclusion with a lowering of poverty levels and economic sustainability. World Bank (2017) added further that a need for inclusion is implied where there is a lack of access to financial services. Niekerk and Phaladi (2021) however define financial inclusion in the context of whether or not an individual possesses an account with a formal financial institution. Adunda and Kalunda (2012), cited by (Wright et al., 2013), define it as a process of advancing banking outreach through making financial products available at a fair price, at the appropriate time and place, and without stigmatizing any members of society.

Whilst the definitions for financial inclusion are varied, most of the past research is in agreement that inclusion is a major engine for economic growth (Park and Mercado, 2015; Niekerk and Phaladi, 2021; Winn and De Koker). It has become all-encompassing, implying the convergence of a plethora of financial systems and products. Its scope, as (Sahrawat, 2010) puts it, has changed to include insurance, remittance, payment, loans and financial counselling. As such, it should be a basic right for all. The lack of access for the underprivileged and other marginalized groups makes life unbearable for them as it denies them the right to participate in economic activity and takes away any hope of them improving their lives through opportunities such as loans and insurance services.

The RBZ (2021) posits that the Covid-19 pandemic reversed any prior gains made towards financial inclusion through measures that were imposed on the public in a bid to reduce its spread. However, the same pandemic highlighted the importance of financial inclusion as remote access to finances was a priority due to movement restrictions. It brought "with it a compelling need to enhance digitization (RBZ, 2021)" a view further buttressed by (Vasile, Panait and Apostu, 2021) who concluded that such an unexpected event intensified the digitization of financial inclusion for all facets of society.

2.2 MNOs, banks and mobile payment systems

2.2.1. History of mobile money in Zimbabwe

The Zimbabwean landscape was introduced to mobile banking in 2011 with the advent of Ecocash (Mbengo and Phiri, 2015). Porteous (2006) as cited by (Mbengo and Phiri, 2015) defined mobile banking as a financial system that allowed access to banking services through mobile devices (Phaladi and Niekerk, 2021) whilst (Bandyopadhyay, 2009) cited in the same article saw it as a way to bring the unbanked into the formal economy. Chitimira and Torerai (2021) posit that" before the advent of mobile money, the majority of financially excluded persons relied on informal cash transactions that often-posed systemic risk to the financial markets in Zimbabwe." Porteous (2010) divided mobile banking into transformational mobile banking and additive mobile banking. The first is the availing of financial services using mobile devices to reach the financially excluded segments. The second model operates with mobile phones being an additional channel used to provide more refined banking services to the already banked. This research focuses mainly on the former with Econet being the chief mobile operator dominating the mobile payment systems landscape with its Ecocash platform as (Benjere, 2018) put its subscribership at a whooping 3738146 as compared to Telecash's 78180 and OneMoney's 51440.

2.2.2. How mobile money works

Through the transformational model, mobile money makes it possible for the excluded groups to deposit, withdraw and send money, and pay bills using value stored on their subscriber identity module (SIM) cards inserted in mobile phone devices (Chitimira and Torerai, 2021). Consequently, this transformational model has been improved to bring about the additive model in which banks can link the customer's phone numbers with their respective bank accounts making it possible for them to access their accounts (Porteous, 2006) remotely using their mobile devices allowing them to pay bills, make transfers between their mobile wallets and accounts and also perform transfers between banks (ZIPIT) and make airtime purchases. Our definition of mobile money comes from Desai (2011) who states that "a service is deemed mobile money if it satisfies the following requirements: (a) The service must provide at least P2P transfers, bill payments, bulk payments, and value storage; (b) A service must exploit a network of transactional agents outside bank branches for cash in or cash out; (c) The service must offer an interface for initiating transactions for customers and agents; and finally (d) Customers must be able to use the service without previously being banked." Additionally, (Dahlberg, 2008) as cited in (Chibakwe, 2013) observed that mobile money services in the third world enabled users to do three things, namely; (a) store value (currency) in an account accessible via mobile phone, (b) convert cash in and out of the stored currency account and (c) transfer stored currency between accounts.

2.2.3. Relationship between Banks and MNOs

It was largely hypothesized that banks with their stringent account opening requirements had opened the door for telecommunication companies to swoop in and take over the financial services space as they had made it easier for individuals to open mobile money accounts and be financially included. Munalye (2015) cited (Reed et al, 2014) stated that it was increasingly unlikely for most people who did not have bank accounts to not own mobile phones which provided an opportunity to satisfy a need in the financial services industry. RBZ (2016) reported that the rate of mobile phone ownership and usage was significantly higher than that of mobile banking (additive) despite its potential benefits. Macharia and Okunoye (2013) report that the number of handset users is higher than that of bank account holders.

Extending financial access and services to excluded groups remains a huge challenge despite the growth in the number of people who own bank accounts. First, demand for the services offered may lag in situations where financial access is supply-driven. According to the 2017 Global Findex, 25% of account holders in developing nations had not made a depositor withdrawal in the previous year (the dormancy rate) (Demirguc-Kunt et al., 2018). It is this level of reach that allowed telecommunication providers to offer mobile device-based mobile money services in Zimbabwe at a lower cost than banks. As a result, telecoms companies that are entering the financial services market are posing banks with unprecedented competition as (Chitimira and Torerai, 2021) suggested.

Mobile phone subscription in Zimbabwe had reached 24.3 million users as of 31 March 2020, with the number of subscribers actively using their mobile phones at 13.7 million (Chitimira and Torerai, 2021). Despite the fact that the total number of active mobile subscriptions had grown by 2.3% to 14,257,590 from 13,935,233 in the third quarter of 2021, the mobile penetration rate had increased by 0.9% to 94.4% from 93.5%. Statistics from RBZ (2021) also show that mobile money payments accounted for 84.6% of transactional activities in volume whilst accounting for only 8.3% of the total value of payment transactions in 2021. This demonstrates the value of mobile money in making small transactions, a characteristic of low-income earners, youth and women, which constitute some of the excluded groups from the formal financial sector. The figure below gives a total breakdown. A key point to note is that apart from mobile money, the rest of the payment systems are bank initiated meaning that one needs an account to be able to access them which just goes to show the importance of mobile money in assimilating excluded groups into the formal financial economy.

TRANSACTION VOLUMES IN MILLIONS										
MONTH	RTGS	ΑΤΜ	POS	MOBILE	INTERNET	Total Volumes	Total Chang e			
Jan-21	0.72	0.35	12.02	95.46	0.87	109.41	-21%			
Feb-21	0.81	0.53	12.31	90.08	0.75	104.47	-5%			
Mar-21	1.11	0.75	15.18	105.27	1.00	123.32	18%			
Apr-21	0.95	0.61	15.18	97.25	1.04	115.04	-7%			
May-21	1.03	0.66	16.51	103.71	0.99	122.91	7%			
Jun-21	1.08	0.58	14.80	99.35	0.98	116.79	-5%			
Jul-21	1.03	0.55	15.22	102.59	0.98	120.37	3%			
Aug-21	1.05	0.48	14.39	105.30	0.96	122.17	1%			
Sep-21	1.19	0.49	15.40	105.81	2.09	124.99	2%			
Oct-21	1.11	0.43	18.21	107.29	2.34	129.39	4%			
Nov-21	1.14	0.48	17.44	99.31	2.32	120.69	-7%			
Dec-21	1.22	0.52	20.03	106.43	2.58	130.78	8%			
Total YTD	12.44	6.43	186.68	1,217.85	16.91	1,440.32				
Proportion	0.9%	0.4%	13.0%	84.6%	1.2%	100.0%				

Figure 1- Transaction volumes for 2021 in millions

SOURCE: RBZ (2021)

TRANSACTION VALUES IN BILLIONS								
MONTH	RTGS	ATM	POS	MOBILE	INTERNET	Values Total	Total Change	
Jan-21	255.55	2.30	21.04	35.35	66.62	380.87	-15%	
Feb-21	226.34	2.29	22.88	36.43	63.60	351.54	-8%	
Mar-21	320.42	3.32	28.57	44.52	86.46	483.30	37%	
Apr-21	288.96	2.81	30.07	44.13	90.58	456.55	-6%	
May-21	361.43	3.19	36.77	49.75	89.47	540.60	18%	
Jun-21	388.76	3.20	38.54	51.44	115.15	597.08	10%	
Jul-21	379.66	2.49	45.81	57.57	145.03	630.55	6%	
Aug-21	397.54	4.09	52.85	60.91	159.21	674.59	7%	
Sep-21	477.93	4.18	52.26	64.14	181.19	779.71	16%	
Oct-21	481.18	3.84	53.17	65.33	197.97	801.49	3%	
Nov-21	621.90	4.88	56.03	63.44	252.41	998.65	25%	
Dec-21	747.04	4.71	67.90	76.51	264.75	1,160.91	16%	
TOTAL YTD	4,946.70	41.28	505.89	649.52	1,712.44	7,855.83		
Proportion	63.0%	0.5%	6.4%	8.3%	21.8%	100.0%		

Figure 2- Transaction values for 2021 in billions

SOURCE: RBZ (2021)

Lack of trust in the banking sector due to large economic collapses such as the 2008 hyper-inflation, high bank charges and the lack of convenience had pushed subscribers to opt for the mobile money systems and shy away from the traditional banking model. Chitimira and Torerai (2021) also suggest that relaxed requirements for a mobile money account have also contributed to their adoption as alternatively, one has to pass the Know Your Customer (KYC), anti-money laundering (AML) and counter-terrorist financing (CTF) requirements when opening a bank account. This has given the unbanked and migrant workers who usually lack sufficient documentation a chance to participate in Zimbabwe's mainstream finance. An ID is often enough to open as well as use a mobile money account in Zimbabwe. Birch and Young (2007) as cited in (Munalye, 2015) observed that "mobile money services in general offer relative advantage in terms of accessibility, convenience, speed privacy, cost effectiveness and control for conducting financial transactions over other money transfers or payment intermediaries such as banks and financial institutions." Chibakwe (2013) is of the opinion that mobile money has replaced banking saving people the hustle of commuting long distances to deposit small sums of money. "Mobile-telecom operators are well-placed to provide affordable financial services because of their existing customer base, marketing capabilities, experience with high volume-low value transactions through sale of airtime and their physical communication infrastructure" he cites (Ivatury & Pickens, 2006).

Mobile network operators have infringed on the market for the banking sector resulting in a change of strategy for players in the banking industry. This competition has forced them to evaluate and modify their operations in order to remain viable and ensure survival. Mobile banking platforms such as Steward Bank Square App or FBC's Mobile Moola are responses to the growing penetration by telecommunication operators, however, such products do not deliver full potential as these services are merely limited to account holders (Vishal et al., 2012) as cited by (Munalye, 2015).

Also new regulation by the RBZ and POTRAZ has resulted in cooperation between banks and competing mobile money providers in the exchange of money between mobile money platforms and banks and between those platforms and their agents. In practice, every bank in Zimbabwe currently has a mobile platform of its own which works in tandem with the likes of Ecocash. Ecocash registration has become a normal part of the account opening process. "The regulations aim to create a smooth exchange of money between two or more mobile money accounts operated by different service providers and in the transfer of money between mobile money platforms and bank accounts" (Chitimira and Torerai, 2015). "The RBZ required that the network providers also maintain a trustee account with a registered financial institution

with real money deposits which backs balances in their e-money virtual account (EcoCash). The central bank maintains a limit on the balance of the trustee account which must not be exceeded" (Makina, Ndari and Chiwunze, 2014).

In June 2020, Zimbabwe banned mobile money agents and introduced a mandatory national payment switch which would increase the role of commercial banks in processing payments and increase transparency on the National Payments System. There is anecdotal information on mobile money agents providing unauthorized FOREX transactions which raised financial integrity/FATF regulatory concerns from the RBZ (Owolade, 2021). Through the Banking (Money Transmission, Mobile Banking and Mobile Money Interoperability) Regulations Statutory Instrument 80 of 2020, the central bank designated Zimswitch Technologies (Private) Limited (Zimswitch) as a national payment switch, and directed all payment service providers, including mobile payment operators, to be connected thereto by 30 September 2020. The interoperability of payment systems effective 30 September 2020 has facilitated the transacting public to instantly send and receive funds across all Mobile Network Operators (MNOs) and Banks (RBZ, 2021). The issued statement banning agents had a number of implications which were:

•" the suspension of mobile money agents from facilitating mobile financial transactions.

• suspension of all merchant transactions except for receiving payments for goods and services as well as payment of utilities (water, power and airtime), which were limited up to ZW\$5000 per day for the convenience of the transacting public.

• a requirement that all mobile money liquidations be performed through the banking system. *•*suspension of all bulk payer transactions."

Source (Owolade, 2021)

"The interplay of banking technologies with mobile technologies, that have much wider penetration, holds new promise of financial inclusion for the masses" (Wright et al., 2013). "Apart from simply leveraging mobile phones for basic and advanced banking, innovation in this space is reaching new levels such as allowing mobile technology to transact through ATMs or using SIMs to operate credit/debit card POS machines on mobile networks." For instance, swipe machines which are banking technology are able to perform Ecocash transactions which are a product of telecommunication providers.

2.3.1. Mobile money and financial inclusion

The introduction of mobile money platforms has drastically reduced the number of clients going to banks and standing in large queues (Thornton and White, 2001). Mbengo and Phiri (2015) state that it opens new possibilities for the unbanked to improve their lives whilst (Benjere, 2018) cited (Porteous, 2006; Donner and Tellez, 2008) who assumed that the provision of financial services to the unbanked through mobile devices would benefit the poor by improving their savings rates, increasing their income, resilience to financial shocks, increasing efficiency of payment systems whilst reducing cash as a medium for transacting. According to Alexandre and Eisenhart (2013), who argued in favour of mobile money, the dependence on cash hinders financial inclusion and that mobile money is disruptive, and will lessen it. Benjere (2018) proposed the hypothesis that nations that make use of mobile financial services are most likely to succeed in lowering their dependency on hard currency.

In addition, according to (Alexandre and Eisenhart, 2013), mobile money is crucial to financial inclusion because it produced data that are crucial to the expansion of financial inclusion and promoted the creation of accounts, which are essential to both financial inclusion and financial integrity. They further argued that a mobile money account was usually the first account an unbanked person was to open. Mobile financial services, according to (AFI, 2010), served two purposes in order to promote financial inclusion: they served as a channel for the delivery of electronic financial services and as a method of payment that permitted the transfer of payment orders between digital accounts or digital wallets.

The potential for poverty alleviation is another aspect of mobile money that cannot be underestimated. When Barugahara (2021) quotes (Demirguc-kunt et al., 2014), who acknowledge that inclusive finance is crucial for eradicating poverty and achieving economic progress, she is in agreement with this school of thought. Chitimira and Torerai (2021) opine that people in rural areas, informal settlements and low-income earners have embraced mobile money technology which has afforded the opportunity to participate in mainstream finance, something they were previously unable to do due to lack of funds to maintain accounts or lack of banking infrastructures in their remote locations.

2.3.2. Key Statistics

Results from the Zimbabwe FinScope Consumer Survey (2014) showed that 45% of the adult population uses mobile money services, with 65% of users citing convenience and 36% citing cost savings over banking services. The number of active mobile subscribers climbed from 3.3 million in 2016 to 7.67 million

as of the end of March 2020, according to data from the RBZ (2021). This increase is due to the rise in the number of registered mobile phone subscriptions. Additionally, "there were 24,379,810 registered mobile subscriptions as at 31 March 2020 of which 13,724,522 were active. On average, in Zimbabwe, mobile money accounts for over 80% of total volume of transactions and at least 20% of the total value of transactions. Financial institutions in Zimbabwe have leveraged on the high mobile phone penetration rate of 94.2% as at 31 March 2020 by partnering MNOs to offer a range of efficient and safe digital financial services to different market segments, thereby broadening the consumer choices" (RBZ, 2021).

2.4.1. National Financial Inclusion Strategy (2016-2020)

The strategy gave the government a base from which to "introduce an evidence-based, prioritized, better resourced, and more comprehensive approach to expanding access and usage of financial services," as it had been noted that financial inclusion was crucial to the socioeconomic wellbeing of the nation (RBZ, 2014). Financial innovation, financial competence, financial consumer protection, and microfinance were its four primary foundations as it developed whilst also identifying the main excluded groups which are: women, the youth, low-income households and MSMEs. One of its objectives was to improve access to formal financial services in Zimbabwe from 69% in 2014 to at least 90% by 2020. Another was to increase the percentage of adults with bank accounts from 30% in 2014 to at least 60% (RBZ, 2021). In a nutshell, the strategy sought to act as a guidepost in the acceleration of financial inclusion in Zimbabwe.

2.5. Mobile money in the Covid-19 era

COVID–19 pandemic brought about a pressing need to improve digitization and ensure digital channels are robust and can handle additional volume of transactions during a crisis (RBZ, 2021). Vasile, Panait and Apostu (2021) concede that the "crisis has generated extensive social policy measures" that have impacted financial inclusion. Furthermore, the scholars also highlighted that low-incomes made loan repayment difficult and coupled with lack of movement, led to the adoption of electronic money which had positive effects on inclusion. Zimbabwe incentivized the use of mobile money as a way to reduce the risk of Covid transmission and allow people and businesses to keep transacting, thereby protecting livelihoods (Owolade, 2021).

2.6 Conceptual Framework

A diagrammatical representation of a conceptual framework demonstrates the link between dependent and independent variables, that is, according to (Young, 2009). The framework below shows the relationship between the independent variable – mobile money (as offered by mobile network operators) and the dependent variable which is financial inclusion. As has been expressed before, this study also intends to assess the effects of hyper-inflation and the Covid-19 pandemic on the usage of mobile money which in turn has had an impact on the level of financial inclusion in Zimbabwe during the Covid-19 era. As these events have happened concurrently, the diagram illustrates the relationship between these variables.



Figure 3- Conceptual framework

Source: Researcher (2022)

2.7 Empirical Literature Review

Using data from FinScope Surveys of 11 countries, Fanta et al., (2016) conducted a study on the contribution of mobile money on financial inclusion in the SADC region. They provided a cross-country analysis of mobile money ownership and its drivers, as well as the factors influencing adoption, and they also demonstrated a connection between mobile money and financial inclusion. Research was carried out using logistic regression analysis. In total the study used three models. The studies concluded that mobile phone penetration was a requisite for mobile money and that development of mobile telecom structures was important for mobile money development. Additionally, the research also underlined the importance of mobile money in countries where the level of exclusion was high. Additionally, the usage of mobile money increased in areas with higher demand for remittances citing Tanzania and Zimbabwe as examples. Additionally, research showed that less mobile money is utilized in the region for saving, credit, and insurance purposes and more is used for transactions and remittances (Fanta et al, 2016). Finally, the study

came to the conclusion that owning mobile money is an alternative to both formal and informal account ownership and that having a bank account, having access to an ATM, using mobile banking, and doing online banking were all inversely associated to owning mobile money.

Mkalipi (2020) carried out research for a related study to look at the impact of mobile money services provided by mobile money carriers on financial inclusion in Zambia. The researcher used a mixed methods approach carried out through surveys on a population of mobile money users. An investigation was carried out on 150 respondents through random sampling which led the researcher to conclude that mobile network operators were impacting financial inclusion positively as their services were easily accessible and were being taken up by those that were formerly excluded.

Munyoro et al (2017) conducted an investigation on the significance of Mobile Money Transfers (MMTs) on the economic development of Zimbabwe, with a particular focus on Ecocash using an exploratory research design involving mixed methods. Data collection was done through questionnaires and focus groups using Likert non-comparative scaling technique on a sample size of 250 respondents. The studies concluded that there as greater scope for inclusiveness in mobile money transfers as compared to traditional banks due to easier accessibility.

2.8. Summary

This chapter first tackled the various definitions of financial inclusion and briefly discussed the origins of mobile money in Zimbabwe. It then explored the relationships between the main players in the mobile money space; mobile network operators (MNOs) and banking institutions and how their relationship has evolved from rivalry to a mutually beneficial one resulting in increased financial offerings that made strides towards financial inclusion. Perspectives from various scholars were analysed on how mobile money has impacted financial inclusion. The NFIS was briefly discussed as well as the impact of the Covid-19 pandemic on the current state of financial inclusion.

CHAPTER III

RESEARCH METHODOLOGY

Introduction

This chapter aims to provide a thorough explanation of the research's methodology. Research methodology is regarded as a science that studies how scientific research is conducted. It is a means of methodically resolving the research issue. Here, the term descriptive research refers to several types of fact-finding enquiries and surveys. The primary goal of descriptive research is to describe the current situation as it stands. The study's research design, demographic, and sample methods will all be outlined and discussed. The logic of the approaches employed should be taken into account in methodology.

3.1 Research Philosophy

According to (Saunders et al, 2009) comprehension is advanced in a number of ways. The researcher suggests positivism, realism, interpretivism, and pragmatism as the four main research philosophies. This research used positivism which uses actual data measured through observations. Saunders, Lewis and Thornhill (2007) define positivism as the "epistemological position that advocates working with an observable social reality which emphasizes highly structured methodology to facilitate replication, whose end product can be law-like generalizations similar to those produced by the physical and natural scientists."

3.2 Research Approach

The researcher adopted the deductive research approach which entails the formulation of a hypothesis or theory and ways by which to investigate or measure the said hypothesis (Saunders et al., 2009). The research was premised on investigating the relationship between mobile money systems and financial inclusion in the Covid-19 era. To do this, quantitative data extracted from a questionnaire survey as well as published data from the Reserve Bank of Zimbabwe's latest Financial Inclusion Bulletin (2021) was used. The ability to produce reliable, quantifiable data makes the quantitative approach a good fit as it makes it possible to generalize the results to a larger population (Benjere, 2018). Thus, the quantitative

methodology with a cross sectional design was adopted in this study. A cross-sectional study concentrates on a specific occurrence at a specific time, as opposed to longitudinal research, which focuses on the phenomenon throughout time (Saunders et al., 2009). Quantitative methods, however, are rigorous and provide scant to no support for the beliefs and behaviours of the study respondents.

3.3 Research Strategies

This study will use questionnaire surveys and secondary quantitative research. The questionnaire used to collect data on mobile money and financial inclusion investigates the extent to which mobile money has influenced access to financial services in the Covid-19 era. This is a form of positivist research strategy which emphasizes on measurable observations that allow statistical analysis (Saunders et al., 2007). Survey research is defined as "involving extracting processed data about one or more groups of people concerning their characteristics, opinions, attitudes, or previous experiences-by asking them questions and tabulating their answers" by (Leedy and Ormrod, 2010). They are also efficient as data can be collected without the researcher having to be physically present. Zikmund et al., (2013) posits that "they provide a quick, inexpensive, efficient, and accurate means of assessing information about a population." People generally view the survey technique as authoritative, and it is connected to deductive research since it is very simple to explain and grasp according to (Saunders et al., 2007). Secondary data from the RBZ (2021) Financial Inclusion Bulletin will also be utilized to provide a more accurate depiction of the inclusion statistics especially with regards to the first objective. Regression analysis will be employed to investigate the relationship between mobile money and financial inclusion using the RBZ data. Due to resource restrictions, secondary quantitative research becomes ideal as it is relatively affordable and less time consuming.

3.4 Research Design

It is the framework to be used to establish relationships between variables to be studied which were mobile money and financial inclusion. The method used to link the many components of the study in a logical and cogent manner, ensuring that the study will successfully answer the research topic, is known as the research design. It comprises the outline for the measurement, collection and scrutiny of data. Explanatory research design will be used as it is best for establishing causal relationships between variables. The descriptive component of the research design is concerned with finding out the causes, implications and relationships of a phenomenon and to find accurate data on and present a clear picture of the phenomenon under study,

while the quantitative aspect stresses the use of objective metrics and the statistical, mathematical, or numerical analysis of information obtained from surveys, questionnaires, and polls. Also, due to the highly quantitative nature of data sought in the study, the research design allowed the author to be highly thorough and objective. Saunders et al., (2009) concedes that surveys can be used to generate data that is representative of an entire population more affordably as they use a small sample.

3.5 Target Population

Wilkinson (2012) defines population as "a group of individual persons from which samples are taken for statistical measurement." Green and Carmone (2011) concede that "research population is the totality of all members, objects and subjects that have common characteristics and features relative to the study to which sample findings can be generalized." The researcher used a target population comprising all users of mobile phone devices with a registered line and can perform financial transactions residing within the Harare CBD from whom relevant data could be extracted.

3.6 Sampling

Trochim and Donnelly (2008) define sampling as "the process of singling out units from a population under study to enable us to generalize the results to the population from which the sample was chosen." Probability sampling was used in this research. Simple random sampling which involves choosing the sample at random from the sampling frame was adopted. Oliveira and Martins (2011) noted that while a large sample shouldn't be too huge to create information that is sufficient for the research to be conducted, it also shouldn't be too small because that could also result in information that is insufficient. The sample size must also be optimum. Benjere (2018) claims that an optimum sample is one which is efficient, representative, reliable and flexible. The formula by (Smith, 2015) was used by the researcher to establish a sample size for mobile money users from the population. The sample size was 138 respondents as this sampling technique works best with a number over a few hundred (Saunders et al., 2007). The sample size was calculated using the (Smith, 2015) formula. Three parameters are used in the formula: margin of error, confidence interval, and standard deviation. It advises a standard deviation of 0.5. The sample size was computed as follows:

Confidence interval: 90% (Giving a Z-score of 1.645)

Standard deviation: 0.5 Margin of error: 0.07

Required sample size $(n) = (Z-score)^2 * (Standard deviation (1-Standard deviation))$

 $= \frac{1.645^2 * 0.5 * 0.5}{0.07^2}$ n = 138

3.7 Research Instruments

3.7.1 Questionnaires

According to (Borg and Gall, 2012) a "questionnaire is an instrument of research used to collect information from respondents for the research topic under study". Church (2013) stated that there are two kinds of questionnaires, open-ended and closed-ended questionnaires. Questionnaires were used as they save time as the physical presence of the researcher is not needed for extraction of data. This also reduced errors such as researcher bias which is eliminated removed due to the absence of the researcher. "Closed-ended questions allow a respondent to choose a response from explicit options given" (Guilford, 2013). Closed-ended questions were employed in this study to help the researcher learn more about how mobile money affects financial inclusion.

 $(Margin of error)^2$

3.8 Reliability and Validity

3.8.1 Reliability

Reliability relates to how consistent a measure is. The researcher will use the following questions as guidelines when measuring validity:

- Is there a consensus on the scale measuring what it is intended to measure?
- Is there a correlation between the measure and other measures of the same phenomenon?
- Does the behaviour expected from the measure predict actual observed behaviour?
The wording of questions, the physical environment, the respondent's mood, the interviewer's mood, the nature of contact, and the regression effect of an instrument are among the elements identified by Kumar (2011) as having an impact on the reliability of a research instrument.

3.8.2 Validity

Validity on the other hand focuses on the "extent to which a test successfully measures that which it is supposed to measure." The researcher will also use the following questions as a guideline when measuring reliability of the research by (Easterby-Smith et al, 2002):

- "Will the measures yield the same results on other occasions?"
- "Will similar observations be reached by other observers?"
- "Is there transparency in how sense was made from the raw data?"

Validity must also meet other conditions in addition to reliability. Three key categories of validity are listed by Kumar (2011): construct validity, concurrent and predictive validity, and face and content validity. He goes on to define them as follows:

Face validity – "is the establishment of a logical between each question on the research instrument and an objective."

Content validity – "means that items and questions on the research instrument cover the full range of the issue or attitude being measured."

Predictive validity – "the degree to which an instrument can forecast an outcome."

Concurrent validity – "how well an instrument compares with a second assessment concurrently done."

Construct validity – "is determined by ascertaining the contribution of each construct to the total variance observed in a phenomenon."

3.9 Data Analysis

The collected data will be edited and classified using quantitative analysis techniques to make for easier analysis and presentation. The researcher will use application software such as SPSS to present research findings as well as frequency tables, bar graphs and pie charts. As they give a rapid general image of research findings and make it simple to draw inferences from the research, bar graphs and pie charts would also be used.

3.10 Research Ethics: Key Considerations

These are norms that underline the research process. In order to promote confidentiality, the respondents were not asked to write their names. Data collection was be done with informed consent. The researcher ensured that the questionnaires represented exactly what they were meant for by informing respondents beforehand that they were meant for academic research to eliminate any deception. In summary, ethical issues that were considered included confidentiality and anonymity, voluntary participation and fairness. Participants were allowed to opt out if they felt uncomfortable at any point during the research.

Chapter Summary

The chapter gave a detailed breakdown of the research design, philosophy and strategy used in performing the research. The target population and sample size to be used were also determined with the sample size being derived from the (Smith, 2015) model. The findings were to be analysed and presented using SPSS. Finally, the researcher explained how the information was handled to ensure validity and reliability.

CHAPTER IV

DATA PRESENTATION, ANALYSIS AND DISCUSSION

4.0 Introduction

The current chapter presents, data presentation, analysis, findings, and discussions as set out in Chapter 3 with the objectives set out in the first chapter as the main guiding factors. The results are presented on the relationship between mobile money and financial inclusion in the Zimbabwean context during the COVID-19 pandemic. The data was presented through the use of bar graphs, pie charts, tables, and lastly, regression statistics on SPSS statistics 25 to find the cause and effect between the two variables under examination (mobile money and financial inclusion). A sample size of 138 was used to gather relevant and reliable data for the study based on Smith (2015) model.

4.1 Data Presentation

4.1.1 Questionnaire Response Rate.

Chapter two reviews that most of the scholars, used questionnaires for data Collection, hence this motivates this study to employ the same data collection technique. As mentioned earlier on, the sample size was reduced to 138 respondents. Questionnaires were sent to respondents physically and some through the emails. The response rate was as follows:

Table 1-Questionnaire response rate

Keturned	Not Returned	Rate %
70	8	50.72%
40	20	28.99%
110	28	79.71%
	70 40 110	Returned Not Returned 70 8 40 20 110 28

Source – Primary data February 2022 (Harare Residents)

As shown above, the response rate of 79.71% was obtained which, according to Mugenda and Mugenda (2003) is above 70% and excellent for analysing and reporting on the opinion of an entire population. In order for the study to obtain this noble response rate, the researcher employed various operational strategies which include but not limited to, the researcher did his utmost to perform thorough and stringent follow-ups, rescheduling the distributing days of the questionnaire based on participant convenience. Additionally, the author was able to arrange questionnaire distribution via google survey which is convenient as it can be done online. Email follow-ups were conducted, and phone calls were made as needed.



Figure 4- Questionnaire Response Rate (Planned and Actual) Source - Primary data (February 2022)

4.2 Demographic Findings

4.2.1 Sample Composition

In context of mobile money and financial inclusion, sample composition refers to the mixtures of subsets that make up a sample. The sample size was categorized of high-income earners and low-income earners. Medium income earners were excluded since it was difficult to separate them from high income earners. Basing on the current trending news from (Sunday mail 19 October 2022), the minimum wage rate was pegged at USD\$150 or RTGS equivalence. This marked the starting point of low-income earners. Moreover, the higher income earners were made up of SME holders, and any individual with a gross salary

of USD\$1500 and above. Since all the subsets were categorized in these two broad categories this validates the research since all the income levels were considered.

Table 2-Sample Composition

Sector	Sample Size
Low-income Earners Higher income Earners	88 50
Total	138
	130

Source: Primary data

4.2.2 Age Range

Age refers to the length of time that an individual has lived. In this context, age is measured in years. Age usually plays a pivotal role in research since it is the one which determines the type of information brought to the research. During the survey, the study managed to take into account the respondent's age, and the respondents from age groups which were out of the required age range, were rejected.

Table 3-Respondents' age range

Age	18 -35 years	36 – 45 years	46 years and above	Total
Outcome	45%	30%	25%	100%
Number of Respondents	50	33	27	110

Source – Primary Source (February 2022)

Table 4.3 displays that a greater response rate was attained from respondents that were between the age ranges of 18 to 35. This age group is considered to be economically engaged and is typically involved in day-to-day money transfers thus referred to as the youth according to past FinScope surveys. The lowest percentage was obtained from individuals over the age of 46. This is a designation for the elderly, some of whom have limited knowledge of the topic at hand.

4.2.3 Educational Status

According to the existing literature, the level of education of the research participant is of paramount importance in giving reliable and valid information for decision making. The usage of mobile money requires literacy, where an individual must be able to read and write. The author managed to ascertain first the educational level of each participant. Participants without secondary education were removed from the sample. This was done to validate the study. The graph below shows the educational status of the participants.





Source – Primary data (authors Survey) February 2022

The highest percentage of participants (30%) attained an undergraduate level, and in theory this is the moderate level of education in Zimbabwe. Additionally, the educational level for all the participants was very noble, hence it satisfies the primary objectives of the research topic.

4.2.4 Gender Distribution

Distribution of respondents by gender

CT 11 (D: 11 1	c	1	
Table 4-	Distribution	of res	pondents	by gender

Gender	Frequency	Percentage
Female	58	52.73%
Male	52	47.27%
Total	110	100%

Source: Primary data

Females outnumbered males in our survey constituting a total of 52.73% whilst males were 47.27%. these statistics compare favourably with those published by the RBZ (2021) pegging women at 52% of the total population and men at 48%.

4.3 The impact of mobile money on financial inclusion in Zimbabwe during Covid 19.

Objective 1 seeks to analyse the relationship between mobile money and financial inclusion in Zimbabwe during Covid 19 Pandemic. The study analysed the relationship between the two variables under examination through regression statistics. Secondary data from (RBZ, 2021) was utilized to provide an accurate depiction of the relationship between the two variables under study. Information for the 12 months of 2021 for total transaction volumes for each month denoted in millions as well as mobile money volumes that contributed to the total were computed and analysed through regression analysis. Mobile money is the independent variable while total volume (financial inclusion) is the dependent variable (*Ceteris Paribus*).

4.3.1 Regression Analysis of the relationship between mobile money and financial inclusion

Mobile Money- independent	Total Volumes (Financial Inclusion) -dependent
variable (in MILLIONS)	variable (in MILLIONS)
95.46	109.41
90.08	104.47
`105.27	123.32
97.25	115.04
103.71	122.91
99.35	116.79
102.59	120.37
105.3	122.17
105.81	124.99
107.29	129.39
99.31	120.69
106.43	130.78

Table 5-Variable analysis of total transaction volumes and mobile money volumes for 2021

Source – RBZ Financial inclusion bulletin (2022)

Descriptive Statistics			
	Mean	Std. Deviation	Ν

Financial Inclusion	120.03	7.642	12
Mobile Money	101.49	5.270	12

Figure 6-SPSS Descriptive statistics

Correlations			
		Financial Inclusion	Mobile Money
Pearson Correlation	Financial inclusion	1.000	.958
	Mobile money	.958	1.000
Sig. (1-tailed)	Financial inclusion		.000
	Mobile money	.000	•
Ν	Financial inclusion	12	12
	Mobile money	12	12

Figure 7-SPSS Correlation table

Model Summary								
					Change Statist	ics		
			Adjusted R	Std. Error of	R Square			
Model	R	R Square	Square	the Estimate	Change	F Change	df1	
1	.958ª	.918	.910	2.296	.918	111.801	1	

Figure 8- Regression Statistics using SPSS

Coefficients^a

	Unstandardized Coefficients	Standardized Coefficients	

Model		В	Std. Error	Beta	t	Sig.
1	(Constant)	-20.96	13.35	.00	-1.57	.145
	Mobile money	1.39	.13	.96	10.57	.000

Figure 9-SPSS Coefficients table

ANOV	A ^a					
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	589.583	1	589.583	111.801	.000 ^b
	Residual	52.735	10	5.274		
	Total	642.319	11			

Figure 10- Anova Table

a. Dependent Variable: Financial Inclusion

b. Predictors: (Constant), Mobile Money

Source – Authors Computations using (SPSS, 2022)

Basing on the above results there is a strong positive correlation between mobile money and financial inclusion. This entails that, an increase in the participants use of might lead to a proportionate increase in financial inclusion percentage hence we accept and conclude the test at 95% confident interval that there is a strong positive correlation between the variables under examination.

As pointed out, R square is above 50%. R square measures the number of points which lies along the linear regression line (Jain and Chetty, 2019). As denoted above, 91.8% of the dependent variable can be fully explained by a tested independent variable. Additionally, at this point we conclude at 95% confident

interval that the variables under examination are predictive in nature, and the predicted amount could be considered accurate.

Furthermore, on the Anova tab, regression indicates the statistical significance of the model. The significant value is set at 0.05, this entails that any value less than 0.05 is statistically significant and any value above 0.05 is statistically insignificant. In the given ANOVA Tab, the value is 0.000, this means that the effect would be statistically significant. Thus, mobile money has a significant positive relationship with financial inclusion

4.3.2 Descriptive statistics on financial inclusion and mobile money

QUESTION	FREQUENCY (F) AND PERCENTAGE (P)					
	(RESPON	ISES)				
1. Do you have a bank	YES			NO		
account?	85		25			
	77.27%			22.73	3%	
2. How often do you use a	Daily	Weekly	Mo	nthly	Occasionally	N/A
bank?	38	22	9		16	25
	34.55%	20%	8.18	5%	14.55%	22.72%
3. How often do you use	Daily	Weekly	N	Ionthl	y Occasionally	N/A
mobile money?	57	35	1	1	7	0
	51.82%	31.82%	10	0%	6.36%	0%

Table 6-Questionnaire responses on financial inclusion and mobile money

4.	Which came first, your	Mobile Mone	y		Bank Ac	Bank Account		
	bank account or mobile money account?	75			10			
		88.24%			11.76%			
5.	When did you last use	Last 6	Las	t 2 years	Last 6 ye	ears	N/A	
	your mobile money	months						
	account?	105						
			5		0		0	
		95.45%	4.55	5%	0%		0%	
6.	When did you last use	Last 6 month	S	Last 2 ye	ears	Las	t 6 years	
	your bank account?	65		17		3		
		76.47%		20%		3.53	3%	
7.	What has been your	Savings	Ren	nittances	Airtime	1	Payments	
	primary usage of mobile money over the past 6	5	25		7		73	
	months?	4.55%	22.7	/3%	6.36%		66.36%	
8.	Do you receive a salary	YES			NO			
	through mobile money? (Employees)	16			40			
		28.57%			71.43%			

9. Does your business rely	YES	NO	N/A
on mobile money for receiving payments?	33	4	3
	82.5%	10%	7.5%
10. Does your business	YES	NO	N/A
make payments using mobile money?	6	31	3
	15%	77.5%	7.5%
11. Does your	YES	NO	Not Sure
mobile service provider have	84	9	17
lending and	76.36%	8.18%	15.45%
borrowing			
function on			
mobile			
money?			
12. Have you used	YES	NO	
a mobile	64	20	
money			
platform to	76.19%	23.81%	
borrow in the			
past 6 months?			

4.3.3 Bank account ownership vs Mobile Money

The majority of the respondents indicated owning a bank account with 77.27% having an account whilst 22.73% did not. This rate is less than the mobile money uptake rate of 100% indicated in the survey with all respondents admitting to having a mobile money account supporting (Munalye, 2015)'s assertion that it was increasingly likely that individuals had mobile money accounts compared to bank accounts. Of the respondents to admit to owning both a bank and a mobile money account (85), 88.24% admitted to having owned a mobile money account first supporting the assertion made by (Alexandre and Eisenhart, 2013) that a mobile money account was the first account an unbanked person was most likely to have showing that this platform has morphed into a more effective tool for financial inclusion as compared to traditional bank accounts.

Additionally, a larger percentage of respondents demonstrated more frequent usage of mobile money accounts as compared to bank accounts with 51.82% vs 34.55% admitting daily usage, 31.82% vs 20% weekly and 10% vs 8.18% conceding using on a monthly basis.

Finally, a larger percentage of respondents demonstrated having used their mobile money account within the last six months compared with those having bank accounts with survey data showing 95.45% against 76.47%, a statistic which could be attributed to higher account maintenance costs (on top of transaction costs) associated with bank accounts unlike mobile money which only charges transaction costs.





Figure 11-Usage of mobile money over the past six months



The survey showed that the primary usage of mobile money has been for payments over the past six months followed by remittances (sending and receiving money) whilst the lowest percentage uses it for savings. The research findings thus support findings by (Fanta et al.,2016) who concluded that mobile money was mainly used for sending and receiving money and less for savings and insurance in areas such as Zimbabwe. The above data shows that despite mobile money being in use for quite some time it has not gained popularity as a saving platform and this situation is further escalated by the hyper-inflationary situation which puts savers at a disadvantage due to erosion of purchasing power.

4.4 How Covid-19 has affected the usage of mobile money in Zimbabwe

4.4.1 Descriptive statistics on Covid-19 and usage of mobile money

Table 7-Descriptive statistics on usage of mobile money during Covid-19 as compared to other money platforms

	At the height transacting?	of the Cov	id-19 pandemic	which was	your primar	y means of
iice above		Mobile Money	Mobile Banking/Zipit	Swipe	Cash (\$ZWL)	Cash (USD)
a for your cho	Easily Accessible	29	5	4	0	2
ght a reaso	More convenient	8	3	11	1	1
highli	Cheaper	6	1	2	2	2
Please	More efficient	17	6	8	1	1
	TOTAL	60	15	25	4	6

Most respondents indicated mobile money as their primary means of transacting during Covid-19 (55.55%) followed by swipe (22.73%) and mobile banking/zipit (13.64%). Very few indicated using physical cash with \$ZWL accounting for 3.64% usage and \$USD accounting for 5.45%. This could be explained by the fact that physical movement was limited with government discouraging the physical exchange of goods or items (paper money). Mobility issues also meant that electronic money was more convenient, more accessible payment method and it is not surprising that the three most preferred payment modes allow interoperability between platforms thus money could be moved easily between all three and all of them do not require physical exchange.



4.4.2 Primary means of receiving remittances

Figure 12-Primary means of receiving remittances during Covid-19

Source: Primary data

The research revealed that 55% of respondents used mobile money as the primary means of receiving remittances during the Covid-19 period whilst 15% used Mukuru, 9% used mobile banking, World Remit and Moneygram had 13% and 8% respectively.

4.4.3 Primary means of paying for utilities



Figure 13-Primary means of paying for utilities during Covid-19

Source: Primary data

4.4.4 Discussion

Zimbabwe was under lockdown since 30 March 2019 to stop the new coronavirus from spreading, though the mining and industrial industries were reopened in accordance with guidelines established by the World Health Organization and public health officials (Mugabe, 2020). The administration declared it had set aside \$600 million for cash transfers to 1 million households and assistance to small companies over the following three months in order to help "vulnerable groups" (Kubatana.net, 2020).

In addition to the challenges faced by many lock-down communities in Africa, such as overcrowding in homes and towns, a shortage of drinking water and sanitation, a deficient healthcare system, and insufficient financial reserves, Zimbabweans have a unique issue that makes it difficult to apply COVID-19 restrictions

Cash is still king in the country's primarily informal economy, although there have always been persistent shortages of both domestic and foreign currency (National Public Radio, 2018). Long, snaking lines at banks were a typical sight long before the COVID-19 lockdown as customers attempted, frequently unsuccessfully, to withdraw cash. Customers who could pay with debit cards or mobile money transfers in places like marketplaces and stores were penalized and faced a mark-up of up to 50%. Crowds gathered even during a pandemic when social distance was necessary thanks to services for exchanging money that allow users to turn electronic balances into cash (Matiashe, 2020). Zimbabweans' exhausting and dangerous

search for cash was made more difficult and dangerous by the interaction of an interim currency, a new Zimbabwean dollar introduced last November, and the U.S. dollar, which was previously banned for local transactions but was later approved again during the COVID-19 period (Matiashe, 2020). Due to Covid, financial institutions and banks tried their level best to widen the usage of mobile money since there was a slim chance for the populace to acquire cash from banks. Moreover, even the supermarkets, and SMEs improvised by advertising their products online and whilst also encouraging individuals to make prepayments such that the products could be delivered at the door step of the customer.

4.5 Determinants of borrowing behavior of mobile money users

4.5.1 Descriptive statistics from questionnaire survey on reasons for borrowing among respondents

REASON FOR BORROWING	RES	PONSE			WAS ENO	5 THE AN OUGH?	AOUN	T
	YES		NO		YES		NO	
EXPERIENCED DEATH OR SICKNESS DURING COVID-	F	60	F	50	F	15	F	45
19	Р	55.55%	Р	44.45%	Р	25%	Р	75%
BORROWED TO IMPROVE QUALITY OF LIFE	F	25	F	85	F	4	F	21
(PURCHASE FURNITURE, VACATION)	Р	22.73%	Р	77.27%	Р	16%	Р	84%
BORROWED TO MEET GOALS (BUY ASSETS,	F	17	F	93	F	6	F	11
INVEST, EDUCATION)	Р	15.45%	Р	84.55%	P 35.29	9%	Р	64.71%
BORROWED TO MEET DAILY SUSTENANCE	F	75	F	35	F	59	F	16
REQUIREMENTS (BUY FOOD)	Р	68.18%	Р	31.82%	P 78.67	7%	Р	21.33%
BORROWED FOR AIRTIME	F	100	F	10	F	94	F	6
	Р	90.90%	Р	9.10%	Р	94%	Р	6%
KEY: F – FREQUENCY P - PERCENTAGE								

Table 8-Descriptive statistics showing reasons for borrowing by respondents

Source: Research findings

The survey showed that 55.55% of the respondents borrowed funds using mobile money because of death or sickness that occurred during the Covid-19 pandemic. Of those who had borrowed due to the abovementioned causes, only 25% reported that the amount they were able to borrow was sufficient enough to suit their financial requirements.

Moreover, 22.73% of respondents indicated that they borrowed to improve quality of life that is, making purchases of household items such as furniture or paying for holidays. However, from those who reported borrowing for these particular reasons, a mere 16% claimed that the amount available for borrowing were sufficient enough for their purposes.

Additionally, the lowest percentage of participants, 15.45% admitted to having borrowed mobile money funds for goal-oriented purposes i.e., buying assets, investment (stocks, C-trade) and educational purposes whilst only 35.29% of those who borrowed mobile money funds admitted that the amount was enough for their requirements.

The second highest percentage were borrowers trying to meet daily requirements such as food and transport who made up 68.18% of respondents whilst 78.67% of these claimed that the amount was sufficient to meet this need.

Finally, the highest percentage comprised borrowers who admitted having borrowed for purposes and these made up 90.90% whilst 96% of these admitted that the amounts borrowed were sufficient for their airtime requirements.

Discussion

The above findings indicate that respondents mainly utilized mobile money credit facilities for low-cost transactions such as buying airtime, cheap medication and food. Due to the various constraints imposed upon people by the pandemic, others were forced to supplement other high value transactions such us buying furniture, assets, paying for funerals, medication and education. However, the amounts that mobile service providers allow people to borrow are not enough to suit their desired purposes as has been shown by respondents who indicated that these amounts were not enough.

4.6 How hyper-inflation and the parallel market has affected the usage of mobile money in Zimbabwe

Since 2017, the supply of USD\$ in Zimbabwe has been very low, hence the country suffered a lot due to shortage of foreign currency. The country introduced the bond note, to plug the sky rocketing of prices. Several strategies were championed towards the stabilisation of the economy. As from the researcher's point of view, those strategies were short term.

In conjunction with the reforms, it employed a number of digital payment methods, including the Real Time Gross Settlement System (RTGS), Electronic Funds Transfer (EFT), Mobile Money, and Electronic Cards, have already been introduced and promoted in Zimbabwe. The government's efforts to encourage electronic payments and provide point-of-sale (POS) equipment to micro, small, and medium-sized enterprises have also greatly aided in the dramatic rise in the number of POS devices in Zimbabwe, which rose from 16,363 in December 2015 to 121,413 in 2019.

Notably, the need for hard currency, which had been typical during the hyper-inflationary era, decreased as a result of the transition toward digital transactions. In Zimbabwe, the use of digital financial transactions has had a variety of transformative effects. First of all, in a situation of such hyperinflation, it relieved the nation of the burden of ongoing money printing to meet demand. Second, it significantly expanded financial inclusion for disadvantaged populations, especially rural residents. The availability of products that enable digital financial transactions has considerably enhanced access to the financial sector because informal enterprises or start-ups find it difficult to obtain finance through conventional banking services. Third, to a certain extent, this financial digitization process also influenced changes in the nation's use of information and communications technologies, notably a growth in the demand for internet services.

In essence, the method produced employment chances by launching fresh, creative enterprises, which opened up new economic potential. The main obstacle to implementing the digital financial system was the network's patchy coverage, particularly in rural areas without electricity, which necessitated the expensive purchase of network boosters powered by diesel generators. The country is also under sanctions, which limits its possibilities for external finance, making it challenging for ICT companies to make the necessary investments to extend network coverage and satisfy demand.

Furthermore, due to a sharp increase in the supply of RTGS in the economy, mobile money flooded the market. The government of Zimbabwe implemented several strategies to curb inflation which include but

not limited to, suspension of mobile money (Ecocash). "The economic crisis faced by Zimbabwe has taken a new turn as the government's attempt to suspend mobile money services was rebuffed by the country's biggest provider, Ecocash, a spin-off from mobile operator Econet Wireless. The government's intention is to increase control of Zimbabwe's national currency in order to tame worsening inflation. They had earlier accused mobile money providers of 'conspiring' with the Zimbabwe Stock Exchange to sabotage the economy" (Priezkalns, 2020)

According President Munangagwa's thoughts as cited by (Priezkalns, 2020), he alluded that,

"Impeccable intelligence which constitutes a prima facie case whereby the phone-based mobile money systems of Zimbabwe are conspiring, with the help of the Zimbabwe Stock Exchange, either deliberately or inadvertently, in illicit activities that are sabotaging the economy"

"Ecocash, in particular, is acting as the centre pivot of the galloping black market exchange rate and therefore fuelling the incessant price hikes of goods and services that are bedevilling the economy and causing untold hardship to the people of Zimbabwe," the government said.'

4.6.1 Basic Questions

Basic questions were used to gather information concerning the issue of inflation in Zimbabwe. The survey viewed that inflation affected mobile money usage during Covid 19 pandemic. This was denoted by 80% participants. Furthermore, the study goes on to analyse the impact of inflation on each individual usage of mobile money that is to identify, if inflation reduced or increased the usage of mobile money in Zimbabwe. Evidence from primary source views that, due to inflation, the people shift their preference from mobile money to hard cash in USD \$. Table below shows the responses from the sampled participations.

Table 9-Basic questions on inflation

Question	Reduced	Increased	No	Yes	No
			Change		
Has the 2022 hyper-				80%%	20%
inflationary					
economic situation					

affected your usage of mobile money?				
How has it affected your usage of mobile	70.45%	20.45%	9.09%	
money				

Source – Primary data – Survey

A small percentage 20% acknowledged that, hyperinflation did not affect their level of mobile money usage since they were having their money value in foreign currency, and they insisted that there are still using mobile money but transacting in foreign currency.

4.5.2 Advanced Questions

These set of questions were different from the basic questions. These were set to grasp the main challenges faced by people and their preferred way of making payments. The survey reveals that, the people were no longer motivated to use RTGs, while they were still in need of mobile money. Since a human being is an economic man, meaning an individual seeks to maximise personal utility while reducing expenditure. The table below shows the results obtained from the survey

Table 10-Advanced inflation questions

. new		If usage of n	nobile money ha red option	s reduced,	kindly high	light your
. your						
n for			SWIPE/RTG\$	ZIPIT	Cash	Cash
easoi					(\$ZWL)	(USD)
nt a r	u	Efficient	2	6	2	6
hligł	optic					
y hig	red .					
indl	refer	Cheaper	1	3	7	6
K	Į					

Easily	7	5	1	4
Accessible				
Other	0	0	1	1
TOTAL	10	14	11	17

Source – Authors computations

In conclusion, basing on the available evidence, mobile money in Zimbabwe stimulates inflation, hence people are no longer motivated to use RTGS but to use mobile money in foreign currency. Due to inflation, mobile money usage in foreign currency increase since the people were diverting from RTGS to USD\$.

4.5.3 Chapter Summary

Chapter 4 covered data presentation, analysis, and discussions. The data was presented in the form of graphs and tables. The chapter employed regression to analyse the relationship between the two variables under examination. This chapter manages to answer all the research objectives in Chapter 1.

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This study focused on the effect of mobile money towards financial inclusion in Zimbabwe during the Covid-19 era and was prompted by the black-swan event which necessitated the need for accessible financial services despite the massive restrictions during lockdown period. These restrictions effectively limited both physical contact and movement thus the study sought to assess the effectiveness of mobile money as a means to financial inclusion. Other areas of focus were how Covid-19 affected usage of mobile money, determinants of borrowing behavior during the pandemic and how hyper-inflation and the parallel market has influenced usage of mobile money. Chapter 5 essentially draws conclusions from the research findings following the structure and order of the research objectives established in Chapter 1. The chapter starts by drawing key conclusions from the literature review, thereafter it draws conclusions from the primary study. Lastly the chapter gives recommendations on the themes touched on throughout the research as well as a conclusion

5.1 Key conclusions from literature review

When financial markets are fully developed, they lower borrowing costs which allow the poor and marginalized access to credit, savings facilities and payment systems which alleviates poverty asserted by McKinnon and Shaw. Published literature supports the view that marginalized groups should be the focus for financial inclusion efforts so as to close the inequality gap. These inclusion efforts can be spearheaded by specialized agents who are well equipped and possess proper facilities who (Ozili, 2020) believes to be mobile network operators. Dahlberg (2015) posited that mobile money has arisen as a substitute for traditional banking and its unique positioning, due to its wide subscriber base, makes it ideal for assimilating societal groups into the modern financial system.

Due to development of financial systems, financial inclusion now encompasses a number of features, products and services. Modern scholars agree that it should take into consideration price, place, time whilst not stigmatizing any societal group. It also now includes savings, loans, remittances and transfer payments. Mobile money systems due to their unique advantages have usurped banks as the main means to financial inclusion in developing nations such as Zimbabwe as they offer accessible, speedy and convenient means to financial inclusion. Additionally, they have reduced cash as a means for transacting. Whilst the Covid-19 pandemic might have reduced some of the gains of financial inclusion and turned people's lives upside down overnight, they remain the best means to eliminating poverty and achieving economic progress. Studies by (Munyoro et al., 2017) concluded that mobile money transfers impacted economic development in Zimbabwe due to their accessibility. Another scholar, (Mkalipi, 2020) established the positive impact by network operators of assimilating excluded societal groups into the formal financial economy. Finally, the study reviewed studies by (Fanta et al., 2016) which asserted the importance of mobile money in countries such as Zimbabwe with high financial exclusion rates and how it was less utilized for credit, savings and insurance purposes. However, despite having the largest percentage of transactional volumes, it only accounts for a small percentage of the total value of payment transactions. This leads to the conclusion that it is still being used to transfer small amounts with greater frequency making it ideal for the low income population.

5.2 Key conclusions from primary study

5.2.1 The impact of mobile money on the level of financial inclusion in Zimbabwe during the Covid-19 era

The research findings showed that mobile money accounted for 84.6% of total transaction volumes for 2021 with regression statistics establishing at 91.8% a strong positive relationship between mobile money and financial inclusion. This leads us to the conclusion that mobile money strongly contributed to the level of financial inclusion during the Covid-19 era as people could easily access their funds through this platform without the need for physical contact or movement as funds could be transferred between bank accounts and mobile money platforms easily. Additionally, the study also established that 100% of the respondents were registered to at least one mobile money platform which supports the assertion made earlier in Chapter 2 about the relative reach of mobile money as almost everyone owns a mobile phone.

The majority of respondents admitted to a mobile money account being the first platform on which they registered before a bank account. This also leads us to the conclusion that a mobile money is usually the means to financial inclusion for individuals in Zimbabwe. One will own a mobile money platform before any transactional platform due to its less stringent account opening requirements, lower transactional costs, convenience (ownership of a mobile device) it affords as one can buy airtime directly using it.

5.2.2 The determinants of borrowing behaviour by mobile money users during Covid-19

Research findings revealed that mobile money users did not fully utilize the credit facility offered by mobile money for large value transactions such as purchase of furniture, funeral ceremonies, education or investment which can be partly explained by the low borrowing amounts that mobile money platforms such as Kashagi which limit the usage of these funds. However, borrowers utilized it where small amounts of expenditure were involved such as buying airtime or food. The amounts available for borrowing on mobile money platforms pale in comparison to other financial institutions such as banks and microfinance institutions. Also, not much time may have passed for a proper borrowing culture to have been inculcated among mobile money users hence borrowing habits may not have been developed. On the other hand, funds available for borrowing may have been limited by the mobile money operators as a way to reduce default risk when taking into account the relaxed account opening requirements for mobile money registration.

5.2.3 How Covid-19 has affected the usage of mobile money in Zimbabwe?

Respondents indicated that their primary means of transacting at the height of the pandemic was mobile money followed by other bank led models such as mobile banking/ZIPIT and swipe/RTGS. The usage of mobile money greatly increased during the pandemic due to the relative ease with which one can open an account as well as its lower costs. Ease of access and efficiency were given as reasons for its increased usage during the pandemic by respondents who indicated it as their primary means of transacting during the pandemic. Other uses that were strongly attributed to mobile money during the black-swan event were sending and receiving money as well as paying for utilities which mobile money allows one to do from the comfort of their home. The research findings emphasize the importance of digital financial services in

situations where movement and contact are restricted such as global crises whilst providing the benefit of being accessible to virtually all facets of society.

5.2.4 How hyper-inflation and the parallel market has affected the usage of mobile money in Zimbabwe

Recent developments in Zimbabwe have resulted in the inflation levels reaching unprecedented levels (256% as at October 2022) whilst the multi-currency system has meant that there is a parallel market rate for the United States dollar (mostly used foreign currency) which is very much different from the interbank rate and other rates for converting cash to electronic money depending on the platform. These developments have led to changes in the usage of mobile money amid the cooling down of the pandemic which has meant that lockdown restrictions were put to a halt and life has returned to normalcy. The research findings indicated that this new economic situation (hyper-inflation) has reduced people's usage of mobile money as it had become more expensive to transact especially with transaction costs factored in as well.

Furthermore, participants had gravitated towards hard currency (both domestic and foreign) in lieu of mobile money as it provided a cheaper and more convenient means of transacting. Though the importance of mobile money had declined after the removal of lockdown restrictions, demand was still there for basic functions such as grocery shopping, airtime and paying for utilities. However, it is more convenient getting it from the black market where one could get more in exchange for domestic currency instead of through formal channels such as salary where it was pegged using the interbank rate.

5.3.1 Recommendations

The study found out that very few participants use mobile money channels for saving as demonstrated by a meagre 5% of participants, a number which when considering recent economic developments, makes sense as people's savings would get eroded due to loss of purchasing power. Mobile network operators could provide further incentive for people to save by paying interests on deposits and increasing awareness on the availability of this function as this could go a long way in benefitting marginalized members of society who are out of reach of banking facilities or cannot afford account opening/ account maintenance fees. As mobile network operators aren't covered within the Reserve Bank Act, this duty might not be

within their scope but considering the fact that they already offer credit and charge interest on those loans (Kashagi) it might be a matter of revising or amending regulation to enable them to provide such.

Additionally, the lack of proper utilization of mobile money credit systems has slowed down the thrust towards financial inclusion. This is manly as a result of the little amounts that are available for borrowing that render borrowed funds virtually useless as they can only be used for low-cost transactions. Mobile money operators could do well to raise borrowing limits even if it comes at the risk of added verification for borrowers as it is a major stumbling block to full utilization of the service.

The study also outlined the growing importance of digital financial services albeit limited to mobile money, further study can be focused on their impact to Zimbabwean society and their contribution to making people's lives and their access to financial services. Platforms such as C-trade and the ZSE Stock Exchange need to be looked into and focus on financial inclusion in the lens of more advanced financial services such as securities trading, life insurance and other forms of insurance and fintech.

Government could do well to improve levels of financial literacy by including it in its curriculum so that people begin at a young age as it can go a long way in improving people's lives. Financial literacy and inclusion are part and parcel of the same broad agenda of poverty alleviation and improving people's lives thus awareness of them creates demand and allows people to develop new channels whilst utilizing existing channels for their benefit. Promoting literacy creates a strong foundation for any inclusion efforts.

5.3.2 Overall study conclusions

In conclusion, mobile money contributed to making lives bearable for both the banked and unbanked during the Covid-19 pandemic as it allowed people to transact from the comfort of their homes and send money among users across remote destinations. Whilst there is still work to be done for users to embrace and utilize its full functions, the pandemic has given a glimpse into its vast potential benefits that can be developed and utilized to promote and support efforts toward full financial inclusion and economic development for Zimbabwe.

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APPENDIX

Questionnaire on "Assessing the impact of mobile money on financial inclusion during Covid-19 in Harare, Zimbabwe

Dear participant,

My name is B190419A and I'm a final year student at Bindura University of Science Education currently studying Banking and Finance.

This questionnaire is designed to study whether mobile money (Ecocash, OneMoney and Telecash) has had an impact on financial inclusion in Zimbabwe during the Covid era. Because you are the one who can give us the correct picture of mobile money and its usage, I kindly request you to respond to the questions frankly and honestly. Your responses will be kept strictly confidential and will be used for academic purposes only. Your name or any other personal details are not required.

HOW TO ANSWER THE QUESTIONNAIRE

1. Mark with an 'X', the best answer from the given options on each question.

SECTION A: ADMINISTRATION

1. Gender?

Male	Female		
2. Age?			
18-35	36-45	46	5 and above
3. Level of education	1?		
O' Level	A' Level		Other
4. What is your sour	ce of livelihood?		
Self-employed	Employee	Unemployed	
5. which mobile services	Telecel	Net-One No	ne
6. Are you registered	for any mobile mon-	ey services and if so wh	ich one?
Ecocash	Telecash	OneMoney	None
7. How long have yo	u been using Mobile	Money?	
less than 3 years	3-6 years	greater than 6 years	not applicable
8. What is your mon	thly income?		
Less than \$150 US	SD Between \$150	0-\$1500 USD Gre	ater than \$1500 USD

SECTION B: MOBILE MONEY AND FINANCIAL INCLUSION

9. Do you have a bank account?

Yes		No		
10. How ofte	en do you use a ba	ink?		
Daily	Weekly	Monthly	Occasionally	Not Applicable
11. How ofte	en do you use mot	oile money?		
Daily	Weekly	Monthly	Occasionally	Not Applicable
12. Which ca	ume first, your bar	nk account or mob	ile money account?	
M 13. When dia	Iobile money	Ba [r mobile money a	nk Account	
Last 6 months	last 2 years	last 6 years	not applicab	le
14. When die	l you last use you	r bank account?		
	t 6 months	last 2 years	last 6 years	

15. What has been your primary usage of mobile money over the past 6 months?



19. Does your mobile service provider have lending and borrowing function on mobile money?



20. Have you used mobile money to borrow in the last 6

months?

Yes No
SECTION C: DETERMINANTS OF BORROWING BEHAVIOR OF MOBILE MONEY USERS DURING COVID-19

Please indicate the motive behind your borrowing from the mobile money platform during Covid-19

21. Experienced death or	sickness during Covid-19	
Yes	No	
22. If you answered yes ab	pove, was the amount enough?	
Yes	No	
23 .Borrowed to improve of	quality of life (purchase household furniture, pa	y for holiday)
Yes	No	
24. If you answered yes ab	pove, was the amount enough?	
Yes	No	
25. Borrowed to meet goal	ls (buy assets, invest, pay for education)	
Yes	No	
26. If you answered yes ab	pove, was the amount enough?	
Yes	No	
27. Borrowed to meet dail	y sustenance requirements(food)	
Yes	No	

28.If you answered yes above, was the amount enough?



SECTION D: COVID-19 AND THE HYPER-INFLATIONARY ENVIRONMENT

31. At the height of the Covid-19 pandemic which was your primary means of

transacting?

-			
Mobile Money	Mobile Banking	Swipe	Cash ZWL
Cash Usd			
32. Please highlight a reason	for your choice above	(Allowed to tick mo	ore than one)
Easily Accessible	More Convenie	ent Cheape	er
More efficient			
33. What was your primary r	neans of receiving remi	ttances during the p	oandemic?
Mobile Money	Mobile banking	WorldRemi	t Mukuru
MoneyGram	Other		

34. How did you pay for utilities during the pandemic?



35.Has the 2022 hyper-inflationary economic situation affected your usage of mobile money?

Yes	No

36. How has the above affected your usage of mobile money services?

Reduced It	Increased It	No Change

37. If usage of mobile money has reduced, kindly highlight your new preferred option

Swipe/RTGS	Zipit	Cash (ZWL)	Cash (USD)
N/A			

38.Kindly highlight a reason for your new preferred option



39. Kindly highlight a reason for your reduced usage of mobile money



40. If your usage of mobile money has increased during the 2022 hyper-inflationary period, highlight a reason below

Efficient	Cheaper	Easily Accessible	Convenient
Other			

Thank you for taking your time to complete this questionnaire!