MINISTRY OF EDUCATION OF THE REPUBLIC OF AZERBAIJAN

AZERBAIJAN STATE ECONOMICS UNIVERSITY

INTERNATIONAL MASTER'S AND DOCTORAL CENTER

MASTER'S DISSERTATION

On the subject

“FINANCIAL INCLUSION ISSUES IN THE CONTEXT OF COVID-19 PANDEMIC“

Chaibou Bouzou Mahaman Laouali

BAKU– 2022

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“___” ____________ 2022 year

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Code and name of the specialty: 060403-Finance
Specialization: Financial management

Group: 656

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BAKU – 2022

Elmi and

Mən, Chaibou Bouzou Mahaman Laouali and içirəm ki, “Financial inclusion issues in the context of COVID-19 pandemic” mövzusunda magistr dissertasiyasını elmi əxlaq normalarına və istinad qaydalarına tam riayət etməklə və istifadə etdiyim bütün mənbələri ədəbiyyat siyahısında əks etdirməklə yazmışam.

"COVID-19 PANDEMIYASI KONTEKSTINDƏ MALIYYƏ DAXILOLMA PROBLEMLƏRI."

ÖZET

Tədqiqatın aktuallığı: COVID-19 pandemiyası dünyanın bir çox ölkəsində mühüm problem olaraq qalmaqda davam edir. Bu pandemiya təkcə insanlara deyil, həm də ölkələrin iqtisadiyyatına təsir edir. Bu araşdırma hələ də əhəmiyyətlidir, çünki pandemiya hələ də davam edir.

Tədqiqatın məqsədi: Bu tədqiqatın məqsədi COVID-19 pandemiyasının Nigerdə maliyyə inklüzivliyinə təsirlərini araşdırmaqdır.

İstifadə olunmuş tədqiqat metodları: Bu layihəni başa çatdırmaq üçün həm keyfiyyət, həm də kəmiyyət tədqiqat metodologiyalarından istifadə edilmişdir.

Tədqiqatın məlumat bazası: Təhlilimiz üçün istifadə olunan məlumatlar həm keyfiyyət, həm də kəmiyyət tədqiqat metodlarından əldə edilmişdir.

Tədqiqatın məhdudiyyətləri: Tədqiqatımızın məhdudiyyəti ondan ibarətdir ki, sorğuda yalnız bir neçə maliyyə provayderi respondenti və az sayda müştəri var.

Tədqiqatın elmi yeniliyi: Maliyyə provayderləri və müştərilərdən aldığımız məlumatlara əsasən, biz aşkar etdik ki, COVID-19 müştərilərin normal xidmətlərinə təsir edib, lakin biz COVID-19 ilə korrelyasiya səviyyəsini qiymətləndirmək üçün SPSS-dən istifadə etdik. maliyyə daxilliyi. Model əhəmiyyətli deyil, çünki nəticələrə görə asılı dəyişənin yalnız 7,3%-ni izah etmişdir.

Nəticələrin elmi və praktiki əhəmiyyəti: Tədqiqatlarımızın nəticələri ilk növbədə maliyyə inklüzivliyini və COVID-19-un maliyyə məhsulları və xidmətlərinə çıxışa təsirlərini daha yaxşı başa düşmək üçün istifadə edilə bilər. İkincisi, bu, gələcək tədqiqatçılara konkret Qərbi Afrika ölkələrində maliyyə daxilolma səviyyəsini daha yaxşı başa düşməyə imkan verir.

Açar sözlər: maliyyə daxilliyi, COVID-19, Niger, SPSS,

“FINANCIAL INCLUSION ISSUES IN THE CONTEXT OF COVID-19 PANDEMIC”

ABSTRACT

Actuality of research: The COVID-19 pandemic continues to be an important issue in many countries throughout the world. This pandemic has an impact not just on people but also on countries' economies. This research is still significant because the pandemic is still ongoing.

Purpose of research: The purpose of this research is to examine the effects of the COVID-19 pandemic on financial inclusion in Niger.

Used research methods: Both qualitative and quantitative research methodologies were employed to complete this project.

The information base of the research: The data used for our analysis came from both qualitative and quantitative research methods.

Restrictions of the research: The restriction of our study is that it only includes a few financial provider respondents and a small number of clients in the survey.

Scientific novelty of the research: Based on the information we received from financial providers and clients, we discovered that COVID-19 had an effect on the customers' normal services, but we utilized SPSS to assess the level of the correlation between COVID-19 and financial inclusion. The model is not significant because it only explained 7.3% of the dependent variable, according to the results.

Scientific and practical significance of the results: The findings of our studies can first be used to gain a better understanding of financial inclusion and the impacts of COVID-19 on access to financial products and services. Second, it permits future researchers to have a better understanding of the level of financial inclusion in specific West African countries.

Key words: financial inclusion, COVID-19, Niger, SPSS,

ABBREVIATIONS

W H O –World Health Organization

GDP –Gross Domestic Product

IMF –International Monetary Fund

AFI –Alliance for Financial Inclusion

SME –Small Medium Enterprise

IFI –Index of Financial Inclusion

MPC –Monetary Policy Committee

CBA –Central Bank of Azerbaijan

RBI –Reserve Bank of India

ECB –European Central Bank

BCB –Brazilian Central Bank

UK –United Kingdom

FinTech –Financial Technology

BCEAO – Central Bank of West African States

UEMOA –West African Economic and Monetary Union Member Countries

CONTENTS

INTRODUCTION

Relevance of the research topic: Financial inclusion is a broad concept. Financial inclusion, also known as inclusive finance, refers to the provision of financial services to marginalized and low-income people at reasonable prices, as opposed to financial exclusion, which occurs when those services are neither available nor cheap. At the G20 Summit in Seoul (2010), the G20 Leaders recognized financial inclusion as one of the key tenets of the international development agenda, and outlined the term financial inclusion as the pursuit of providing valuable and affordable access to financial services to all individuals and businesses around the world. As a result, financial inclusion may help to boost economic growth and employment, as well as reduce inequality and improve financial stability (Timmermann and Gmehling, 2017).

According to the Financial Action Task Force (FATF), financial inclusion entails giving underprivileged and other vulnerable groups, such as low-income, rural, and undocumented people, with access to a sufficient range of safe, convenient, and inexpensive financial services. Financial inclusion includes to the provision of financial services to all members of the population, notably the poor and other marginalized groups (Ozili, 2018). Sarma (2008) highlights financial inclusion as the process of ensuring all members of an economy have easy access to, availability of, and use of the official financial system.

On the other hand, Niger is a country in the Sub-Sahara Zone located east of West Africa. The Central Bank of West African States (BCEAO), which establishes the financial situation of the West African Economic and Monetary Union member countries (UEMOA), provides a union currency to Benin, Burkina Faso, Guinea-Bissau, Ivory Coast, Mali, Niger, Senegal, and Togo.

However, access to financial services remains limited in Niger. As of 2020, the composite index of financial inclusion in Niger was 0.25, one of the lowest among the nations in the member union according to the data of the central bank

(BCEAO). The central bank took a number of actions to increase access to and use of a diverse range of adaptable and inexpensive financial products and services in order to improve the country's level of financial inclusion.

On December 31st, 2019, the World Health Organization's China Country Office received notification of cases of pneumonia of unclear etiology (unknown cause) in Wuhan City, which were subsequently traced to coronavirus known as SARS-CoV-2. However, the World Health Organization (WHO) formally declared this unique coronavirus (COVID-19) outbreak as a global pandemic on March 11th 2020.

The COVID-19 pandemic resulted in a significant loss of human life around the world, and it created an unprecedented threat to public health, food systems, and the workplace. The pandemic's economic and social effects were devastating: tens of millions of people seemed to be at risk of falling into extreme poverty, and the number of people whom were undernourished, which would be presently estimated at almost 690 million, might increase by up to 132 million by the end of 2020 (Chriscaden, 2020) .

Statement of the problem and learning level: Since early March 2020, the COVID-19 pandemic had impacted negatively on the global financial system, triggering a dramatic drop in financial markets. Investors suffered massive financial losses, as well as a substantial lack of liquidity in the markets. Many governments, organizations, and financial institutions took numerous precautions to lessen the pandemic's effects on their economies, activities and the delivery of financial services to their clients. Many governments' restrictive measures to combat the spread of COVID-19 resulted in income losses, with low-income people suffering the effects of the burden (Dr. Ahmad El-Safti, 2020).

The COVID-19 pandemic, according to the Economic Commission for Latin America and the Caribbean (ECLAC), had affected all of the region's countries, causing their economies to decline at the same time, losing jobs and increasing poverty and inequality. All around the world, the COVID-19 pandemic showed the flaws in the old development pattern, as well as its limitations. According to Ramelli & Wagner (2020), COVID-19-related health issues evolved into economic crises, which were then amplified through financial channels. COVID-19's worldwide health calamity has soon turned into an economic disaster, wreaking havoc on people's livelihoods all across the world.

Otherwise, the West African Economic and Monetary Union's regional consular chamber conducted a survey to learn about the issues that individuals, organizations, firms, small medium enterprises (SME), and other enterprises faced during the COVID-19 pandemic in the countries that are members of the BCEAO. According to the World Bank on Niger (2021), the COVID-19 swept across the country, resulting in reduced working hours, job losses, limitations on the flow of goods and people, and the cessation of activity in a variety of companies. All of these issues contributed to the plight of approximately 400,000 individuals living in extreme poverty.

Purposes and objectives of the research: The notions of financial inclusion, as well as the key aspects of financial inclusion and theories connected to financial inclusion, have been described in order to have a broad understanding of this topic. Furthermore a summary of COVID-19's effects and a literature-based measurement of financial inclusion have been explained and to learn about the strategies used by financial institutions in Niger to supply financial products and services. There were specific research questions that answered in order to adequately define the problem. The research questions are as follows: Which of kind of measures has your Bank / Financial institutions taken to deal with the impact of the COVID-19 pandemic? ; How has your Bank/ Financial institution responded to customer requests during the COVID-19 pandemic? ; In terms of customer’s relation, what particular channels have you used to interact with your customers since the lockdown began? ; Have you noticed a significant impact in the volume of interactions with your customers during the COVID-19 pandemic? There were a slew of questions being asked to clients in order to have a complete picture of how clients engaged with their financial providers throughout the COVID-19 era.

Object and subject of the research: This work investigates the effects of the COVID-19 pandemic on the delivery of financial products and services in Niger. To identify the primary issue of the pandemic in terms of financial inclusion, as well as the methods used by financial providers to provide financial products and services.

Research methods: Methods of investigation both qualitative and quantitative research methodologies were employed to complete this project. The qualitative research method was employed first through WhatsApp online interviews with financial providers, and then the quantitative research method has been applied through an online survey by using Google forms link to clients.

Research limitations: The first restriction of our study is that it only includes a few financial provider respondents and a small number of clients in the survey.

Scientific novelty of the research: Based on the information we received from financial providers and clients, we discovered that COVID-19 had an effect on the customers' normal services, but we utilized SPSS statistics tool to assess the level of the correlation between COVID-19 and financial inclusion. The model is not significant because it only explained 7.3% of the dependent variable, according to the results.

Scientific and practical significance of the results: The findings of our studies can first be used to gain a better understanding of financial inclusion concepts and the impacts of COVID-19 on access to financial products and services. Second, it permits future researchers to have a better understanding of the level of financial inclusion in specific West African countries.

CHAPTER 1: LITERATURE REVIEW

1.1 The concepts of financial inclusion

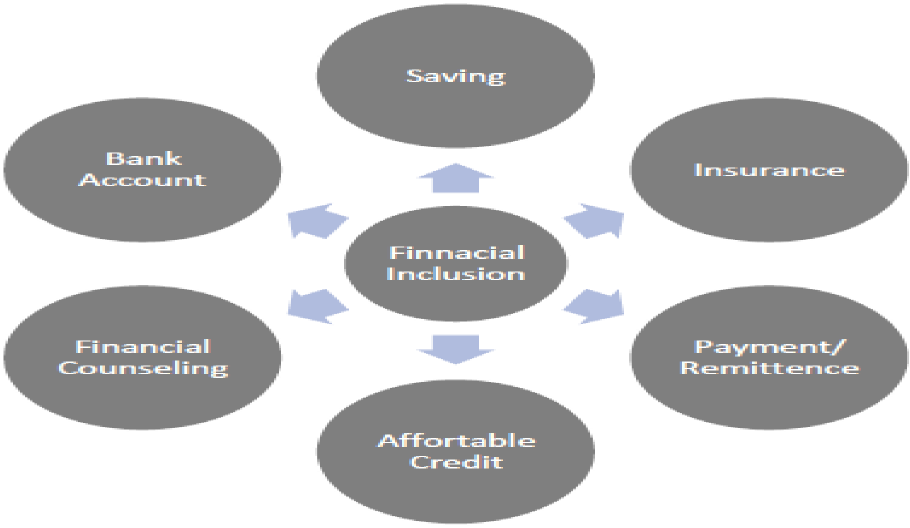
In general, there is no consensus on the definition of financial inclusion, and several perspectives exist on what it means and entails.

Financial inclusion seeks to integrate the unbanked masses into the formal financial system, allowing them to use services such as savings, payments and transfers to credit and insurance institutions. However, the World Bank (2014) states that individuals and enterprises with financial inclusion have access to useful and inexpensive financial products and services that fulfill their requirements, such as transactions, payments, savings, credit, and insurance, provided responsibly and sustainably. Financial inclusion can help make financial services more accessible to everyone, including the poor, by ensuring a strong financial system, which is an important factor of economic growth. Similarly, the Asian Development Bank (2015) extensively defined financial inclusion as access by businesses and households to reasonably price and acceptable formal financial services that meet their needs, it has been adopted as a key development objective by policy makers around the world.

Prevalent efforts on financial inclusion have shifted definitions of the term. Several studies link financial inclusion to financial exclusion, which lead to a larger framework of social exclusion. According to Sarma (2008), financial inclusion (or, conversely, financial exclusion) has been described in the context of a broader issue of social inclusion (exclusion) in society. However, it essentially refers to the ease of access to financial services by people and firms, particularly poorer households and micro and small medium enterprises. As a result, there are significant differences in term usage and nuance. Otherwise, Thorat (2006) defines financial inclusion as the provision of inexpensive financial services, such as access to payments and remittance facilities, savings, loans, and insurance services, via the official financial system to individuals who tend to be excluded.

These definitions agree on the scope of financial inclusion; however Sahrawat (2010) expands to Thorat's scope of financial inclusion by including financial counseling and a choice of bank accounts depending on the unique needs of the client.

Figure 1: Scope of Financial Inclusion



Source: Sahrawat, (2010)

Full financial inclusion includes offering every household with a variety of modern financial services, such as savings, credit, insurance, and payments, as well as adequate education and support to enable customers to make rational decisions for themselves (Goland, Bays and Chaia, 2010). Financial inclusion, according to Demirgüç-Kunt et al., (2008) is the usage of financial services by individuals and businesses. Individuals and businesses can take advantage of business possibilities, engage in education, save for retirement, and insure against risks due to financial inclusion.

Under the chairmanship of Dr. Rangarajan (2008), a committee of financial inclusion in India defined financial inclusion as "the process of guaranteeing access to financial services and timely and sufficient credit where required by vulnerable people including the weaker sections and poor people at a reasonable price.

A study on financial exclusion is presented in the context of a larger issue of societal exclusion of certain groups of people from the official banking system. According to Leyshon and Thrif (1995), financial exclusion refers to any practice that aims to keep individuals, social groups, and institutions out of the formal banking system. Financial exclusion is defined as the incapability to obtain essential financial services in a timely and effective manner. Problems with access, conditions, costs, marketing, or self-exclusion as a result of unfavorable experiences or views can all contribute to exclusion Sinclair (2001). In the same realm of thought Dr. Mohan (2006) explains financial exclusion as a limited access by particular sections of society to appropriate, less priced, reasonable, and harmless financial activities and services from accepted providers. The World Bank (2014) describes intentional exclusion as a position which a part of the population or enterprises decide not to use financial services because they do not need them or for cultural or religious reasons. Unintentional exclusion, on the other hand, happens when participants have insufficient income and a high risk profile, because of selective market failures and imperfections.

1.2 Key aspects of financial inclusion

The financial inclusion strategy has strongly affected policymakers such as the World Bank, the Consultative Group to Assist the Poor (CGAP), the Asia Development Bank, the African Development Bank, the International Monetary Fund (IMF), and the governments of some Sub-Saharan African countries to achieve the need for inclusiveness in the financial sector. The basic appearance to defining the degree of financial inclusion is to identify the instruments that allow for ease of access, utilization, and superior advantage of financial services in an economy. In order to release that policymakers require reliable assessments of the current degree of financial inclusion in their respective nations successively to create policies and strategies to remove barriers to financial inclusion.

Several institutions like World Bank, the European Commission and Alliance for Financial Inclusion have provided some key ambit of financial inclusion that need to be highlighted in order to gain a better understanding of the complex. These include: financial services and institutions, Access to and use of financial services, levels of financial inclusion, unit /level of analysis: individual, family, household, institutions, financial system and channel in promoting financial inclusion.

- ✓ Types of financial services

The term "financial services" refers to a variety of economic activities provided by the finance industry, which includes credit unions, banks, credit-card companies, insurance companies, accounting firms, consumer-finance firms, stock brokerages, investment funds, individual managers, and some government-sponsored organizations. According to Horton (2021), financial services operate to offer individuals, businesses, or both a wide range of deposit, lending, and investing products. While some financial companies focus on providing services and accounts to the broad public, others are more likely to provide specialized services to a limited number of customers.

- ✓ Access to and use of financial services

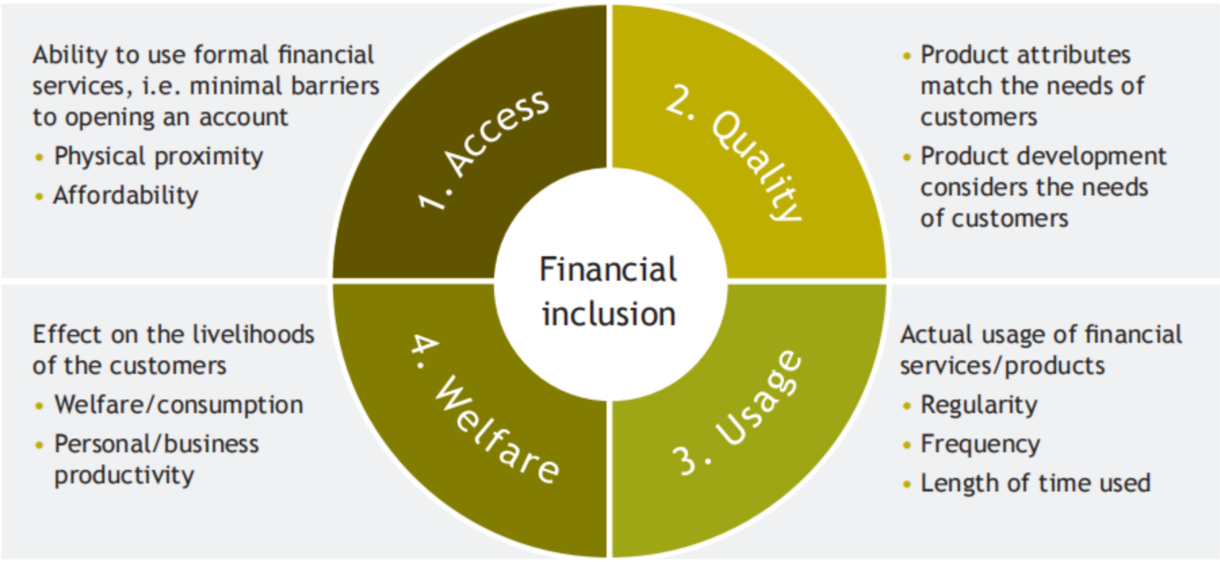
The usage of financial services is not the same as having access to the funds. Access refers to the availability of a supply of reasonable-quality financial services at reasonable prices, with reasonable quality and reasonable cost defined in terms of some objective criteria (Claessens, 2006). According to World Bank report (2012) on financial inclusion, access to financial products is the ability to use absolute financial services and packages from official institutions. Accepting higher levels of access may necessitate intuition and understanding of potential barriers to having and using a bank account for any drive, such as fees and the proximity of bank service sites (for example, branches and ATMs). Counting the number of accounts opened through financial institutions and estimating the percentage of the population with an account is a simple way to ascertain access.

The term "use" refers to the actual consumption of financial services, which occurs at the intersection of the supply and demand schedules. Because of the demand and supply schedules some households or enterprises may have access to financial services but choose not to utilize them because they have no need, no funds, rely on non-financial means of dealing (barter), or believe the prices are too expensive.

- ✓ The levels of financial inclusion

Basically, there is an irregular and inconclusive concept about the level of financial inclusion. The Alliance for financial inclusion (2010) states, the term "financial inclusion" refers to a notion that has several aspects and is made up of several components that can be used in whole or in part for a specific country's plan. The following examples of four aspects under which financial inclusion might be defined, arranged in order of increasing of complexity.

Figure 2: Possible lens to measure financial inclusion



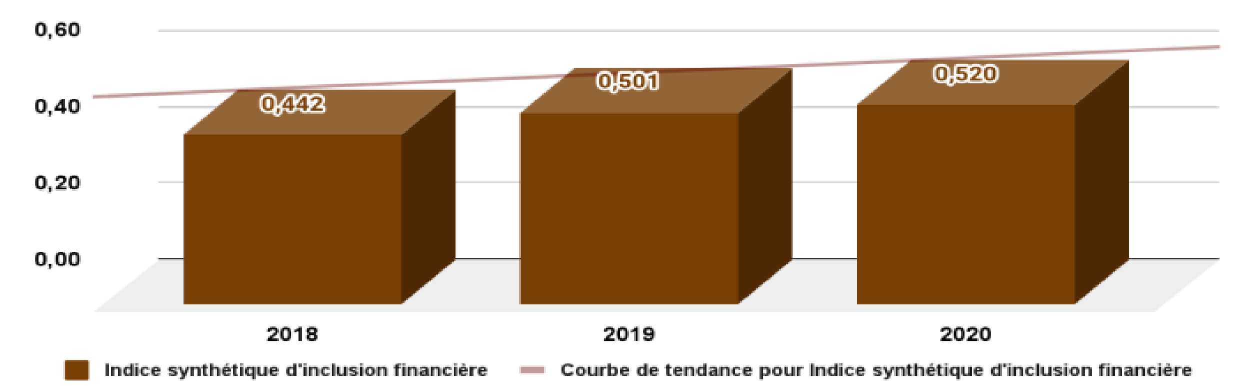
Source: Alliance for financial inclusion (2010)

The four lenses of financial inclusion measurement defined by Alliance for financial inclusion (2010) serve two fundamental goals while taking into account various data demands. The first goal is to assess and monitor the level of financial inclusion, while the second goal is to get a better understanding of the factors that drive financial inclusion and, as a result, the effects of policies.

In accordance with, several attempts have been made to calculate a financial inclusion index. The level of financial inclusion is defined as high, medium, or low based on the index computation. According to Sarma (2008), the index of financial inclusion (IFI) is a measure of a country or region financial sector's inclusiveness. It is built as a multidimensional index that collects data on many aspects of financial inclusion such as banking penetration, banking service availability, and banking system usage. More information on measuring financial inclusion is provided in the following chapter.

The Central Bank of West African States (BCEAO by French acronym : is a central bank serving the eight west African countries which share the common West African CFA franc currency and comprise the West African Economic and Monetary Union : Benin, Burkina Faso, Guinea-Bissau, Ivory Coast , Mali, Niger, Senegal, Togo) has established the financial condition of the West African Economic and Monetary Union member countries, in order to determine the level of financial inclusion in the countries. The central bank calculated the level of financial inclusion based on three dimensions: access, use, and accessibility-price. Thus, financial inclusion in the countries member States improved overall in 2020, based on the evolution of the variables selected and the progress of the synthetic index of financial inclusion, which increased by about 0.019 points between 2019 and 2020 on a scale of 0 to 1 to be at 0.520.(see the figure below) .

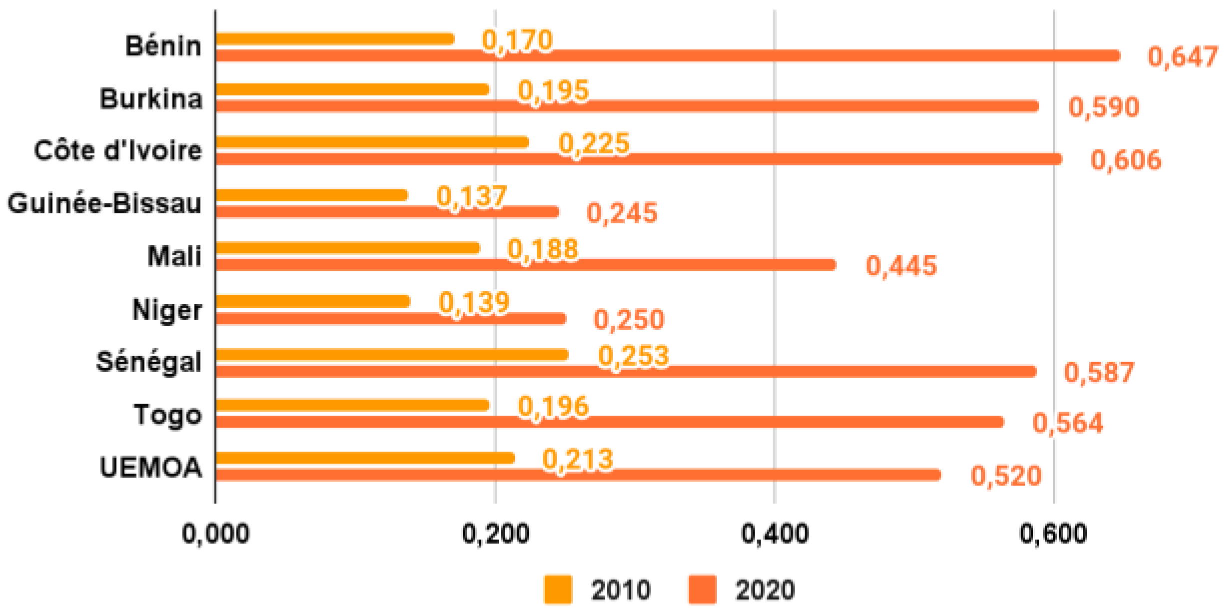
Figure 3: Synthetic index of financial inclusion



Source: BCEAO: https://www.bceao.int/fr/publications/rapports

However, this overall degree of financial inclusion is union. Nevertheless, the Republic of Niger's level of financial inclusion has increased from 0.139 in 2010 to 0.250 in 2020, which is close to the last lowest level of financial inclusion among the country's member states as shown in the graph below.

Figure 4: Financial Inclusion Index in WAEMU in 2010 and 2020



Source: BCEAO: https://www.bceao.int/fr/publications/rapports

In order to improve the level of financial inclusion in the countries, the West African Economic and Monetary Union has adopted strategies to ensure that the adult population of the countries has access to and use of a diverse range of adapted and affordable financial products and services, in collaboration with the regional financial inclusion and the Council Ministers of the countries member states. Adolescents, women, small and medium businesses, and rural producers would be the target populations. To achieve this goal, five guidelines have been identified: provide an effective legal, regulatory, and supervisory framework; stabilize and strengthen the microfinance sector; and promote innovations that support financial inclusion for vulnerable communities; strengthen financial education and client protection in the financial services sector; create a political and fiscal environment that promotes financial inclusion (Regional Strategy for Financial Inclusion and Development of Digital Financial Services in WAEMU-BCEAO).

- ✓ Unit / levels of Analysis : individual , family , household , institution and financial system

According to the details given previously, the fundamental appearance to determining the degree of financial inclusion is to recognize the instruments that allow for ease of availability, use, and better advantage of financial services in an economy. Authorities primarily necessitate dependable confirmations regarding the current level of inclusiveness in their own countries, as this is required to shape policies and programs to remove barriers to financial inclusion. A researcher (Kumari, 2021) discovered that among the four indicators of financial inclusion access, usage, quality, and impacts in Sri Lanka. The findings revealed that both impact and quality had a significant effect on determining the country's financial inclusion, and the impact is recognized as the most significant dimension among all four dimensions. The amount of utilization was found to be the least important factor in influencing the degree of financial inclusion in Sri Lanka. As a result, it is critical for policymakers to find out the main indicators of an economy's financial inclusion and to develop some regulatory requirements for financial institutions to manage an individual's day-to-day financial activities.

- ✓ Distribution channel in promoting financial inclusion : banking and non-banking institutions

Technological improvements have led in some changes to bank business models, including essential modifications. Over the last few decades, financial institutions have made substantial investments in new technologies in order to cut costs and improve the customer experience. In giving the best service possible, banks today offer a number of digital banking channels to customers, including ATMs, online banking, m-banking, and digital banking kiosks (Kaur et al, 2020) .

In Niger, the overall rate of use of financial services was 15.6% at the end of December 2020, compared to 17.1% in 2016. This decrease is mostly explained by a drop in the use of microfinance services, which fell from 11.0 percent in 2016 to 6.5 percent in 2020. During the same time period, the use of electronic money services declined from 3.1 percent in 2016 to 2.6 percent in 2020. In comparison to the countries member States, Benin had a financial inclusion rate of 81.6 percent, Burkina Faso had a rate of 75.4 percent, Ivory Coast had a rate of 79.1 percent, Guinea-Bissau had a rate of 56.9 percent, Mali had a rate of 48.6 percent, Senegal had a rate of 75.6 percent, and Togo had a rate of 81.6 percent (Annual report of BCEAO, 2020).

In February 2020, the Governor of the BCEAO formed a financial technology (Fintech) Committee with the purpose of supporting the long-term expansion of FinTechs across the country's member states. The Supplying Institution's efforts should focus on improving FinTech education and control, regulation and supervision of FinTechs, and reinforcing the old technology's capacity (Annual report of BCEAO, 2020).

1.3 Underlying theories of financial inclusion/exclusion

Financial inclusion theories, according to Ozili (2020) are explanations for observed financial inclusion behaviors. Theories of financial inclusion beneficiaries, theories of financial inclusion funding, and theories of financial inclusion delivery are the three basic categories into which these theories are classified.

The identified financial inclusion theories are the public good theory, the dissatisfaction theory, the vulnerable group theory, the systems theory, the community echelon theory, the public service theory, the special agent theory, the collaborative intervention theory, the financial literacy theory, the private money theory, the public money theory, and the intervention fund theory.

- **Theories of financial inclusion beneficiaries**

There are differing opinions or perspectives on who benefits from financial inclusion results. Some studies argue that poor people are the ultimate beneficiaries of financial inclusion (Bhandari, 2018), while others believe that financial inclusion outcomes benefit women (Ghosh and Vinod, 2017; Demirguc-Kunt et al, 2013b), and still others believe that financial inclusion benefits the economy and financial system (Mehrotra and Yetman, 2015; Kim et al, 2018). Aside from women and the poor, there are other potential beneficiaries of financial inclusion such as young people, the elderly, institutionalized people, disabled people, and expelled people from the financial sector for others problems. The four theories presented below describe who gains from financial inclusion.

- ✓ Theory of the public good

The public good theory, according to the principle of financial inclusion, the supply of formal financial services should be viewed as a public good. So that everyone benefits from financial products and services and no one is left out; the government supports the cost of formal financial services; and the government assumes responsibility for financial inclusion. The disadvantage of this theory is that it does not address the root cause of financial exclusion; subsidizing the cost of formal financial services reduces funding for other important national projects; financial inclusion may become unsustainable when treated as a public good; and it may be ineffective in explaining financial inclusion in countries where most financial institutions are privately funded (Ozili, 2020).

- ✓ Dissatisfaction theory of financial inclusion

According to the dissatisfaction theory of financial inclusion, financial inclusion programs in a country should first target all individuals who were previously in the formal financial sector but left because they were dissatisfied with the rules of engagement in the formal financial sector, or had an unpleasant personal experience when dealing with firms and agents in the formal financial sector. This approach addresses the issue of voluntary financial exclusion; it is simple to identify financially excluded people of the population; and achieving financial inclusion does not necessitate the use of public funds. Otherwise, this theory's flaw is that it does not prioritize financial inclusion for all members of the population; financial exclusion may not be caused by customers' displeasure with the formal financial sector (Ozili, 2020).

- ✓ Theory of Vulnerable Groups in Financial Inclusion

According to the vulnerable group theory of financial inclusion, a country's financial inclusion programs should be targeted on the vulnerable members of society who suffer the most from economic hardship and crises, such as the poor, young people, women, and the elderly. It reduces financial exclusion by targeting vulnerable groups; it is cost effective to target only vulnerable members of the population; however, the theory does not prioritize financial inclusion for everyone in the population; it ignores no vulnerable people outside the formal financial sector; and it assumes that women are a vulnerable group, implying that men are not a vulnerable group (Ozili, 2020).

- ✓ Systems theory of financial inclusion

According to the systems theory of financial inclusion, financial inclusion outcomes are supplied through existing subsystems (such as the economic, social, and financial systems) on which financial inclusion is founded. As a result, expanding financial inclusion will benefit the subsystems upon which it is built. It acknowledges the role of existing sub-systems (economic, financial, and social systems or structures) in promoting financial inclusion in a country; it examines financial inclusion from a macro perspective; and it considers how the interrelationships among existing sub-systems affect financial inclusion outcomes. The system theory, on the other hand, ignores the impact of external factors on financial inclusion outcomes; it assumes a direct link between financial inclusion outcomes and the systems that support it (Ozili, 2020).

- **Theories of financial inclusion delivery**

There are various perspectives on who should offer or provide official financial services to the public. Some believe that the government should provide official financial services to citizens (Aggarwal and Klapper, 2013; Staschen and Nelson, 2013). Others claim that private businesses, such as banks and financial technology firms, can provide individuals with formal financial services more effectively (Gabor and Brooks, 2017; Ozili, 2018). There are additional theories that formal financial services can be provided through collaboration between the public and private sectors (Arun and Kamath, 2015; Pearce, 2011).These assumptions for the delivery, or provision, of formal financial services necessitate a thought process to determine why these agents are required to deliver formal financial services in the first place. The following are some theories or viewpoints on how financial inclusion can be delivered.

- ✓ Community echelon theory of financial inclusion

According to the community echelon concept of financial inclusion, the excluded populous should be provided with official financial services through their communal leaders. Community leaders can urge people to make changes that will improve their lives. The hypothesis, however, has some limitations. If communal leaders are self-serving and corrupt, their influence may emerge; communal leaders may be persuaded to make decisions that are not in the best interests of community members; and agency problems may arise in the form of nepotism, fraud, and corruption (Ozili, 2020).

- ✓ Public service theory of financial inclusion

According to the public service theory, financial inclusion is a public responsibility that the government owes its residents, and citizens expect the government to provide formal financial services to them. Financial inclusion can be achieved when the government is responsible for it; the government can utilize existing economic, social, and political structures to fulfill its financial inclusion goals; and when public institutions take full responsibility for financial inclusion, public confidence increases. However, this idea ignores the role of the private sector in fostering financial inclusion; tax money may not be sufficient to fund large-scale financial inclusion programs (Ozili, 2020).

- ✓ Special agent theory of financial inclusion

According to the special agent theory of financial inclusion, special agents should supply formal financial services to the excluded population. It necessitates the use of specialized agents to promote financial inclusion in the country; it allows the government to focus on other important and pressing national issues; the government has high confidence in the ability of special agents; the financial inclusion objectives that should be met are clear; the special agent connection is unaffected by the fundamental principal-agent problems in agency theory. The demerit of this theory is that the government may appoint its own special agent, making itself both the principal and the agent; the private special agent may leave the financial inclusion project if contractual terms are violated (Ozili, 2020).

- ✓ Collaborative intervention theory of financial inclusion

According to the collaborative intervention theory of financial inclusion, formal financial services should be supplied to the excluded population by numerous stakeholders working together. It promotes multi-stakeholder measures to achieve financial inclusion, and the collaborating stakeholders feel really good about being a significant contributor to a public effort. The flaw in this theory is that determining the number of collaborators required to achieve financial inclusion goals is difficult; some partners may be inactive, leaving the work to be done by a few active collaborators; and having a larger number of contributors does not guarantee that financial inclusion will be achieved (Ozili, 2020).

- ✓ Financial literacy theory of financial inclusion

According to the financial literacy theory of financial inclusion, financial literacy increases people's desire to participate in the formal financial sector. It claims that financial inclusion may be accomplished by increasing citizens' financial literacy through education. Financial knowledge enhances raising attention of basic financial services; it can help people get to be self-sufficient and have some financial stability; governments with limited public funds may prefer to use financial literacy as a national strategy for financial inclusion because it does not require a large amount of public funds. However, the financial literacy idea focuses on a person's 'willingness,' rather than their ability, to participate in the formal financial sector (Ozili, 2020).

- **Theories of financial inclusion funding**

The concept was to figure out who should pay for people's financial inclusion expenses. Marshall (2004) believes that public funds (taxpayers' funds) should be utilized to fund financial inclusion projects. Others believe that private-sector capitalists should pay financial inclusion programs because they contributed to the widening of the income gap between the rich and the poor (Mohiuddin, 2015). There are other proposals that financial inclusion programs be supported jointly by the public and commercial sectors (Dashi et al, 2013; Cobb et al, 2016). The following are various financial inclusion financing theories.

- ✓ Private money theory of financial inclusion

According to the private money theory of financial inclusion, financial inclusion programs should be supported with private money (e.g., shareholders' equity capital) because private funders will demand full transparency from users of their funds, ensure that private funds are used efficiently, and ensure that formal financial products are provided to the population's excluded members. The advantages of the private money theory of financial inclusion include: obtaining private funding for financial inclusion projects takes less time; private funders are fully engaged through equity ownership or fundraising; private funders can take ownership of the project; private financiers can offer greater management skills, innovative facilities, and risk management in achieving financial inclusion objectives; and private funders can impose greater pressure private contractors to complete all financial inclusion projects on time and with excellent quality. The disadvantages of this theory include the high cost of raising private funds to fund financial inclusion projects; funding financial inclusion aims with private money can boost private interest in financial inclusion outcomes; as well as the failure of government control over the financial inclusion facilities created by private investors (Ozili, 2020).

- ✓ Public money theory of financial inclusion

According to the public money theory of financial inclusion, financial inclusion projects should be sponsored with public funds (e.g. tax payer’s fund). The government can tax the wealthy to bring in revenue for financial inclusion activities that benefit everyone; the cost of raising public funds to fund financial inclusion projects is low or non-existent; funding financial inclusion objectives with public funds can prevent individuals from hijacking the financial inclusion agenda for personal gain. The flaws of this theory include: a lack of adequate organizing is a major problem associated with public funding; using government money to fund financial inclusion investments can result in unnecessary delays in achieving the excluded population; governments with inadequate income may be compelled to obtain loans, which will enhance the national overall debt; and inappropriate delegation of authority may occur when the task of gaining financial inclusion is assigned to an individual (Ozili, 2020).

- ✓ Intervention fund theory of financial inclusion

Financial inclusion activities and programs, according to the intervention fund theory, should be sponsored by unique interventions by a variety of funders rather than using taxpayer funds. It claims that philanthropists, non-governmental organizations, and foreign governments are all examples of "special financiers" around the world. It avoids the usual political red tape associated with allocating public funds for public projects; special funders can mobilize financial and human resources, both locally and internationally, to achieve the desired financial inclusion objectives; and special funders can establish new pro-development institutions to assist them in achieving the desired financial inclusion objective. Special funders would need to devise a system for determining which segments of the population are financially excluded from the formal financial sector; special funders could adopt an unfair methodology or criterion to identify which population members are financially excluded. Using foreign governments' or donors' intervention funds to fund development projects in a country can harm the country's reputation (Ozili, 2020).

CHAPTER 2: THE IMPACT OF COVID-19 PANDEMIC ON FINANCIAL INCLUSION

2.1 Literature Review of COVID-19 Pandemic and its Consequences

The first instance of COVID-19, as well as the infections caused by the new coronavirus known as SARS-CoV-2, was discovered in the Chinese city of Wuhan. This occurred somewhere in December 2019, and the World Health Organization (WHO) formally declared this unique coronavirus (COVID-19) outbreak as a global pandemic on March 11th 2020.

According to a study, COVID-19-related health crises morphed into economic crises, which were then magnified through financial channels. The global health catastrophe caused by COVID-19 has quickly morphed into an economic disaster that has badly impacted people's livelihoods all around the world (Ramelli & Wagner, 2020). COVID -19 was having a significant impact on the global economy. Experts believe that the virus would reduce global domestic product growth by half a percentage point, from 2.9 percent to 2.4 percent, in 2020 (Grupta et al, 2020). Financial inclusion is seen as a critical enabler for reducing poverty and increasing shared prosperity (World Bank, 2014).

COVID-19 has impacted people's daily lives and hampered the global economy, according to Abid Haleem et al. (2020). They claimed that the economic effects of coronavirus include a reluctance to manufacture essential goods, interruption of product supply chains, losses in national and international business, poor cash flow in the market, and a significant slowing down in revenue growth, while the social consequences include the cancellation or postponement of educational examinations, large-scale sports and tournaments, disruption of cultural, religious, and other celebrations.

Researchers discovered that coronavirus caused a negative supply shock in a study using a simple model (Fornaro &Wolf, 2020). They argued that dramatic policy interventions – both monetary and fiscal – may be required to avoid this negative supply shock having a significant impact on employment and productivity.

COVID-19 should be studied in the context of other previous events that are similar to the COVID-19 pandemic (Goodell, 2020). According to researchers, the outbreak and spread of COVID-19 disease in Nigeria resulted in a quick shutdown of towns and states across the country, wreaking havoc on the tourism industry (Oruonye and Ahmed 2020). The coronavirus (COVID-19) had a worldwide impact on financial markets, according to Zhang et al (2020). It introduced a previously unheard-of level of risk, resulting in significant losses for investors in a short period of time. Ozili (2020)'s other research looked at the COVID-19 spillovers to Nigeria and concluded that the country's structural weaknesses contributed to the worsening of the crisis.

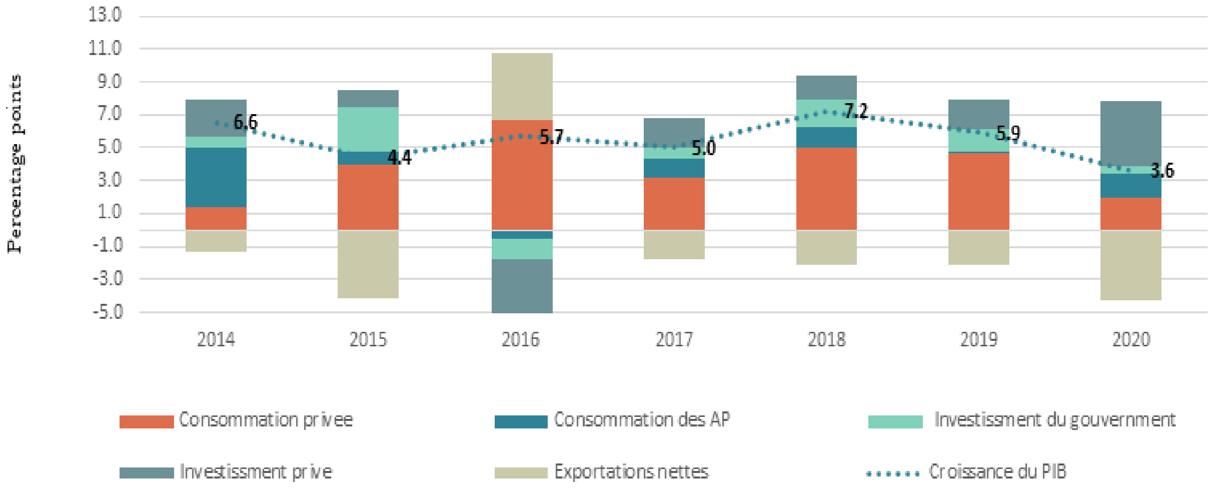
On February 14th, 2020, Egypt announced the first case of COVID -19 in Africa. During the same time period, 30 imported COVID-19 cases were confirmed in seven African countries: Algeria (17), Senegal (5), Egypt (3), Morocco (2), Cameroon (1), Tunisia (1), and South Africa (1), (Ministry of Public Health General, Secretariat Directorate of Surveillance and Response to Epidemics-Republic of Niger, 2020). The first case in Niger was reported on March 19th, 2020 in Niamey, the capital (Republic of Niger, Coronavirus-COVID-19, Situation Report n° 1). COVID-19 has afflicted 29 communes in Niger as of July 4th, 2020, with 1 093 confirmed cases, and 741 (67.8%) of them are males (Ali Issakou Malam Tchole et al., 2020).The government had already formed COVID-19 task forces, which were travel restrictions and social distancing measures, prior to confirmation of these incidents.

Niger is located east of West Africa in the Saharan-Sahelian area. It is situated 700 kilometers north of the Gulf of Guinea, 1 900 kilometers east of the Atlantic Coast, and 1 200 kilometers south of the Mediterranean Sea. It's between 11° 37 and 23° North latitude, and Greenwich Mean Time and 16° East longitude. Niger is a landlocked country sandwiched between the Mediterranean Sea and the Gulf of Guinea. The overall area is 1,266,491 km2, with desert covering 3/4 of the land. Niamey, on the other hand, is the capital and is located around 1 035 kilometers from Cotonou (Benin), the nearest port. Algeria and Libya are to the north, Benin and Nigeria are to the south, Burkina Faso and Mali are to the west, and the Thad Republic is to the east.

In 1960, the Republic of Niger declared independence from the French Republic. According to the National Institute of Statistics' general population and housing census (2012), Niger's population is predicted to reach 23,192,002 people in 2020, with an average density of 18.3 people 18.3 per/km^2. Following the independence of West African states in 1960, and especially following the signing of the Treaty of May 12th, 1962, establishing the West African Monetary Union, the Central Bank of West African States (BCEAO) is a public international organization headquartered in Dakar, Senegal (Republic of Senegal). The Central Bank's primary responsibilities include issuing currency, managing monetary policy, organizing and regulating banking activities, and providing assistance to West African member countries, in addition to centralizing the Union's financial reserves (BCEAO).

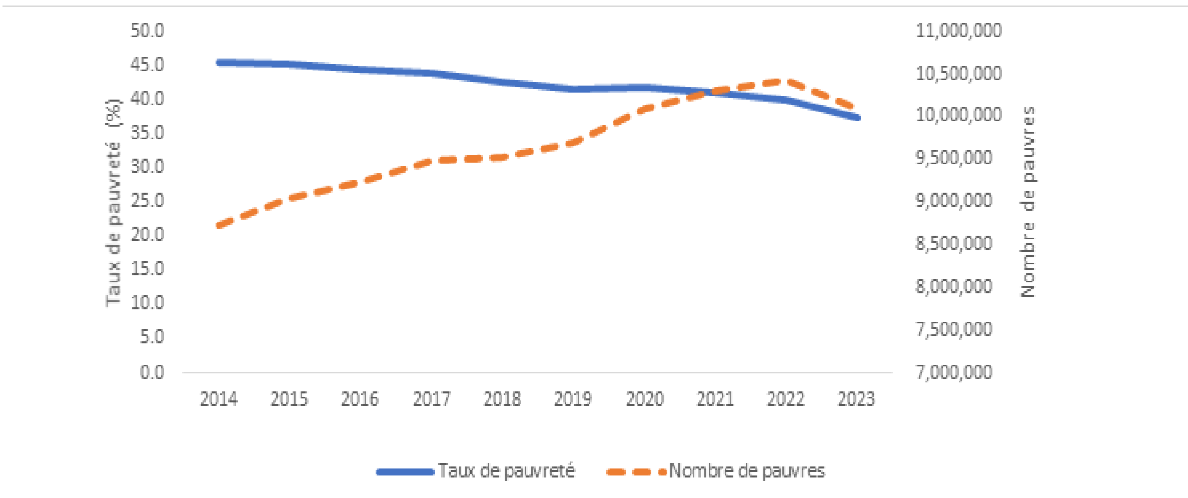
Niger's government has acted quickly to combat the outbreak by creating regulations and giving training. The Niger Republic is dependent on imported commodities; currently, Asia is Niger's largest source of supply, accounting for 37.7 percent of total imports in 2018, followed by Europe (28.0 percent) and Africa (25.1 percent). The revenue loss is expected to be 89.2 billion Francs CFA, with 63.8 billion Francs CFA going to the General Directorate of Customs and 25.4 billion F CFA going to the General Directorate of Taxes, corresponding to 1.1 percent of 2020 GDP (GDP) . Similarly, the World Bank (2021) claims that the COVID-19 health crisis and other insecurity issues have impacted the country's well-being, as a result, the country's per capita income would fall by 0.3 percent, the proportion of the population living on less than $ 1, 9 would rise to 1.3 percent, and an extra 400 000 people would be impoverished by 2020 (see figure below).

Figure 5: Global visual



Source: World Bank (2021) https://www.banquemondiale.org/fr/country/niger/publication/situation-economique-du-niger-le-bien-etre-des-populations-menace-par-la-crise-sanitaire-et-securitaire.

The COVID-19 has had broad consequences across the country, resulting in reduced working hours, job losses, restrictions on the flow of goods and persons, and the suspension of activities in a variety of businesses. All of these factors had an impact on household income, pushing nearly 400,000 people into extreme poverty. Despite the rebound, significant population growth was expected to increase the number of people living in extreme poverty by 200,000 in 2021. Only by the end of 2023 would the number of poor begin to fall but remaining at a high level similar to that experienced previous to the COVID-19 crisis as shown the following graph.



Source: Word Bank (2021) https://www.banquemondiale.org/fr/country/niger/publication/situation-economique-du-niger-le-bien-etre-des-populations-menace-par-la-crise-sanitaire-et-securitaire.

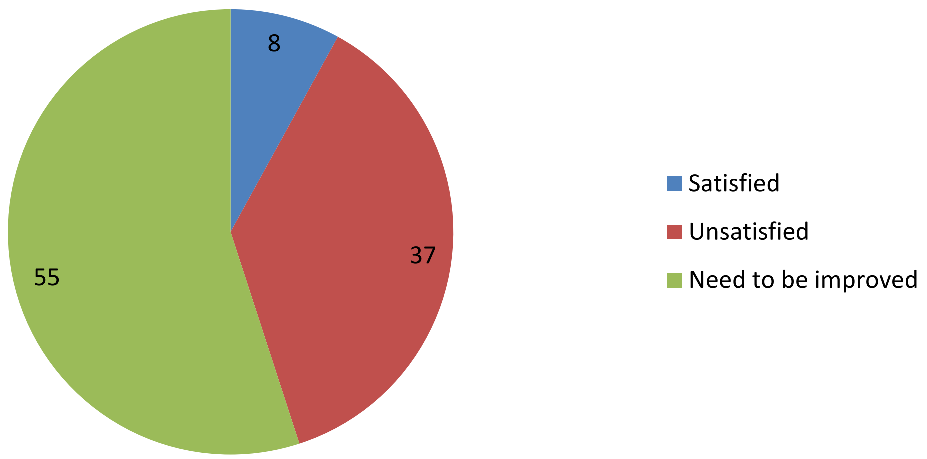
On April 30th, 2020, the West African Economic and Monetary Union's regional consular chamber conducted a survey to learn about the issues that organizations, firms, small medium enterprises (SME), and other enterprises faced during the COVID-19 pandemic in many of the union's member countries, as well as to learn about the accompanying measures desired by the enterprises and the recommendations formulated for the attention of the governments of the West African Economic and Monetary Union's member states (WAEMU).The main challenges confronting the Union's private sector as a result of the COVID-19 crisis are: difficulties in making international business trips, a drop in turnover due to a drop in orders and sales, difficulties in sourcing raw materials and commercial products imported from Asia (China) and Europe or America with longer delivery times, the suspension of construction sites and public orders, and a drop in cash. The following are some of the company's and financial difficulties:

- The amount of unpaid operating expenses, such as electric bills (which can account for 45 percent to 55 percent of turnover), water and communication bills, rents, and social charges (salaries, social contributions, and so on);
- The delays observed in the payments of certain public contracts duly executed by companies;
- Increased customer defaults(delinquency) ;

- The slowdown in financial activities, in particular bank loans;
- Difficulties in accessing financing despite the measures taken by the Central Bank of West African States.

Many firms may be compelled to close their doors as a result of challenges in the private sector, resulting in a rise in the number of jobless persons in the short or long term. According to some firms, 37% of the measurements performed by the States member union are poor, 55% of these measurements need to be improved, and only 8% of these measurements are excellent.

Figure 7: Satisfaction of companies and organizations with the measures taken by the State and Sub-Regional Institutions



Source: Survey/COVID-19/CCR-UEMOA
https://ccruemoa.org/?s=impact+de+la+pandemie+du+COVID-19+sur+le+prive+de+l%27uemoa+

2.2 Overview of Worldwide of Financial Inclusion Issues due to COVID-19 Pandemic

According to the Alliance for Financial Inclusion, the world economy would shrink by roughly 3.5 percent in 2020 as a result of the economic shock induced by the COVID-19 pandemic. While practically all countries have been affected, the crisis's impact has been more pronounced in emerging economies and developing countries. It would take several years for the global economy to fully recover from the effects of the crisis in terms of household incomes, economic equality, poverty, and other characteristics related with the Sustainable Development Goals.

As reported by Worldometer.infocoronavirus/countries (https://www.worldometers.info/coronavirus/) and WHO (in March 2022), the five most affected countries are United States, India, Brazil, France, and United Kingdom.

According to the chair of the Federal Reserve Board of Governors, the coronavirus outbreak in the United States, as well as the resulting business closures, event cancellations, and work-from-home rules, triggered a severe economic downturn. The Federal Reserve engaged with a wide range of initiatives to keep credit flowing and mitigate the economic damage caused by the pandemic. Large purchases of USA government and mortgage-backed assets were made, as well as loans to consumers, employers, financial market participants, and state and local governments. To help individuals and companies, the Fed reduced its target for the federal funds rate, the amount banks pay to borrow from each other overnight by 1.5% points at its meetings on March 3rd and March 15th, 2020.

The Federal Reserve reduced the rate; it charges banks for loans via its discount window by two percentage points, from 2.25 percent to 0.25 percent, the lowest rate since the Great Recession. During the pandemic, the Fed encouraged banks, both large and small, to use their regulatory capital and liquidity reserves to increase lending.

According to former Federal Reserve vice Chair Mr. Don Kohn, most credit in many other nations came through the banking system. As capital markets in the United

States handle a significant amount of credit, the Fed worked hard to keep them running as smoothly as possible stated in March 2020.

The Reserve Bank of India (RBI) had adopted a number of financial steps to combat COVID-19 since March 2020. Liquidity management, regulation and supervision, and financial market decisions were among them. The Reserve Bank of India (RBI) cut interest rates to reduce economic pain while keeping inflation in check, maintaining the policy repo rate at a low of 4%. The cash reserve ratio (CRR) was decreased, allowing the banking sector to have more liquidity. The goal was to ensure that credit and liquidity concerns did not impair any part of the financial system.

Given the virus's rapid spread, the Brazilian Central Bank (BCB) had announced measures to combat the virus's impacts. The BCB implemented the following new measures: New Term Deposits with Special Guarantees, permitting the raise of money through Term Deposits with Special Guarantees without a fiduciary lien in favor of the Credit Guarantee Fund (FGC). All financial institutions may improve their ability to obtain funds with the Credit Guarantee Fund's guarantee; Liquidity ratios, both mandatory and short-term. The BCB cut the mandatory deposit rate of time deposits from 25% to 17%, allowing financial institutions to have greater financing for loans and credit. This policy reflected an extra release of funds into the market; Loans with debenture coverage. The central bank provided loans through a special line of credit. Furthermore the central bank purchased bonds on the secondary market that could be utilized as guarantees if the regulation's conditions are met; Flexibility in the regulation of Agribusiness Financing Notes, led credit to agribusiness and a strengthening of local banks' liquidity; Increased repurchase limit for self-issued Financial Notes so that Banks would be able to increase the amount of Financial Notes that could repurchase from 5% to 20% of their own issue.

The European Central Bank (ECB) adopted a number of steps to mitigate the effects of the COVID-19 pandemic in order to accomplish its primary goal of maintaining price stability. The ECB focused on three major objectives: maintaining an overall accommodative policy, assisting market stabilization to protect the transmission mechanism, and providing abundant central bank liquidity, particularly to preserve credit provision. Both the existing Asset Purchase Program and a new temporary Pandemic Emergency Purchase Program were used to increase asset acquisitions. The ECB also made it easier for banks to borrow liquidity through its longer-term refinancing operations by lowering collateral requirements. Finally, increased swap and repo lines in the US dollar and euro helped to relieve pressures in global funding markets.

In order to help minimize the disruption caused by COVID-19, the Bank of England acted with a comprehensive and timely set of measures to assist UK individuals and businesses in overcoming the economic disruption that was projected to be linked with COVID-19. At a special meeting that ended on March 10th, 2020, the Monetary Policy Committee (MPC) voted unanimously to reduce the Bank Rate by 50 basis points to 0.25 percent. The MPC voted communally in favor of the Bank of England launching a new Term Funding plan with extra incentives for Small and Medium-sized Enterprises, which would be funded by central bank reserve issuance. The Bank Rate cut would assist to boost business and consumer confidence during a challenging period, enhance cash flows for enterprises and people, and lower the cost and availability of credit.

The Central Bank of Azerbaijan (CBA) adopted additional assistance steps in many sectors on April 23th, 2020, to ensure financial service continuity for enterprises and the general public, to continue lending to the economy, and to protect financial service consumers' rights during the pandemic. The CBA had restructured bond mortgages issued until September, 2020 and banks suggested not charging borrowers interest fines, penalties, or other obligations in the case of a whole or partial delay in payment of credit liabilities. Moreover, the CBA had reduced the Bank service fees in interbank payment systems by nearly half till September 30th, 2020; Banks should reduce payment service fees for clients as well, according to the recommendations. It was recommended that acquiring tariffs be reduced by 50% until September 30th, 2020, in order to lower the costs of acquiring payments with cards for commercial entities.

Similarly, the CBA asked insurance companies to make efficient use of electronic tools. Insurers should accept e-mail and electronic appeals from insured's regarding damage regulation. Allow for a grace period in the payment of insurance premiums for insured's immediately affected by the special quarantine regime on voluntary insurance contracts until September 2020; Insurers should take the appropriate management and technological steps to properly adapt their business processes to the new operational conditions brought on by the pandemic. Insurers should guarantee that voluntary insurance agreements were entered into online; on their websites, insurers should give information about the work schedule during the particular quarantine period, as well as essential processes for damage regulation. To defend the insured's rights, insurers should provide hotlines 24 hours a day, 7 days a week and receive calls via video calls.

To deal with the impacts of the COVID-19 pandemic, the Central Bank of West African States (BCEAO) opted to increase the resources available to banks, allowing them to maintain and expand the economy's finance. In this regard, the amount that the Central Bank gives to banks each week has been increased by 340 billion, increasing the total to 4,750 billion; Increase the variety of mechanisms available to banks for getting Central Bank refinancing. To remind banks of the resources available on the special counter for refinancing loans issued to small and medium-sized businesses; To put in place, in collaboration with the financial sector, an appropriate structure to assist businesses affected by the pandemic's effects and having difficulty repaying debts; Conduct agreements with companies that issue electronic money with the goal of lowering transaction costs and encouraging people to use digital payment methods more to reduce contact and travel; Provide sufficient quantities and high-quality banknotes to banks to ensure the smooth operation of automated teller machines (ATMs).

Furthermore, on March 21st, 2020, the Central Bank, in consultation with the West African Economic and Monetary Union, took a series of measures to restrict physical touch of currency between people by encouraging the use of electronic payment instead. Transfers of electronic money between people for amounts less than or equal to 5,000 CFA francs were free across the country; free payment of water and electricity bills for amounts less than or equal to 50,000 CFA francs via mobile phone; abolition of commissions paid by merchants on e-money-backed merchant payments by e-money issuers; and a 50% reduction in merchant commissions on card payments on the network of the banks. The reloading limit for electronic wallets has been increased from two (2) to three (3) million FCFA, with a monthly top-up limit of ten (10) to twelve (12) million FCFA. Fees on client transfers processed through the WAEMU Automated Clearing Interbank System were reduced by 50%; conditions for creating electronic money accounts were loosened; and bank card withdrawal fees in the WAEMU interbank banking group's regional network were reduced by 50% stated by Kpoti Edem MENSAH (kemensah@bceao.int) Head Manager of Financial Inclusion Directorate-BCEAO.

2.3 Criteria of Measuring Financial Inclusion

Sarma (2008) and Sarma and Pais (2011) are two among the first to create a financial inclusion index. They define financial inclusion as a process that ensuring all members of an economy have easy access to, affordability and use of the formal financial system. Their measure combines data on banking service accessibility, availability, and usage into a single number ranging from 0 to 1, with 0 signifying complete financial exclusion and 1 indicating complete financial inclusion. To create the index, they implement three-step processes that include: the choice of dimensions and their variables; the normalization of the different indicators; and finally the classification of weights to each of the variables and dimensions, and their accumulation into a single index of financial inclusion. The number of bank accounts per 1 000 persons is used to determine accessibility in their study (one variable). The number of bank branches and ATMs per 100,000 persons is a proxy for financial service availability (two variables). Furthermore, the level of loans and deposits over GDP is used to quantify banking system utilization (one variable). The variables are normalized using the min–max approach; the three dimensions are given either equal weights (Sarma, 2008) or arbitrary weights (Sarma & Pais, 2011), and they are collected using Euclidean distance-based techniques (see Tables 1 and 2).

Chattopadhyay (2011) and Park, Mercado (2015) conducted new research that employed the same methodological approach to generate financial inclusion indexes as Sarma (2008).

Arora (2010) proposes a new index that differs from Sarma's (2008) index in terms of methodological methods. The index, like the latter, is built using min–max standardization and subjective weighting strategies (i.e., equal or arbitrary weighting systems), but the measurements are combined using linear or geometric approaches rather than the Euclidean distance approach (i.e., arithmetic or geometric mean).

Table 1: Dimension of Financial Inclusion

Publication	Main data (sources)	Dimension of FI.				Financial services			
		Access	Use	Cost	Quality	Savings	Loans	Payments	Insurance
Sarma (2008)	World Bank's World Development Indicators database	Yes	Yes	No	No	Yes	Yes	Yes	No
Sarma and Pais (2011)	World Bank's World Development Indicators database	Yes	Yes	No	No	Yes	Yes	Yes	No
Arora (2010)	World Bank's Finance for All databases	Yes	No	Yes	No	Yes	Yes	Yes	No

Table 1: Computation of financial inclusion index

Publication	Providers		Channels		Numbers dimension(indicators)	Weights	Normalization and aggregation methods
	Banks	Other	Physical access	Other			
Sarma (2008)	Yes	No	Yes	No	3(4)	Equal	$d_i = w_i \frac{A_i - m_i}{M_i - m_i}$ $IFI = 1 - \sqrt{\frac{(1-p_i)^2 + (0.5-a_i}{1.5}}$ Where wi is the weight given to dimension i Ai is the actual value of dimension i, Mi is max value of dimension i, and m_i is min value of dimension i.
Sarma and Pais (2011)	Yes	No	Yes	No	3(4)	Arbitrary	$d_i = w_i \frac{A_i - m_i}{M_i - m_i}$ $IFI = 1 - \sqrt{\frac{(1-p_i)^2 + (0.5-a_i)^2}{1.5}}$
Arora (2010)	Yes	No	Yes	No	3(22)	Arbitrary	$d_i = w_i \frac{A_i - m_i}{M_i - m_i}$ $FAI = D_i I * w_i / D_i II * w$ FAI=financial access index Di =the outreach dimension Dii =the usage dimension Diii= the ease of transaction dimension.

CHAPTER 3: ANALYTICAL AND EMPIRICAL FRAMEWORK

3.1 Methodology and Data Description

3.1.1 Methodology

The harmful impacts of the COVID-19 pandemic pervaded all segments of the economy, including the financial sector. Notably, the pandemic has disrupted monetary policy and shrunk access to credit in the financial sector.

The COVID-19 pandemic has brought about significant disruptions beyond public health. This research project examined the impact of the pandemic in Niger from a financial inclusion lens by surveying clients and financial providers on the delivery of financial services. The research looked at how COVID-19 influenced the delivery of financial services, and how the shift in delivery methods as a result of COVID-19 affected the group of customers.

According to Blumberg, Cooper, and Schindler (2011), research design determines the research question and dictates the research methods to be implemented. As a result, it is crucial to know the research's purpose before starting. The purpose of the study, as stated, is to find out the effects of the COVID-19 pandemic on financial inclusion in Niger and to make recommendations based on the data collected.

Actually, the research will be analyzed using a mixed method design in order to have a clear understanding of the problem. Mixed method data analysis is the method that combines both qualitative and quantitative data analysis methodologies (Aramo-Immonen, 2013). This strategy will assist in the rigorous solution of research questions. Consequently, gathering quantitative data and analyzing the situation using an online survey is crucial for doing effective study on this topic. Qualitative data, on the other hand, will provide a broader grasp of the topic based on interviews.

As previously said, this thesis will analyze both qualitative and quantitative data; thus, a well-structured design, in this case exploratory consecutive method designs (qualitative & quantitative), should be adopted. This strategy aims to start the research with qualitative data in the exploratory phase before going on to quantitative data for the main analysis.

3.1.2 Data Description

In order to conduct acceptable research on a given issue, it is crucial to select appropriate data. Most studies rely on primary and secondary data. To begin with, primary data source is an original data source, meaning that the data was obtained directly for a specific study goal or project. Primary information can be gathered in a variety of ways. Self-administered surveys, interviews, field observation, and experiments are the most prevalent methodologies (Salkind, 2010). As previously stated, this thesis will focus on practical information gathered through interviews. As a result, primary data will be used as information for analysis based on the knowledge of experts in specific fields.

In addition, secondary data sources were used in this thesis. In other words, secondary data refers to data that have already been collected for some other purpose. Yet, such data may be very useful for one's research purpose (Mike Allen, 2017). Secondary data plays a significant role in this thesis, as evidenced from the survey, and this material provided a thorough overview of the topic. The survey conducted online through Google forms was the secondary data for this thesis. Finally, it's important note that using both primary and secondary data in this thesis improves the research's validity (Blumberg, Cooper, Schindler, 2011).

- **Primary data**

In research methodology, interviews are considered as primary data. Interviews with various specialists and analysts in their disciplines were held in order to get wide perspectives and knowledge about the topic. It's critical to identify the right persons to interview because any misstatement throughout the data gathering procedure may cause problems for the research. Therefore, interviewees were selected depending on their position, experience, and recommendations from others. Conducted interviews benefited in gathering information from real-life cases and informing about the issues facing from the perspective of officials. The administrators were given an interview questionnaire in order to gain a better understanding of the subject. A semi-structured interview method was used, which is important in social sciences.

According to Lisa M. (2008), the semi-structured interview is a qualitative data gathering approach in which the researcher asks informants a sequence of open-ended questions that are predefined by the researcher. This type of interview style generates fresh research ideas by conveying various solutions, opportunities, and offers for future progress in this field. It allows for a free-flowing discussion of ideas. Both the interviewee and the interviewer benefit from visual eye contact and attentive listening. Questions should be followed up on to show your interest in knowing more about the subject (Kelly S. Meier, 2018).Thus, the interviewee's responses are not limited, and the interviewer receives more flexible and relevant data from the respondent. As a result, a semi-structured interview style was adopted to gather more ideas and information about the topic.

As previously said, it is critical to carefully select the person to interview because any misleading during the data collection process would cause the research to be compromised. As a result, respondents were chosen based on specific criteria. First, the person should be knowledgeable about the subject. Second, it is dependent on their position in financial institutions, whether in government or private institutions and on how they deal with clients in order to understand the real situation. The interviews were performed online by call videos WhatsApp due to the distance between the two nations (the Republic of Azerbaijan and the Republic of Niger).

A total of ten people were questioned. However, it's interesting to note that interviews with ten experts in respective areas provided a multitude of knowledge on the subject. The interviews provided a direct opportunity to learn about the strategies that were implemented to provide financial services to customers, as well as the role of agency banking or financial institutions in delivering banking services or their products and services more accessible.

Furthermore, the interviews offered an opportunity to hear about each financial institution's personal experiences to fight against the COVID-19 pandemic and how they improved their financial accessibility to customers.

- **Secondary data**

Secondary data was also implemented in this research, as previously stated. The secondary data used in this thesis primarily consisted of an online survey of customers to better understand the implications of COVID-19. The data from the documents provided a broad knowledge of the topic, therefore it was considered important to include it in this thesis. The sources' reliability is also a significant consideration. The survey link was sent directly to customers by their client managers via organization emails, WhatsApp, ordinarily messaging, messenger, and telegram family page of their institutions. The document sources were carefully investigated. As a result, these data can be considered highly credible.

3.2 Data Collection

The research methodologies included an interview call video to financial providers via WhatsApp, followed by an online survey client via Google forms. The study was divided into two parts: a qualitative interview via WhatsApp and a quantitative online survey via Google forms. The survey was conducted from January 1st to January 31st. Section 1 questioned financial providers about their decisions to provide financial services, whereas Section 2 polled clients about financial accessibility throughout the COVID-19 era. The COVID-19 Financial Inclusion client survey received 100 complete replies, with 10 responses from financial providers.

- **Qualitative data collection**

As previously stated, qualitative data was primarily based on interviews. The interviews were conducted entirely online. The date and time of the interview were predetermined based on the interviewee's schedule. Furthermore, all interviewees were located in different parts of the country in order to adequately acknowledge the issues of financial inclusion caused by COVID-19 throughout the country, even in remote locations. Thus, there were no difficulties in reaching respondents. Furthermore, as said before, respondents were selected with great care in order to obtain high-quality and accurate data. Interviewees demonstrated in-depth knowledge of the subject and were specialists in their respective fields of activity.

Furthermore, interviews were conducted in a semi-structured manner, allowing interviewees to be free while expressing his or her ideas. Despite, it was between two countries. There were no technical or communication issues during the interview. In addition, the interview questions included one personal question and four (4) basic open-ended inquiries. As COVID-19 disrupted customers 'total access to their financial services. The first question's aim was to learn how a bank or any financial institution in Niger responded to consumer requests during the COVID-19 pandemic. The second question was to ascertain the steps taken by banks or financial organizations to deal with the effects of the COVID-19 outbreak. The third question was to know in terms of customers' relation, which particular channels bank / financial organization used to interact with their customers since the lockdown began. And the last was to find out if bank / financial institution notice a significant impact in the volume of interactions with their customers during the same time period of COVID-19.

During the interview, respondents had a great interest in the research issue and became excited when answering. All of the interviewees provided roughly the same measurement steps in order to continue offering financial services to their clients. As a result, the researcher started to investigate the problem from new and distinct perspectives. Furthermore, qualitative data was gathered from each respondent's response. These data offered the main notion about the topic and aided in understanding the main parts of the problem. Furthermore, using these data, researchers were able to identify variables when evaluating quantitative data.

- **Quantitative data collection**

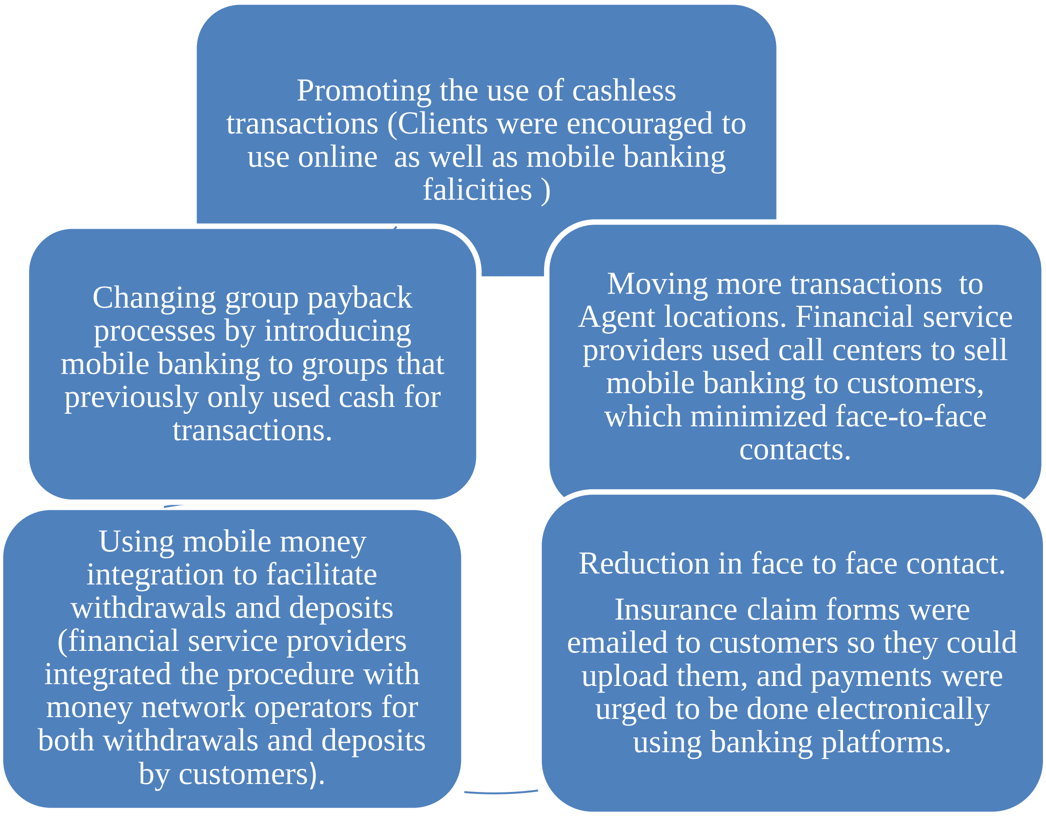
The research will be analyzed using a mixed method design in order to have a clear understanding of the issue. As a result, it is critical to specify the acquired data for quantitative method analysis. In fact, after analyzing qualitative data, all of the data questionnaires were sent to clients; thus, an exploratory sequential mixed method design is used. The online survey provided all of the data.

3.3 Data Analysis

- **Qualitative data analysis**

Qualitative data analysis aims to make sense of the abundant, varied, mostly nonnumeric forms of information that accrue during an investigation (Chesnay, 2014). This type of data is gathered by observation, one-on-one interviews, focus groups, and other similar approaches. As previously stated, a total of ten people were interviewed. From the first respondent, we noticed that respondents employed similar techniques to provide their financial products and services, ranging from the health hygiene help to the use of social devices to decrease client interaction. The first respondent was Mr. Sadick Harouna a branch Manager of International Bank for Africa (B.I.A) located in KONNI- NIGER, he stated that in a bid to continue serving clients remotely; respondent financial service provider indicated that they made several clients changes due to COVID-19. These included introducing virtual client services, cashless transactions were encouraged, more transactions were moved to agent locations, toll-free service numbers were introduced, call center capabilities were improved, withdrawal and deposits were made easier through mobile money integration and face-to-face contact and operating hours were reduced as indicated the graph below .

Figure 8: Financial service providers' changes to clients during the pandemic



Source: Survey/COVID-19, 2022

Financial service providers made significant general modifications to their operations to support the shift to non-face-to-face delivery. COVID-19 required the implementation of social distancing mechanisms and COVID-19 protocols, as well as educating people in new working methods and COVID-19 formalities, and partnering with agents to make face-to-face delivery possible at the local level. These measures are implemented to improve access to financial services without requiring clients to visit the bank; protect both staff and customers; ensure business continuity; decongest banking halls; and ensure customers can conduct transactions without having to leave their homes or visit bank branches, statement said by the second respondent Mr. Ibrahim Boukida an account manager bank ACEP Tahoua- Niger.

In response to COVID-19 difficulties, Mr. Mustapha Chaibou Manirou, a third respondent of SONIBANK-Niger customer service representative, indicated that the bank made improvements to its financial products and agreements. The three most significant adjustments were an increase in loan terms, a drop in loan sizes, and an increase in customer withdrawal limitations.

Given that lockdowns limited their clients' capacity to continue their economic activity, financial service providers increased loan terms to provide their customers more time to repay their loans while maintaining client relationships. In the COVID-19 operating environment, reducing loan amounts for new loans helped financial service providers to decrease their credit exposure and manage liquidity difficulties.

According to the fourth respondent Mr. Mamadou Lamine Gueye, the Managing Director of CAURIE Microfinance, a few financial service providers that function as microfinance institutions have stated that the COVID-19 has posed significant hurdles to their operations and performance. There was a big withdrawal from client savings, a dramatic drop in the loan repayment rate, a huge decrease in credit activity (loan generation), suspension of collection activities, cash stress, loss of income, and an increase in the usage of digital services and mobile payment methods. The virus afflicted a majority of microfinance institutions, resulting in a drop in outstanding loans, loan production, an accumulation of delinquent debts, degradation in portfolio quality, a decrease in outstanding deposits, and latent liquidity problem.

Mr. Didier Alexandre CORREA, the managing director of ECOBANK-Niger, was the fifth respondent. He stated that the bank's operations were significantly altered as a result of COVID-19 pandemic and to maintain with product and service deliveries. The bank had put in place the necessary measures to assist limit the spread of the virus at its branches across the Ecobank group across the country. As standard measures recommended by the Federal Ministry of Health and World Health Organization , these include providing temperature checks at all entry points to screen employees, customers, and visitors; installing hand sanitizers; equipping customer-facing staff with an emergency response plan; encouraging social distancing, especially from anyone who is coughing or sneezing; educating branch staff on international best practices; and actively updating customers and employees on the COVID-19 pandemic.

In support to the measures mentioned above, Ecobank encouraged its customers to use of its digital channels for financial transactions including as the Ecobank Mobile App, Ecobank Online, Ecobank OmniPlus, OmniLite, and the Rapid Transfer App Without having to visit its branches while the bank remained open to customers who wanted to carry out their physical transactions. On average, the bank's staff was reduced to almost 40% of its normal operating capacity and clients demanded for a moratorium and restructuring of loans. The loan interest rate was cut to assist customers.

Additionally, clients could also create a virtual card for ecommerce and other online transactions on the Ecobank mobile app as part of their self-service options. Mobile money transactions, on the other hand, significantly increased.

Insurance companies were only allowed to have a fixed percentage of its personnel in the office, even though it was considered an essential service. The COVID-19 pandemic and the subsequent containment measures had an impact on insurers' business operations. As a result, they took the following precautions to assure the continuation of their business:

- Provided some key employees with the resources they needed to operate remotely (e.g., internet and laptop computers) while others were on leave.
- Used virtual/remote engagement tools such as Skype and MS Teams for internal and client-facing meetings.
- Provide customer service via a variety of channels, including emails, phone calls, and WhatsApp messaging.

However, working remotely presented a number of issues. There were nationwide interruptions in the supply of electricity, affecting remote workers' ability to fulfill their functions as well as data security and privacy risks resulting from negligence by employees working remotely; additionally, only 30% of staff employees had the necessary resources to work remotely, indicating that underwriting and claims departments were unable to work remotely at full capacity. There was a considerable risk of email accumulation and customer service delays, statement testified by the sixth respondent Mr. Yahaya Abouzeidi , the director of the Leyma insurance company –Niger.

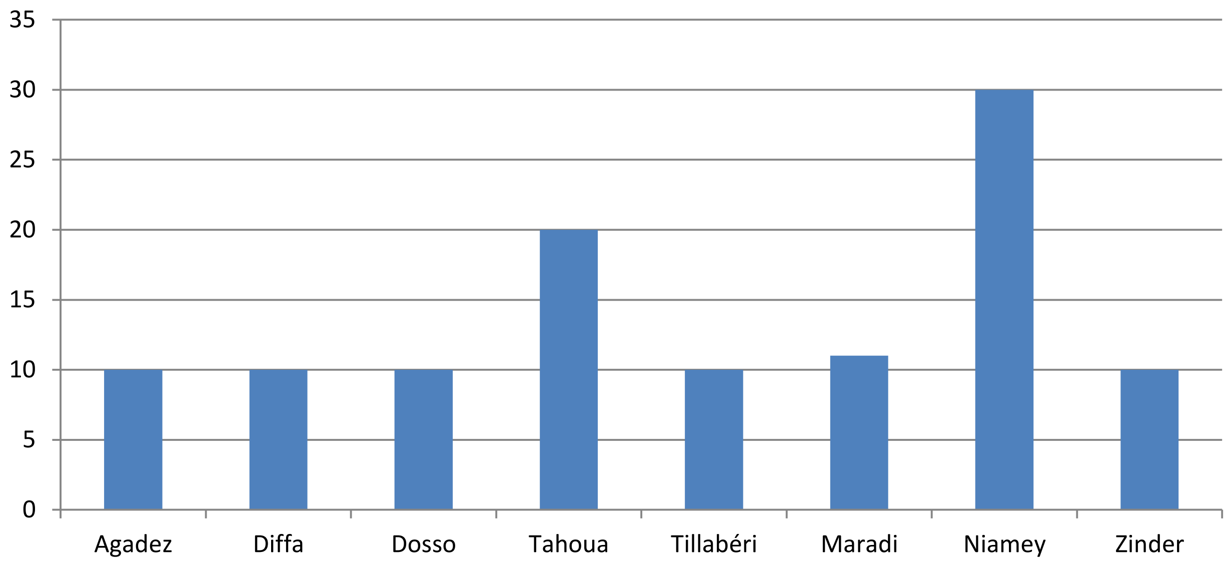
According to Mr. Abdoul Rachid, a director of the SAHAM insurance in Agadez –Niger pronounced that the insurance company, like any other sector, was impacted by the COVID-19 pandemic in the following areas: demand for insurance, insurance carrier operations, social and customer relations, and insurance claims. Among the most serious repercussions of the pandemic and the government agencies quarantine measures, the disruption of business is one of the most dangerous for most companies. This was primarily due to the implementation of lockdown measures in the country on March 2020, which imposed limitations or compelled businesses to close. Obviously, companies had lost a significant amount of money.

- **Quantitative data analysis**

The quantitative data analysis approach is essential in this thesis because all of the information obtained through the qualitative data analysis method will be evaluated in quantitative method. Indeed, the primary purpose of this thesis is to examine the impact of the COVID-19 pandemic on financial inclusion in Niger. The questionnaire designed to clients was with the maximum number of answers already indicated in order to limit open answers. It was created with the study's goals in mind because it only collected variables that would be within the topic of the study. The question sheet is constrained .It divided all of the process to help identify the issues faced customers within financial inclusion in Niger during COVID-19 pandemic.

As the country (Niger) comprises eight regions, respondents were based in each of them. The capital Niamey had the highest number of respondents (30%), followed by Tahoua (20%), Maradi (11%), Agadez (10%), Dosso (10%), Diffa (10%), Tillabéri (10%), and Zinder (10%).

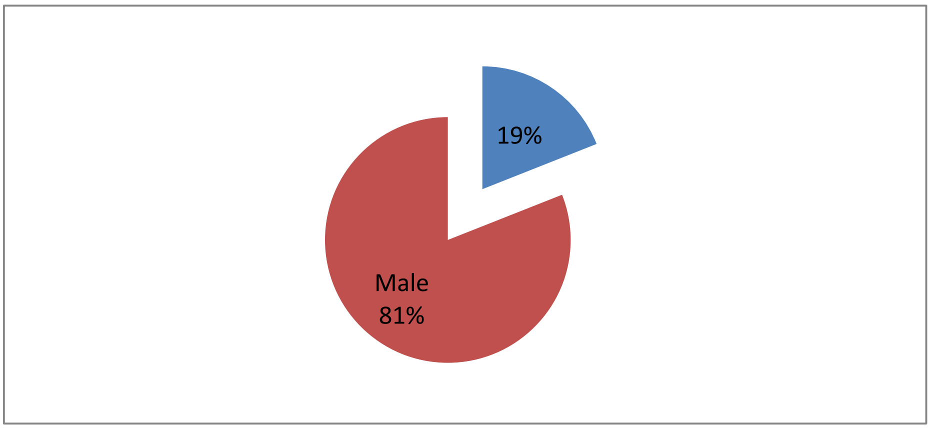
Figure 9: What is your region?



Source: Survey/ COVID-19, 2022

The number of people surveyed, 81% were male and 19% of them were female (see the graph below).

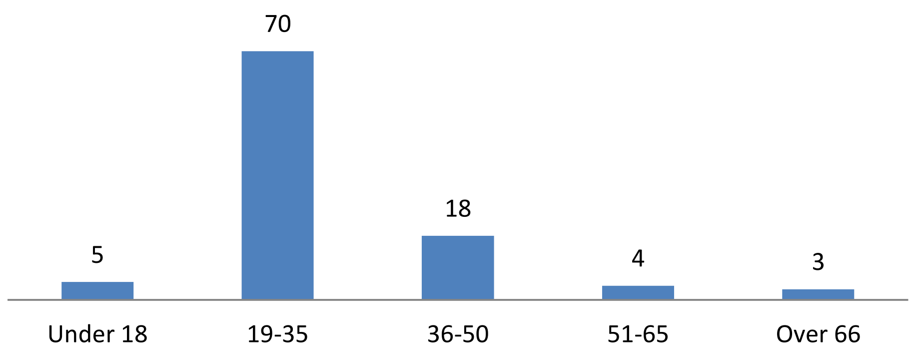
Figure 10: Gender



Source: Survey/ COVID-19, 2022

The majority of survey respondents were between the ages of 19 to 35, accounting for 70% of the total, followed by 18% of those aged 36 to 50, 4% of those aged 51 to 65, and 3% of those aged beyond 66.

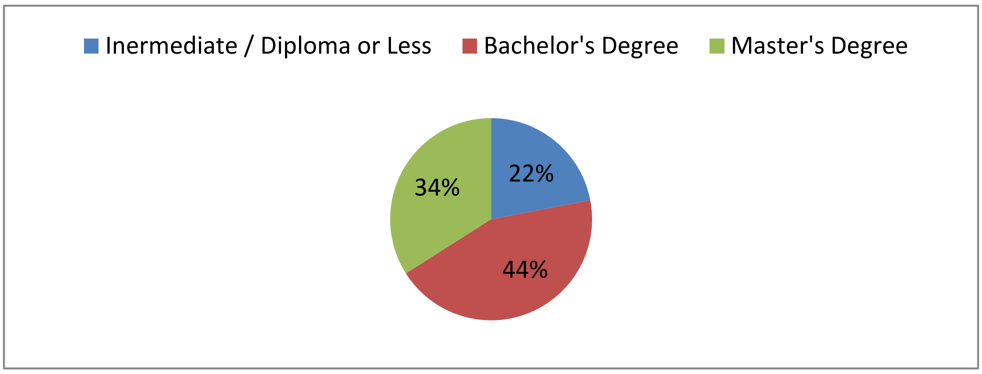
Figure 11: Age



Source: Survey/COVID-19, 2022

When it comes to respondents' educational levels, the majority of those who responded had a high diploma. As shown in the graph below, a bachelor's degree is followed by a master's degree diploma, and then an intermediate diploma.

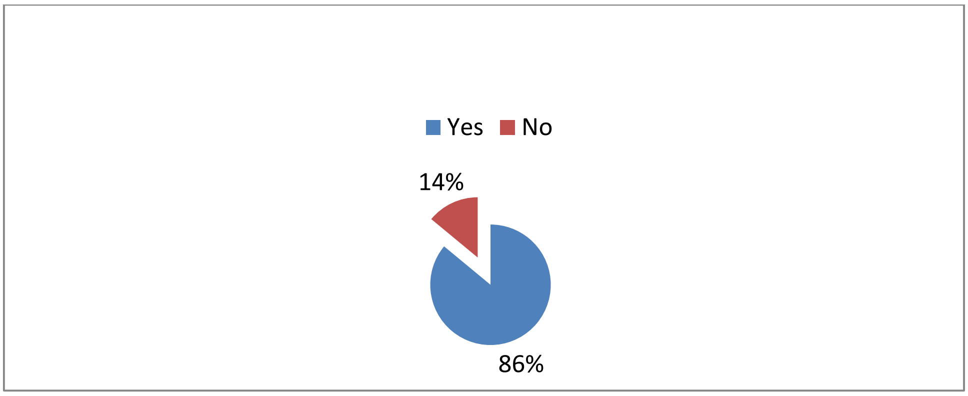
Figure 12: Level of Education



Source: Survey/COVID-19, 2022

During COVID-19, most clients' access to financial services became quite restricted. As a baseline, the customers were asked if they had experienced financial service issues throughout the COVID-19 era. According to the survey, 86 percent of clients faced financial difficulties, while 14 percent said they didn't.

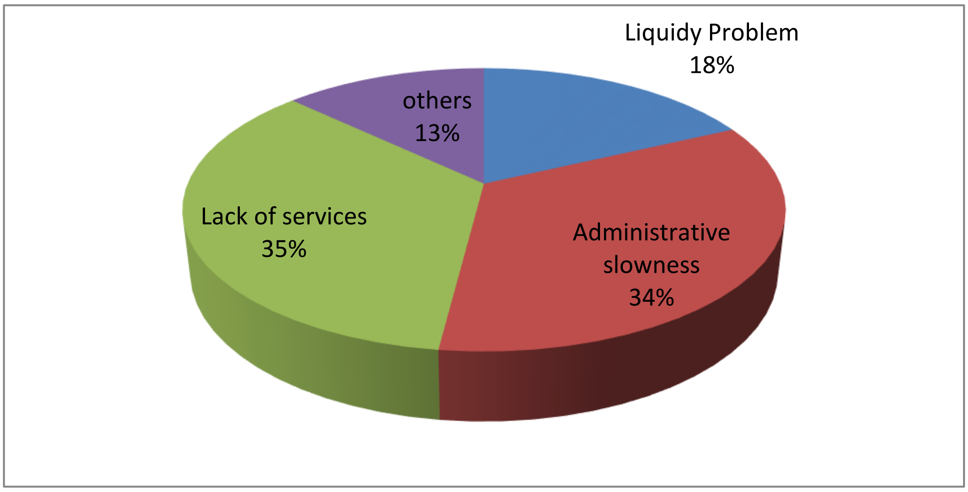
Figure 13: Did you encounter financial problems during the Covid-19 pandemic?



Source: Survey/COVID-19, 2022

A question was also carefully examined in order to discover the fundamental issue that the client faced during COVID-19. The majority of respondents claimed to be impacted by no service (35 percent), administrative slowness (34 percent), liquidity problems (18 percent), and other challenges as a result of the survey (13 percent).

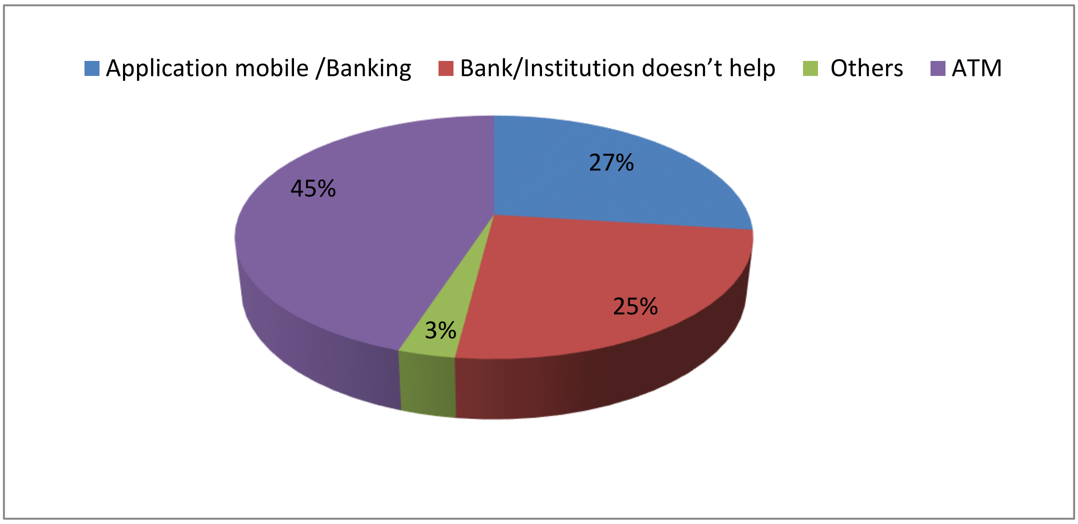
Figure 14: If so, what kind of problems?



Source: Survey/COVID-19, 2022

In order to comprehend the most prevalent types of financial services supplied to clients by banks or other financial organizations. How has your bank or financial institution assisted you in meeting your need for financial services during the COVID-19 pandemic, according to the survey question? . Figure 3.8 indicates that 45 percent of respondents testified their bank assisted them using an automated teller machine (ATM) , 27 percent attested they used mobile banking/phone, 25 percent said their bank or financial institution did not help them during that period, and 3 percent said they had other issues.

Figure 15: How has your bank/financial institution helped you meet your demand for financial services during the COVID-19 pandemic?

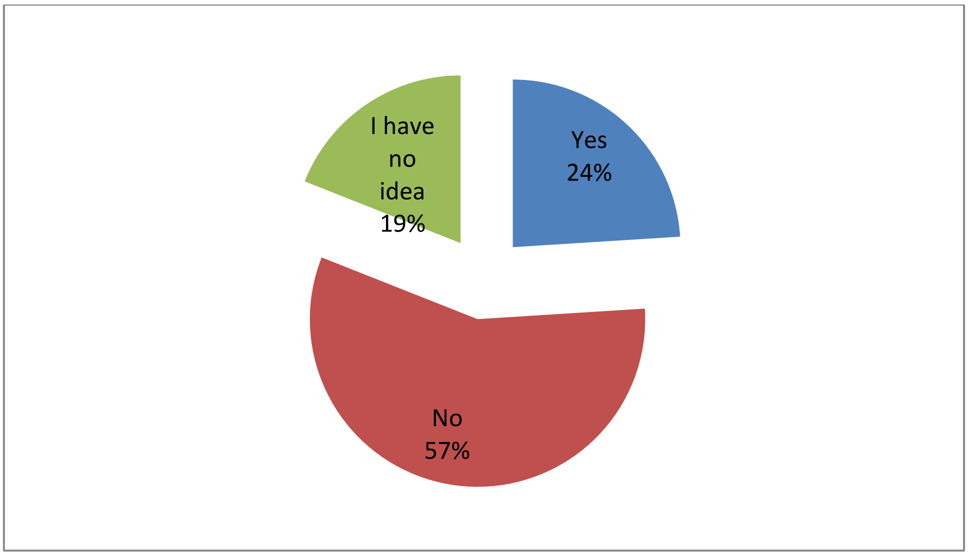


Source: Survey/COVID-19, 2022

To reduce the number of client trips, the financial service providers supplied the majority of cash withdrawal facilities, as well as a rise in the usage of mobile banking/money, which helped to reduce the use of cash by encouraging clients to shift to electronic payment mechanisms.

In case, the respondent mentioned utilizing a mobile application. As the country was put on lockdown, a question was raised about whether clients received any assistance from their financial institutions throughout the pandemic. As seen in figure 3.9 below, the majority of respondents stated that they did not receive any assistance at that time, while 24 percent stated that they were assisted, and 19 percent stated that they had no idea.

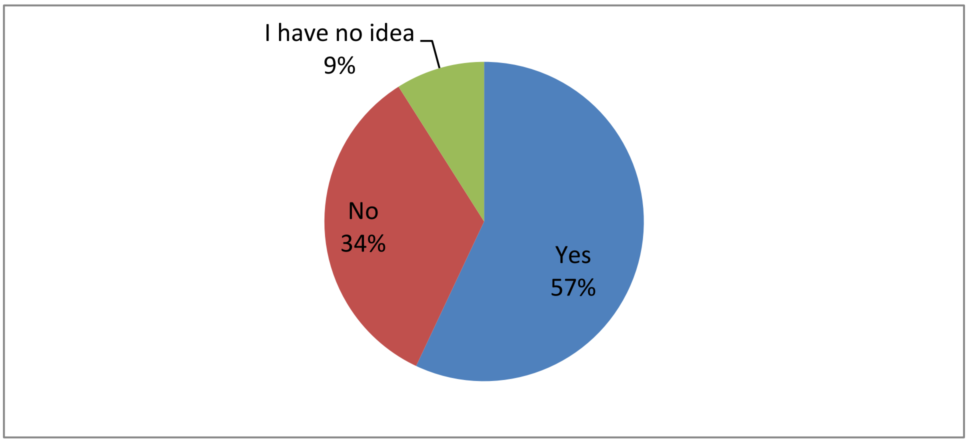
Figure 16: Has your bank/institution guided you to use mobile applications while staying at home?



Source: Survey/COVID-19, 2022

In addition to the precedent question, the survey included a section where clients testified about their experiences with the mobile application. And 57 percent of respondents said the app gave them a sense of satisfaction, 34 percent said no, and 9 percent said they had no idea (see figure below).

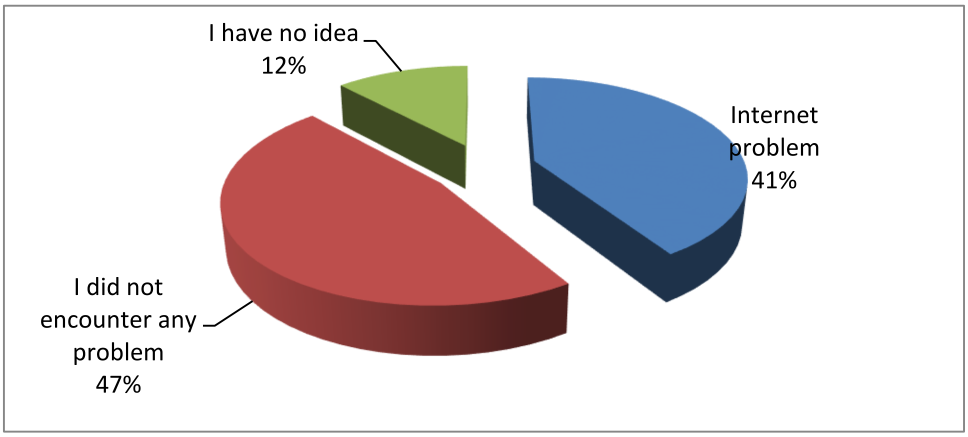
Figure 17: Are you satisfied with the use of mobile applications during the COVID-19 pandemic?



Source: Survey/COVID-19, 2022

The study sought to understand the main problem with the use of mobile application. A question was posed and due to the result of the survey. The greatest effect encountering clients while using mobile app was internet problem with the percentage of 41% (see figure below).

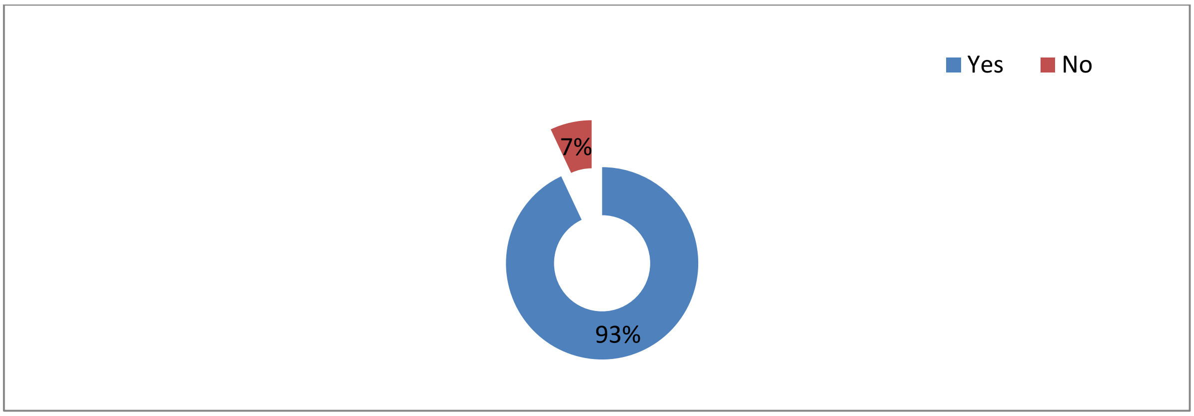
Figure 18: What kind of problems have you encountered using the mobile app during the COVID-19 pandemic?



Source: Survey/COVID-19, 2022

There are significant concerns about digital delivery widening the financial inclusion gap between those with and without access to the technological tools needed for digital access. The survey reported an overview of customers about the financial technologies in every location. According to the survey's findings 93 percent of respondents believe the sector needs to develop, while 7 percent of respondent said no (see figure below).

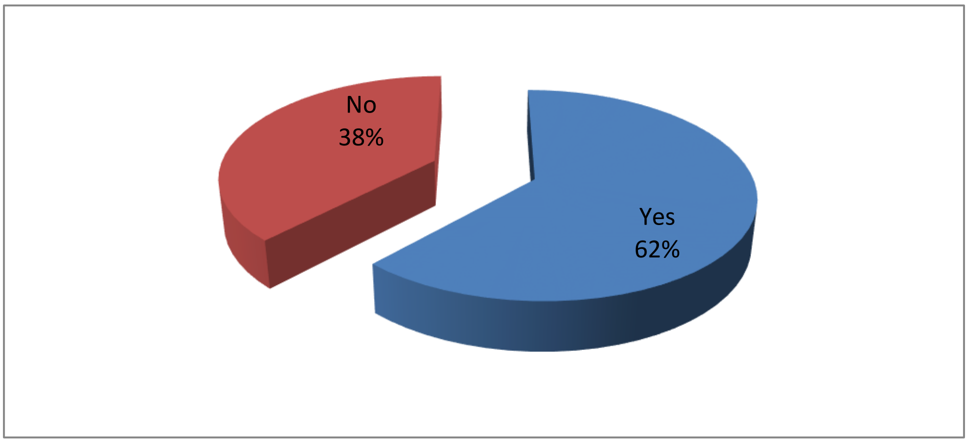
Figure 19: Do you think financial institutions should improve financial technology compared to the previous one?



Source: Survey/COVID-19, 2022

The clients were questioned to see whether they had taken out a loan during the pandemic or not. The graph below shows that a minority of respondents (38%) asked for a loan, while (62%) of respondent percent said no.

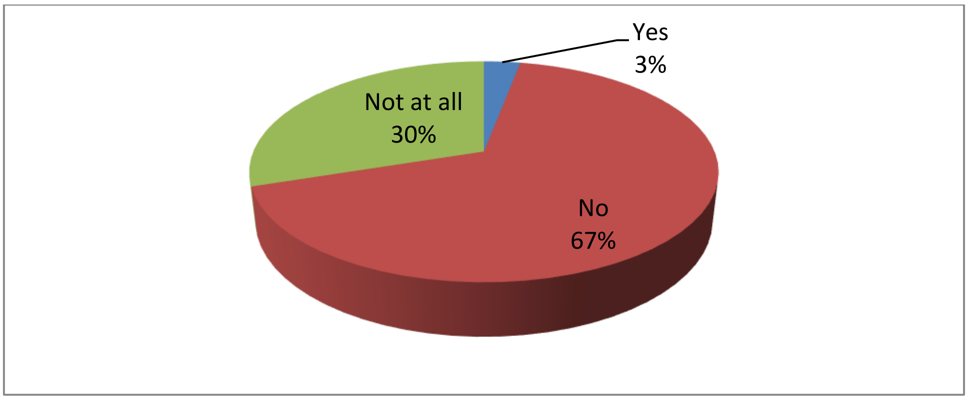
Figure 20: Did you seek a loan during the COVID-19 pandemic?



Source: Survey/COVID-19, 2022

Due to a lack of financial services, the study intended to see if clients were able to obtain a loan during the study period. According to the data, 67 percent of respondents stated they did not receive the loan that they applied for, 30 percent said they did not receive it at all, and 3 percent responded yes.

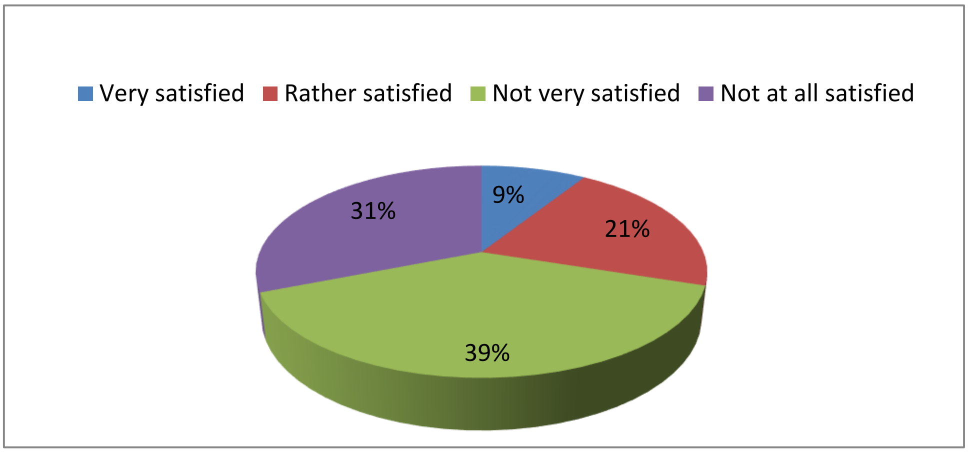
Figure 21: Did you manage to obtain the desired loans from your bank/financial institution during the COVID-19 pandemic?



Source: Survey/COVID-19, 2022

The study wanted to find out, if clients were happy with their bank's or financial institution's financial services during the pandemic. According to the survey's findings, 39 percent of respondents were not very satisfied, 31 percent were not satisfied at all, 21 percent were somewhat satisfied, and 9 percent were satisfied (see figure 3.15 below).

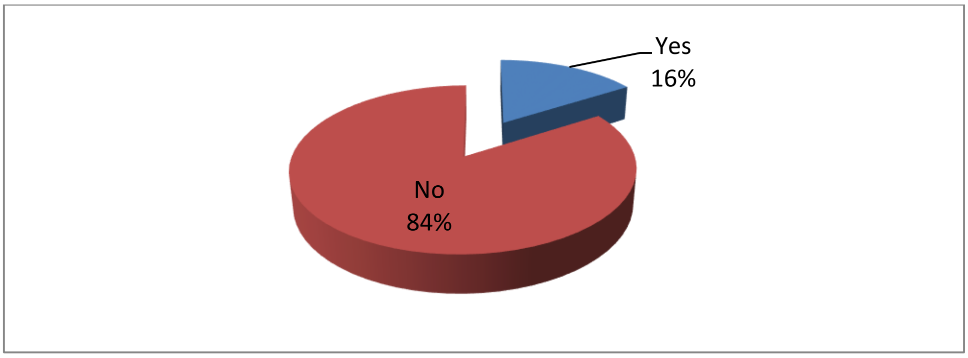
Figure 22: Are you satisfied with the financial service of your bank / financial institution during the COVID-19 pandemic?



Source: Survey/COVID-19, 2022

The study of the research was to determine how easy it was for clients to get access to their account before the COVID-19 pandemic hit. The figure below shows the result of that question so that 84 percent of those questioned replied no, while 16 percent said yes.

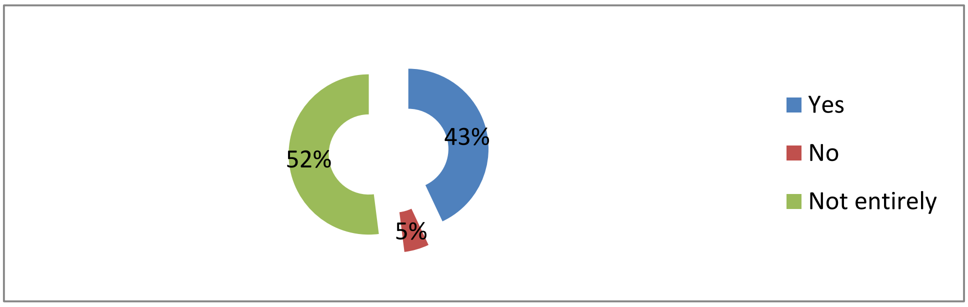
Figure 23: Was it difficult for you to access your account before the Covid-19 pandemic?



Source: Survey/COVID-19, 2022

Similarly, the same question was asked about whether clients would have complete access to their accounts throughout the pandemic. The majority of respondents stated that they did not have complete access to their account, with 43 percent saying yes and 5% saying no. (See the diagram below).

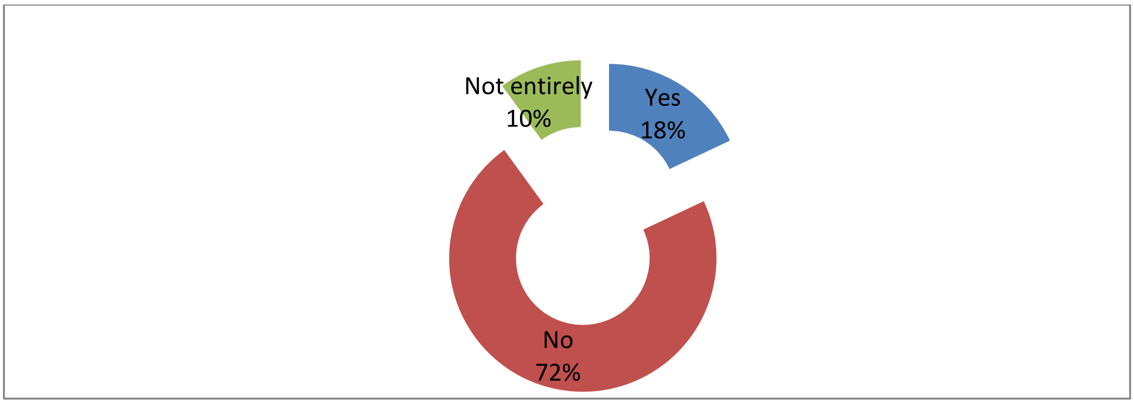
Figure 24: Did you have access to your account during the COVID-19 pandemic?



Source: Survey/COVID-19, 2022

The figure below displays the accessibility of customers to their account in the post COVID-19 era. The majority of consumers (72%) said they had no difficulty getting access to their accounts, while 10% said they couldn't fully access their accounts and 18% said they had some problems using their accounts.

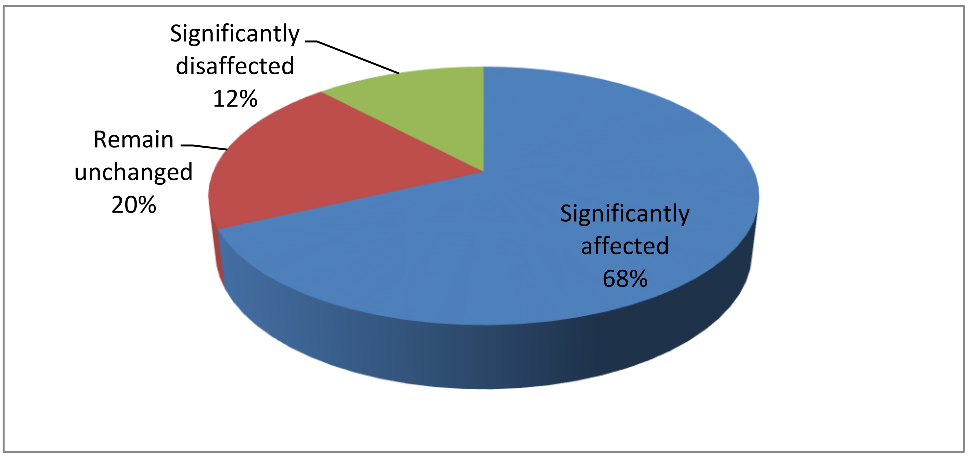
Figure 25: Is it difficult for you to access your account after the COVID-19 pandemic?



Source: Survey/COVID-19, 2022

In reaction to COVID-19 limitations, several financial service providers began using social media channels like WhatsApp, SMS, and Facebook to reach out their customers. To understand the impact of account restrictions on customers' ability to access their accounts, the results of the study shows 68% of respondents were considerably affected by the restrictions, 20% said their account access stayed the same, and 12% claimed the restrictions had no effect on their account access (see figure below) .

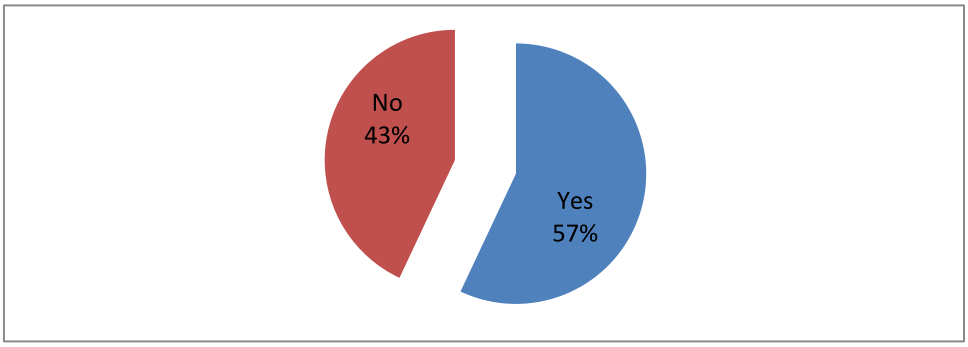
Figure 26: How have restrictions on locations and social distancing affected access to your account?



Source: Survey/COVID-19, 2022

As previously indicated, certain financial service providers launched social media channels to fill service delivery gaps caused by lockdowns that limited clients' access to branches. The goal was to make self-service facilities more convenient for customers, allowing them to view their accounts without having to go to a branch, and to provide new options for customers to repay their debts. In a similar manner, the study asked clients if their banks or financial institutions had invented any assistance during the COVID-19 era. According to the graph below, 57 percent of customers stated their financial providers aided them, while 43 percent of customers answered no.

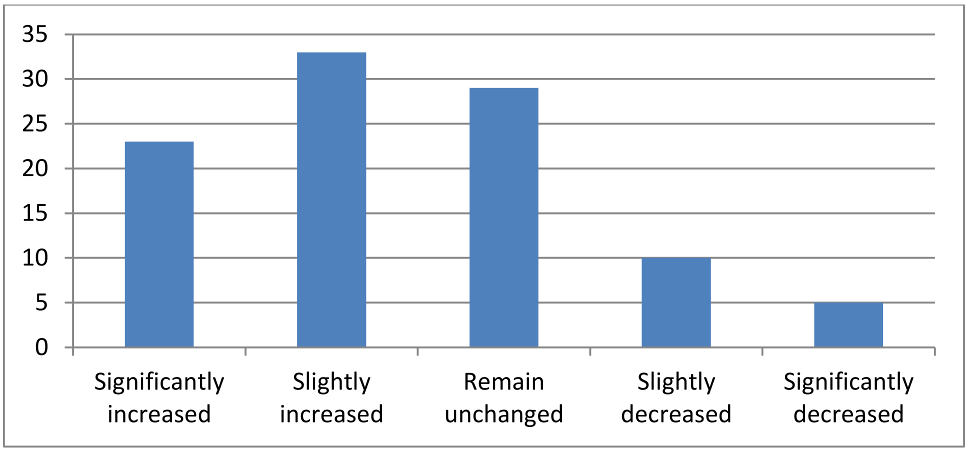
Figure 27: Has your bank or financial institution developed a written business continuity plan following the onset of COVID-19?



Source: Survey/COVID-19, 2022

The survey sought to investigate customers' perspectives in order to further promote loan floating in the post-COVID-19 era, and the majority of respondents believe the level will slightly increase, some believe it will remain unchanged, then those who believe it will be significantly increased, then slightly decreased, and finally a few who believe it will be significantly decreased, as shown in the graph below.

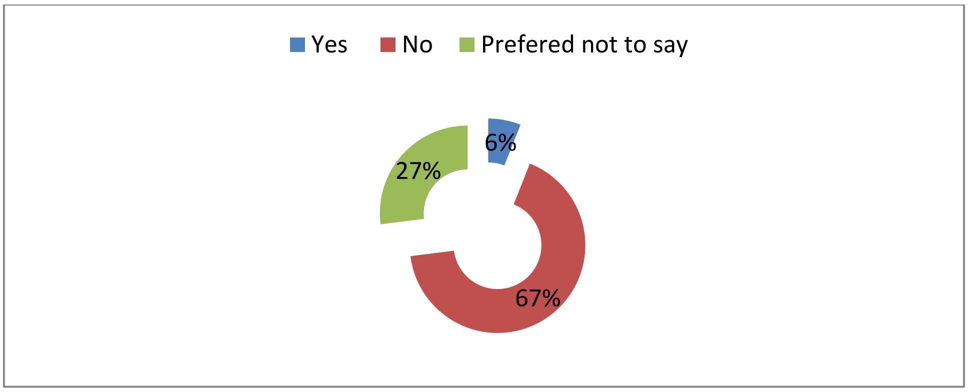
Figure 28: Do you believe that the level of disbursement of new loans compared to the previous year is so?



Source: Survey/COVID-19, 2022

As a result of COVID-19 pandemic, several governments have made efforts to not only mitigate the virus from spreading, but also to provide citizens with social assistance and to support entrepreneurs and the economy in order to alleviate the pandemic's impacts. A question in the survey asked if you received financial assistance from the government during the COVID-19 pandemic. Payments for education or medical expenses, unemployment benefits, grant payments, or any other type of social benefit could be included in this money. Wages and other work-related payments should not be included. According to the data, a few respondents confirmed receiving government help, while the majority of respondents testified no, and some chose not to say. (See the graph below).

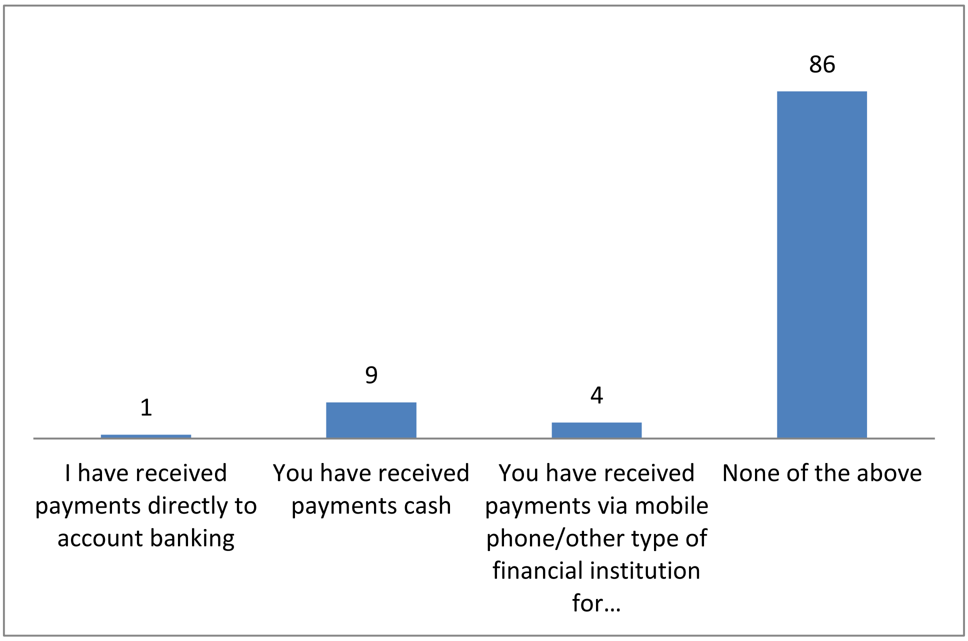
Figure 29: Have you personally received financial support from the government during the COVID-19 pandemic? This money could include payments for education or medical expenses, unemployment benefits, grant payments or any kind of social benefits. Please do not



Source: Survey/COVID-19, 2022

Similarly, to ascertain whether the respondent received money in the following ways, the figure below reveals that few customers said they received payment in cash, while some said they received money through formal mechanisms (for example, mobile money), a minority said they received money directly to their accounts, and the majority said they did not.

Figure 30: Did you receive money from the government during the COVID-19 period in any of the following ways?



Source: Survey/COVID-19, 2022

Since the main goal of this research is to determine the effects of COVID-19 in the delivery of financial services and products in Niger, the researcher conducted multiple regression analysis as the main statistical model. Therefore, it is important to identify dependent and independent variables that are going to be used in the study. As financial inclusion refers to efforts to make financial products and services accessible and affordable to all individuals and businesses in the society, regardless of their personal net worth or company size (Mitchell Grant, 2020). Regarding that age was chosen as dependent variable because it plays a critical role in financial inclusion. Older adults are having more accounts, more savings, more borrowings, higher ownership of debit and credit cards. Younger adults are more comfortable in use of digital payments mobile payment and internet payments (Bakhshi&Attri, 2020).

Secondly, there were identified main independent variables according to secondary sources from client's online survey. According to the analysis, independent variables are: gender, numbers of financial products and service issues faced due to COVID-19 (coded as COVID-19Issue), number of restrictions and social distancing affected access to account due to COVID-19 (coded as COVID-19access) have been taken as independent variables as well as indicators or proxies of COVID-19 pandemic. Thus, the quantitative analysis will try to find out a relationship between dependent and independent variables. The relationship should tell the effects of COVID-19 indicators to the financial inclusion of the country.

In addition, the study will be carried out using the multiple linear regression analysis method. Multiple regression analysis is a statistical approach for analyzing the relationship between two or more variables and estimating the value of the dependent variables using the information gathered (Adam Hayes, 2022). In order to conduct multiple linear regression analysis, SPSS software was used to analyze the data. SPSS statistics is a software package used for logical batched and non-batched statistical analysis (SPSS, 2020). In fact, description, summary and multicollinearity of data were found out with the help of SPSS.

The equation of the model was:

$$Age = \beta 0 + \beta 1 Gender + \beta 2\ COVID\text{-}19issue + \beta 3\ COVID\text{-}19access + \varepsilon$$

Where Age is as dependent variable, $ß_0$ represents the intercept or constant, $ß_1$, $ß_2$, $ß_3$, represent the estimated coefficients of each of the predicators, and Gender, COVID-19issue which represents financial products and services issues faced during COVID-19, and COVID-19access which represents restrictions on locations and social distancing issues affected access to banking account, represent the selected independent variables predict the dependent variable and ε is the stochastic disturbance term.

The following hypothesis has been formulated based on the objective of the study:

H0 = There is no statistically significant impact of independent variables on the dependent variable.

HA = There is a statistically significant impact of independent on the dependent variable.

- **Results of multiple linear regressions**

Multiple linear regressions is the main data analysis tool for this research, in order to find out the relationship between financial inclusion (age) and COVID-19 (Gender, COVID-19issue, COVID-19access). The results are following:

Table 2: Descriptive Statistics and Model Summary

Descriptive Statistics

	Mean	Std. Deviation	N
Age	2.30	.759	100
Gender	1.19	.394	100
Financial services issue due to COVID-19	1.14	.349	100
Access to account issue due to restrictions	1.44	.701	100

Source: SPSS

Model Summary

					Change Statistics				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.270[a]	.073	.044	.742	.073	2.515	3	96	.063

a. Predictors: (Constant), Access to account issue due to restrictions, Gender, Financial services issue due to COVID-19

Source: SPSS

The model's outcome shows that R Square is 0.073, indicating that the dependent variable and independent variables have a low correlation. As a result, financial inclusion and COVID-19 have a low correlation. The R square and Adjusted R square values are 0. 073 and 0.044, respectively, indicating that the independent variables explain approximately 7.3 percent of the variation in the dependent variable and 92.7% is explained by additional factors not included in this study.

Table 3: ANOVA of Regression Analysis

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4.154	3	1.385	2.515	.063[b]
	Residual	52.846	96	.550		
	Total	57.000	99			

a. Dependent Variable: Age
b. Predictors: (Constant), Access to account issue due to restrictions, Gender, Financial services issue due to COVID-19
Source: SPSS

The p value of the model is 0.063 which is more than 0.05 indicating that the regression model is statistically no significant. That means, there is no correlation between the changes in the independent variable and the shifts in the dependent variable. There is insufficient evidence to conclude that there is an effect of COVID-19 on the financial inclusion of the country.

Table 4: Coefficients of the Regression Analysis

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	3.267	.375		8.723	<.001	2.524	4.010
	Gender	-.379	.192	-.197	-1.975	.051	-.759	.002
	Financial services issue due to COVID-19	-.287	.217	-.132	-1.321	.190	-.718	.144
	Access to account issue due to restrictions	-.131	.108	-.121	-1.218	.226	-.345	.083

a. Dependent Variable: Age

Source: SPSS

The outcome of the test shows that the coefficients of Gender, Financial services issue due to COVID-19, and Access to account issue due to restrictions are respectively -0.379, -0.287, and 0.131. As a result, it may mean that there is an inverse relationship between the variables tested; For example, an increase of one unit of indicators of COVID-19 may cause a negative level of the indicators of financial inclusion and vice versa.

CONCLUSION AND RECCOMENDATIONS

Financial inclusion is described as an increase in access to and effective use of financial services by households and businesses, allowing them to better manage their money, establish a stronger resource portfolio, and reduce their vulnerability to poverty. COVID-19, on the other hand, caused a huge loss of human life around the world and posed an unprecedented threat to public health, food systems, and occupational safety. Furthermore, the COVID-19 caused the economies of many countries to collapse, resulting in increased job losses, poverty, and inequality. Many governments have taken steps to slow the spread of the pandemic, including imposing restrictions throughout the country and other measures. Alternatively most countries' financial institutions implemented monetary and fiscal strategies to prevent their markets from catastrophic collapse and to pump liquidity into them to mitigate the pandemic's detrimental impact.

The goal of this project was to first determine the main effects of COVID-19 on financial services delivery before examining its impact on Niger's financial inclusion. To achieve our goal, we conducted interviews with financial service providers in the first part of the investigation and then surveyed clients in the second part to get a complete picture of the issues they faced during the COVID-19 era. Based on the information, we received from the financial providers and survey answers from clients; we realized that the COVID-19 had effects on the customers ‘normal services.

In the following part of the investigation, we ran a statistical analysis tools SPSS to evaluate the effects of COVID-19 on financial inclusion. In order to conduct this test, age was chosen as indicator to financial inclusion in the country. Therefore, age was chosen as dependent variable in quantitative study. On the other hand gender, financial services issue due to COVID-19, and access to account issue due to restrictions were chosen as independent variables. The multiple regression analysis showed that there is a low correlation between COVID-19 pandemic and financial inclusion in the country, the independent variables were able to describe only 7.3% of the dependent variable.

In view of this, we concluded that a range of aspects and significant regulatory reactions taken by government and financial institutions in reactions to COVID-19 led to control the impacts of the pandemic to the financial products and services in the country.

Urging the financial service providers to consider the following:

- Assisting clients in using financial products and services in a more effective manner by enhancing the loan processing and servicing operations, eliminating paper documents, reducing the duration of the operation, splitting workload across employees in several areas…etc
- Accelerating the pace of their services by improving performance with client interaction.
- Improving liquidity difficulties in order to fully respond to client needs.
- Assisting clients with financial literacy challenges in order to make financial technology more accessible.
- Increasing the use of digital techniques and communication strategies to assist clients who are unable to leave their homes because of COVID-19.
- Delivering loan demand to financial agents in order to aid the country's economic growth in the face of the COVID-19 pandemic.
- Digitizing your services to continue to provide access to your customers who are sitting at home by stream or video chat, telegram and so on.
- Implementing government assistance/help in order to support impacted business firms/companies as result of COVID-19 pandemic.

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EXTRAS

List of Annexes

Annex 1: Financial Provider Questionnaires

1. Could you please briefly introduce yourself?
   a. Name, gender, age.
   b. Company, position, area of expertise, job description?
2. Which of kind of measures has your Bank / Financial institutions taken to deal with the impact of the COVID-19 pandemic?
3. How has your Bank/ Financial institution responded to customer requests during the COVID-19 pandemic
4. In terms of customer's relation, what particular channels have you used to interact with your customers since the lockdown began?
5. Have you noticed a significant impact in the volume of interactions with your customers during the COVID-19 pandemic?

Annex 2: Clients Questionnaires

1. Sex
- Man
- Woman
2. What is marital status?
- Married
- Single
- Prefer not to say
3. What is your region?
- Agadez
- Dosso
- Diffa
- Maradi
- Niamey
- Tahoua
- Tillabéri
- Zinder
4. Please indicate the highest level of education/training you have completed?
- Intermediate / Diploma or less
- Bachelor's Degree
- Master's Degree
- PhD or Higher
5. Did you encounter financial problems during the Covid-19 pandemic?
- Yes
- No
6. If so, what kind of problems?
- Liquidity problem
- Administrative slowness
- Lack of services
- Others

7. How has this problem affected you?
8. How has your bank/financial institution helped you meet your demand for financial services during the Covid-19 pandemic?

- ATM
- Application mobile /Banking
- Bank/Institution doesn't help
- Others

9. Has your bank/institution guided you to use mobile applications while staying at home?

- Yes
- No
- Don't have any idea

10. Are you satisfied with the use of mobile applications during the COVID-19 pandemic?

- Yes
- No
- Don't have any idea

11. What kind of problems have you encountered using the mobile app during the COVID-19 pandemic?

- I did not encounter any problem
- Internet problem
- Don't have any idea

12. Do you think financial institutions should improve financial technology compared to the previous one?

- Yes
- No

13. Did you seek a loan during the COVID-19 pandemic?

- Yes
- No

14. Did you manage to obtain the desired loans from your bank/financial institution during the COVID-19 pandemic?

- Yes
- No
- Not at all

15. Are you satisfied with the financial service of your bank / financial institution during the COVID-19 pandemic?

- Very satisfied
- Rather satisfied
- Not very satisfied
- Not at all satisfied

16. Was it difficult for you to access your account before the Covid-19 pandemic?

- Yes
- No

17. Did you have access to your account during the COVID-19 pandemic?

- yes
- No
- Not at all

18. Is it difficult for you to access your account after the COVID-19 pandemic?

- Yes
- No
- Not at all

19. How have restrictions on locations and social distancing affected access to your account?
- Significantly affected
- Remain unchanged
- Significantly disused
20. Has your bank or financial institution developed a written business continuity plan following the onset of COVID-19?
- Yes
- No
21. Do you believe that the level of disbursement of new loans compared to the previous year is so?
- Significantly increased
- Slightly increased
- Remain unchanged
- Slightly decreased
- Significantly decreased
- Slightly decreased
22. Have you personally received financial support from the government during the COVID-19 pandemic? This money could include payments for education or medical expenses, unemployment benefits, grant payments or any kind of social benefits. Please do not include wages or work-related payments.
- Yes
- No
- Preferred not to say
23. Did you receive money from the government during the COVID-19 period in any of the following ways?
- I have received payments directly to account banking
- You have received payments cash
- You have received payments via mobile phone/other type of financial institution for…
- None of the above

Annex 3: Contacts of interviewees

1. Mr. Sadick Harouna (BIA Bank Niger) +227 97 53 34 00
2. Mr. Ibrahim Boukida (ACEP-Niger) +227 98 91 13 31
3. Mr.Mustapha Chaibou Manirou (SONIBANK-Niger) +227 99 23 88 23
4. Mr. Didier Alexandre CORREA(Ecobank) + 227 20 73 71 81
5. Mr. Abdoul Rachid (ECOBANK-Niger) + 227 90 83 54 25
6. Mr. Mamadou Lamine Guèye (Caurie Microfinance) + 227 89 98 90 10
7. Mr. Yahaya Abouzeidi (Insurance company Niger) + 227 96 07 37 87
8. Mr. Latif Maika (Tax direction Niger) + 227 85 75 73 73
9. Mr. Seydou Dangande Laminou (B I A Niger) + 227 90 90 57 71
10. Mr. Sidi Mohamed(agent Bank) + 227 97 81 48 86
11. Kpoti Edem MENSAH Head Manager of Financial Inclusion Directorate-BCEAO (kemensah@bceao.int) .

Annex 4: Quantitative data used for analysis

	Gender	Age	Did you encounter financial problems during the Covid-19 pandemic?	How have restrictions on locations and social distancing affected access to your account?
1	Male	Under 18	Yes	Remain unchanged
2	Female	19-35	Yes	Significantly affected
3	Male	36-50	Yes	Significantly disaffected
4	Male	19-35	No	Significantly affected
5	Female	36-50	No	Significantly affected
6	Male	19-35	No	Remain unchanged
7	Male	36-50	Yes	Significantly affected
8	Female	Under 18	Yes	Remain unchanged
9	Male	19-35	Yes	Significantly disaffected
10	Female	36-50	Yes	Significantly affected
11	Male	19-35	Yes	Significantly affected
12	Male	36-50	Yes	Remain unchanged
13	Female	19-35	Yes	Significantly affected
14	Male	19-35	No	Remain unchanged
15	Female	19-35	Yes	Significantly affected
16	Male	19-35	Yes	Significantly disaffected
17	Male	36-50	Yes	Significantly affected
18	Male	36-50	Yes	Significantly disaffected
19	Female	19-35	Yes	Significantly affected
20	Male	19-35	Yes	Significantly affected
21	Male	19-35	No	Significantly affected
22	Female	19-35	Yes	Significantly disaffected
23	Male	19-35	Yes	Significantly affected
24	Male	36-50	Yes	Significantly disaffected
25	Female	19-35	Yes	Significantly affected
26	Male	36-50	No	Significantly affected
27	Male	Under 18	No	Significantly disaffected
28	Female	19-35	Yes	Significantly affected
29	Male	19-35	Yes	Significantly affected
30	Female	19-35	No	Significantly affected
31	Male	19-35	No	Significantly disaffected
32	Male	36-50	Yes	Significantly affected
33	Female	19-35	Yes	Significantly affected
34	Male	19-35	Yes	Significantly disaffected
35	Female	19-35	Yes	Significantly affected
36	Male	19-35	Yes	Significantly affected
37	Male	19-35	Yes	Significantly disaffected
38	Male	19-35	No	Significantly affected
39	Male	19-35	Yes	Remain unchanged
40	Male	19-35	Yes	Remain unchanged
41	Male	19-35	Yes	Significantly affected

42	Male	19-35	Yes	Significantly affected
43	Male	19-35	Yes	Significantly affected
44	Male	19-35	Yes	Significantly affected
45	Male	19-35	Yes	Remain unchanged
46	Male	19-35	Yes	Significantly affected
47	Male	36-50	Yes	Significantly disaffected
48	Male	19-35	Yes	Significantly affected
49	Male	19-35	Yes	Significantly disaffected
50	Male	19-35	Yes	Remain unchanged
51	Male	19-35	Yes	Significantly affected
52	Male	19-35	Yes	Remain unchanged
53	Male	36-50	Yes	Significantly affected
54	Male	19-35	Yes	Significantly affected
55	Male	19-35	Yes	Significantly affected
56	Male	19-35	Yes	Significantly affected
57	Male	19-35	Yes	Significantly affected
58	Male	19-35	Yes	Significantly affected
59	Male	36-50	Yes	Significantly affected
60	Male	19-35	Yes	Significantly affected
61	Male	19-35	Yes	Significantly affected
62	Male	19-35	Yes	Remain unchanged
63	Male	Under 18	Yes	Significantly affected
64	Male	19-35	No	Significantly affected
65	Male	19-35	Yes	Significantly affected
66	Male	19-35	Yes	Remain unchanged
67	Male	19-35	No	Significantly affected
68	Male	19-35	No	Remain unchanged
69	Male	19-35	Yes	Significantly affected
70	Female	19-35	Yes	Significantly affected
71	Male	19-35	Yes	Significantly affected
72	Female	19-35	Yes	Remain unchanged
73	Male	19-35	Yes	Significantly affected
74	Female	19-35	Yes	Significantly affected
75	Male	19-35	Yes	Significantly affected
76	Male	19-35	Yes	Remain unchanged
77	Female	19-35	Yes	Significantly affected
78	Male	36-50	Yes	Significantly affected
79	Male	19-35	Yes	Significantly affected
80	Male	19-35	Yes	Significantly affected
81	Male	19-35	Yes	Significantly affected
82	Male	36-50	Yes	Remain unchanged
83	Male	19-35	Yes	Significantly affected
84	Male	19-35	Yes	Remain unchanged
85	Male	19-35	Yes	Significantly affected
86	Female	Under 18	Yes	Significantly affected
87	Male	19-35	Yes	Remain unchanged
88	Male	19-35	Yes	Significantly affected

89	Male	51-65	Yes	Significantly affected
90	Male	19-35	Yes	Significantly affected
91	Female	19-35	Yes	Remain unchanged
92	Male	19-35	Yes	Significantly affected
93	Male	51-65	No	Significantly affected
94	Male	19-35	Yes	Significantly affected
95	Male	36-50	Yes	Significantly affected
96	Male	19-35	Yes	Significantly affected
97	Male	36-50	Yes	Remain unchanged
98	Male	19-35	Yes	Significantly affected
99	Male	36-50	Yes	Significantly affected
100	Male	19-35	Yes	Significantly affected

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