Faculty of Business Economics

Master of Management

Master's thesis

Promoting Responsible Digital Innovation in the Banking Industry: A Case Study of Public-Private-Community Partnerships in Cameroon

Adih Agingi Shelden

Thesis presented in fulfillment of the requirements for the degree of Master of Management, specialization Strategy and Innovation Management

SUPERVISOR :

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Preface and Acknowledgement:

This master's thesis **"Promoting Responsible Digital Innovation in the Banking Industry: A Case Study of Public-Private-Community Partnerships in Cameroon"** was conducted at the University of Hasselt during the spring of 2023. I would like to express my gratitude to the individuals who have supported and contributed to the completion of this thesis.

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Shelden Adih Agingi

Abstract

The banking industry is undergoing a transformative shift driven by digital innovation. While digital banking holds tremendous potential for financial inclusion and sustainable development, it also presents challenges in terms of data privacy, cybersecurity, and accessibility. This dissertation examines the role of Public-Private-Community Partnerships (PPCPs) in promoting responsible digital innovation in the banking industry, with a specific focus on Cameroon.

Through a comprehensive case study analysis, this research explores the challenges and opportunities in Cameroon's digital banking sector and investigates how PPCPs contribute to responsible digital innovation. The study identifies best practices and lessons learned from existing PPCPs, aiming to provide recommendations and strategies for enhancing the effectiveness of these partnerships in fostering financial inclusion and sustainable development.

The research methodology encompasses qualitative empirical research, including interviews, and document analysis. A robust conceptual framework is developed based on the principles of responsible digital innovation, emphasizing collaboration, transparency, and accountability among stakeholders.

The findings of this study have significant implications for the banking industry, policymakers, and stakeholders. They contribute to the existing body of knowledge on responsible digital innovation and PPCPs, offering insights into the practical implementation and outcomes of these partnerships. The research highlights the importance of integrating responsible practices into digital innovation strategies to build trust, enhance customer relationships, and address societal concerns.

While this study acknowledges certain limitations, such as the focus on a specific context and potential biases in data collection, rigorous research methods and transparent reporting are employed to mitigate these limitations.

In conclusion, this dissertation advances our understanding of responsible digital innovation in the banking industry and the role of PPCPs in promoting it. The research provides actionable recommendations for stakeholders to enhance the effectiveness of PPCPs in fostering financial inclusion and sustainable development. By fostering responsible digital practices, this study seeks to create a more inclusive, secure, and sustainable banking sector in Cameroon and beyond, ultimately benefiting individuals, businesses, and the overall economy.

Keywords: *Digital banking, Responsible digital innovation, Public-private-community partnerships, stakeholders, financial inclusion, sustainable development.*

Table of Contents

CHAPTER 1: Introduction

1.1 Background

This dissertation seeks to generally investigate how Public-Private-Community Partnerships (PPCPs) promote responsible digital innovation in the banking industry, with a focus on Cameroon.

The banking industry is undergoing a significant transformation fuelled by advancements in digital technology. The adoption of digital innovation, such as online banking platforms, mobile banking applications, and digital payment systems, has reshaped the landscape of banking services and has the potential to significantly impact financial inclusion and sustainable development.

Numerous studies have highlighted the benefits of digital banking, including increased access to financial services particularly for individuals in remote areas or underserved communities, improved efficiency, cost savings, and expanded reach to underserved populations (Cracknell, 2012; Indriasari et al., 2019). Digital banking has the power to overcome traditional barriers, such as geographic constraints and limited physical infrastructure, by providing convenient and inclusive financial solutions (Bhattacharya, 2017). By leveraging technology, individuals and businesses can conduct financial transactions, access credit, save money, and manage their finances more effectively.

However, the transformative impact of digital banking is not without challenges, risks, and ethical considerations. As the reliance on digital platforms grows, concerns related to data privacy, cybersecurity, and financial fraud have become significant considerations (Akinbowale et al., 2020; Naz et al., 2022). Protecting customer data and ensuring secure transactions are critical to maintaining trust and confidence in digital banking services. Additionally, digital literacy, access to reliable internet connectivity, and affordability of digital devices can pose barriers to full financial inclusion, particularly for marginalized populations (Liverpool-Morrisa, 2023). To address these challenges and harness the full potential of digital banking, responsible digital innovation practices are essential.

Responsible digital innovation refers to the deliberate and ethical adoption of digital technologies and practices that consider the interests of all stakeholders, including customers, financial institutions and technology providers, regulators, and the broader community (Chueca Vergara & Ferruz Agudo, 2021). Responsible digital innovation has emerged as a critical concept in the banking industry, emphasizing the need to balance technological advancements with ethical, social, and environmental considerations. Financial institutions are increasingly recognizing the importance of incorporating responsible practices into their digital innovation strategies to build trust, enhance customer relationships, and address societal concerns. It emphasizes the need for collaboration, transparency, and accountability to ensure that digital banking benefits all individuals and contributes to sustainable development.

One promising approach to fostering responsible digital innovation in the banking industry is through public-private-community partnerships (PPCPs). PPCPs bring together various stakeholders, including government agencies, financial institutions, technology providers, consumer advocacy groups, and community organizations, to collectively address the challenges and opportunities of digital banking (Jibrin et al., 2018). By leveraging the diverse expertise, resources, and perspectives of each stakeholder group, PPCPs could enable collaborative efforts to design and implement responsible digital banking strategies. While the significance of responsible digital innovation and PPCPs in the banking industry has been acknowledged, there is a need for in-depth case studies to understand the practical implementation and outcomes of such partnerships.

1.2 Research objective

This master's dissertation aims to fill this research gap by conducting a comprehensive case study of public-private-community partnerships (PPCPs) in Cameroon, with a specific focus on their role in promoting responsible digital innovation in the banking sector.

Cameroon, a country in Central Africa, provides an intriguing context for studying responsible digital innovation in the banking industry. The nation has experienced remarkable economic growth in recent years, accompanied by a growing demand for accessible and secure financial services. However, there are significant challenges to the widespread adoption of digital banking, including limited access to banking services in rural areas, low financial literacy, and concerns regarding data privacy.

Therefore, this research aims to explore how responsible digital innovation can be effectively promoted in Cameroon's banking industry through public-private-community partnerships. By conducting a thorough review of existing literature, engaging in qualitative empirical research, and analysing industry case studies, this study seeks to examine the challenges and opportunities within Cameroon's digital banking sector. It also intends to investigate the specific contributions of PPCPs in promoting responsible digital innovation, identify best practices and lessons learned from existing PPCPs in Cameroon and similar contexts, and provide actionable recommendations and strategies to enhance the effectiveness of PPCPs in fostering financial inclusion and sustainable development in Cameroon. The research questions guiding this study include:

1. What are the main challenges and opportunities in Cameroon's digital banking sector?
2. How do PPCPs contribute to responsible digital innovation in the banking industry?
3. What are the best practices and lessons learned from existing PPCPs in Cameroon and other similar contexts?
4. What recommendations and strategies can enhance the effectiveness of PPCPs in fostering responsible digital innovation for financial inclusion and sustainable development in Cameroon in Cameroon?

By conducting an in-depth case study analysis, this dissertation will contribute to the existing body of knowledge on responsible digital innovation and PPCPs in the banking industry. It can also provide insights into the practical implementation and outcomes of these partnerships, and their effectiveness in addressing local challenges and fostering responsible digital practices. The findings and recommendations will be of great significance to various stakeholders, including government agencies, financial institutions, regulators, and community organizations, enabling them to develop informed strategies, policies, and technologies that promote responsible digital innovation and address the challenges faced in achieving financial inclusion and sustainable development in Cameroon.

1.3 Research outline

The remainder of the dissertation is organized as follows: The second chapter focuses on the literature review and conceptual framework. It provides a comprehensive review of the existing literature on digital banking, responsible digital innovation, PPCPs, stakeholders, financial inclusion, and sustainable development. The chapter explores the transformative impact of digital technologies on the banking industry, discussing the benefits, challenges, and implications of digital banking adoption. It also investigates the concept of responsible digital innovation, examining the ethical, social, and environmental aspects associated with digital banking practices. Moreover, the chapter establishes a solid conceptual framework by presenting relevant studies, theories, and frameworks from the literature. It identifies research gaps and emphasizes the need for further investigation in the field.

The third chapter describes the research methodology, explaining the research design and approach adopted for the study. It justifies the chosen methodology and details the data collection methods, sampling strategy, and data analysis techniques. Ethical considerations are also addressed to ensure the research is conducted with integrity.

In the fourth chapter, the findings, results, and discussions of the study are presented. An analysis of the current state of digital banking in Cameroon is conducted, examining the level of adoption of digital banking services and highlighting challenges and opportunities in the industry. The role of PPCPs in promoting responsible digital innovation is investigated and supported by case studies and examples. The findings are thoroughly analysed and discussed, providing insights into the effectiveness of PPCPs and their impact on financial inclusion and sustainable development.

The final chapter concludes the dissertation by summarizing the research findings and implications and providing general conclusions. The implications of the findings are discussed, and recommendations are provided for various stakeholders on how to effectively implement PPCPs in the banking industry. Future research directions related to the topic are suggested to further advance knowledge in the field.

CHAPTER 2: Literature Review and conceptual framework.

Digital banking has emerged as a transformative force in the banking industry, reshaping the way financial services are delivered and accessed. This section provides a comprehensive review of the literature on digital banking, responsible digital innovation in banking, public-private-community partnerships (PPCPs), stakeholders, financial inclusion and sustainable development highlighting key findings and research gaps in the field.

2.1 Overview of digital banking.

2.1.1 Historical Development of digital baking

The historical development of digital banking encompasses a series of milestones and advancements that have significantly shaped the banking landscape. This section of the literature review provides an in-depth exploration of these key literature highlighting their key impact, the evolution of digital banking, followed by the benefits, challenges, and current technological advancements in digital banking.

In the 1990s, internet banking first appeared, marking a significant turning point in the development of digital banking. The development of the Internet made it possible for banks to provide online platforms where consumers could access their accounts, check transaction history, and carry out standard banking procedures (Granic et al., 2020). This innovation signaled the start of the shift away from conventional brick-and-mortar banking toward online platforms. The introduction of mobile banking applications and the spread of mobile devices have completely changed the landscape of digital banking. According to (Shaikh et al., 2015), access to financial services while on the go has been made easier by the widespread use of smartphones and the availability of mobile internet connectivity and

(Tchouassi, 2012) highlighted that financial institutions have made it possible for consumers to monitor their accounts, make payments, and conduct transactions effortlessly from their mobile devices by introducing mobile banking apps. With the help of this innovation, clients may now access financial services anywhere, at any time. The rise of digital payment systems has also played a pivotal role in the development of digital banking.

Studies highlight the impact of digital payment technologies, such as e-wallets and peer-to-peer payment platforms, in reshaping the payment landscape(Agarwal & Zhang, 2020; Liu et al., 2015). These technologies have provided customers with convenient and secure alternatives to traditional cash and card-based transactions, driving the transition towards a cashless society.

Furthermore, the integration of advanced technologies, such as artificial intelligence (AI) and machine learning, has revolutionized the capabilities of digital banking platforms. (Cheng & Jiang, 2020) researched how AI-powered chatbots and virtual assistants have transformed customer interactions by providing personalized and efficient support. The application of AI algorithms in credit scoring and risk assessment has also streamlined lending processes, making them faster and more accurate.

The literature has also highlighted the impact of regulatory changes on the development of digital banking. (Chan et al., 2022) examines the influence of regulatory frameworks, such as the Revised Payment Services Directive (PSD2) in Europe, which promotes open banking and fosters competition and innovation. These regulatory changes have paved the way for collaboration between traditional banks and fintech firms, leading to the emergence of innovative digital banking services and improved customer experiences. Additionally, the review discusses the role of customer behaviour and attitudes in shaping the adoption of digital banking.

(Zhou et al., 2021) explore the factors influencing customer trust and acceptance of digital banking technologies. They highlight the importance of factors such as perceived security, ease of use, and perceived usefulness in driving customer adoption.

2.1.2 Benefits and Challenges of digital banking

Benefits of digital banking

Looking at the benefits of digital banking, researchers have extensively explored various aspects of digital banking, including the adoption of online banking platforms, mobile banking applications, and digital payment systems. They have found that digital banking offers numerous **advantages**, such as enhanced convenience, accessibility, and cost efficiency for both financial institutions and customers. Studies also emphasize the role of digital technologies in driving financial inclusion by reaching previously underserved populations, enabling them to access banking services and participate in the formal economy. For instance, a study by (Banu et al., 2019) examined the impact of digital banking on customer behaviour and satisfaction. Their findings indicated that digital banking services, such as 24/7 account access and quick transaction processing, have positively influenced customer satisfaction levels. Customers appreciate the flexibility and convenience of managing their finances online, leading to increased customer loyalty and engagement.

Similarly, the research conducted (Msweli & Mawela, 2021) investigated the factors influencing the adoption of digital banking among different demographic groups. They found that younger individuals are more inclined to adopt digital banking due to their familiarity with technology and the convenience it offers in their daily lives. In addition to customer benefits, digital banking has also transformed the operational efficiency of financial institutions.

(Hassan & Farmanesh, 2022) explored the cost-saving potential of digital banking and found that it significantly reduces operational expenses, including staffing, branch infrastructure, and transaction processing. This cost optimization allows banks to allocate resources to other areas, such as product development and customer service enhancements.

Moreover, studies by (Gomber et al., 2018) highlighted the role of digital banking in improving the overall efficiency and effectiveness of financial services, enabling banks to streamline processes, reduce paperwork, and minimize errors.

Moreover, digital banking has played a pivotal role in expanding financial inclusion. Studies conducted by (Abdulhakeem & Hu, 2021) demonstrated that digital banking services have opened opportunities for unbanked and underbanked individuals to access financial services. Through mobile banking applications and digital wallets, individuals can perform basic financial transactions, such as money transfers, bill payments, and account management, without the need for physical branches. This has been particularly beneficial for individuals in remote or underserved areas where physical bank branches are limited.

Additionally, research by (Hu et al., 2019) examined the impact of digital banking on financial literacy and found that individuals who engage in digital banking activities have a better understanding of financial concepts and are more likely to make informed financial decisions.

Challenges of digital banking

Despite the numerous benefits, the literature also highlights several challenges and considerations associated with digital banking. One such challenge is the issue of data security and privacy. Researchers, such as (Li et al., 2021), have emphasized the importance of robust cybersecurity measures to protect customer information and prevent unauthorized access. They argue that as digital banking evolves, financial institutions must invest in advanced security technologies and adopt stringent data protection practices to safeguard customer trust and mitigate the risk of data breaches.

Additionally, studies by (Van Greuning & Bratanovic, 2020) have examined the challenges of regulatory compliance in the digital banking environment, highlighting the need for effective regulatory frameworks to ensure consumer protection, fair practices, and risk management.

Furthermore, ethical considerations surrounding digital banking have gained attention in recent years. Scholars, such as (Schultz & Seele, 2023), have explored the ethical implications of digital banking practices, particularly in terms of transparency, fairness, and responsible lending. They argue that financial institutions must ensure that digital banking services are provided ethically, without discriminatory practices or predatory lending behaviour. Similarly, research by (Pedro et al., 2019; Schultz & Seele, 2023) examined the ethical dimensions of data collection and usage in digital banking, emphasizing the importance of informed consent, data transparency, and responsible data governance.

2.1.3 Technological advancements in digital banking,

The use of emerging technologies has significantly impacted the development of digital banking, with several studies highlighting their applications and benefits in the banking industry. Artificial intelligence (AI) is one such technology that has received considerable attention in recent years. Research by (Pedro et al., 2019) highlights the use of AI in improving risk management, fraud detection, and customer service in digital banking. AI-powered chatbots and virtual assistants have been developed to improve customer service by providing personalized support and resolving customer queries promptly. Additionally, AI has been utilized in credit scoring and lending, enabling financial institutions to make more informed and accurate lending decisions.

Blockchain is another emerging technology that has the potential to revolutionize the banking industry by enhancing security, transparency, and efficiency in financial transactions. Studies by (Abdulhakeem & Hu, 2021; Choi, 2020) explore the use of blockchain in payment systems, international transactions, and supply chain finance. The use of blockchain in digital banking enables secure and transparent transactions, reduces processing time, and costs, and eliminates intermediaries.

Biometric authentication is also an emerging technology that has been widely adopted in digital banking to improve security and user experience. Biometric authentication methods like facial recognition, fingerprint scanning, and voice recognition provide an additional layer of security by verifying the user's identity. Studies by (Ghelani et al., 2022; Lovisotto et al., 2017)explore the applications of biometric authentication in digital banking, highlighting the benefits of increased security, reduced fraud, and improved user experience.

Moreover, the literature review highlights the potential synergies between these emerging technologies. For example, the combination of AI and blockchain can enable advanced analytics and data-driven insights while ensuring the integrity and privacy of customer data. Research by (Abdulhakeem & Hu, 2021; Pedro et al., 2019) discusses the applications of AI and blockchain integration in areas such as fraud detection, risk assessment, and compliance. These synergistic technologies can help banks provide personalized financial services, mitigate risks, and comply with regulatory requirements effectively. The adoption of emerging technologies like AI, blockchain, and biometric authentication has significantly impacted the development of digital banking, enabling financial institutions to provide innovative and secure financial services to their customers. The review sets the stage for the subsequent sections of the dissertation, which delve into responsible digital innovation, public-private-community partnerships, and the conceptual framework for promoting responsible digital banking practices.

2.2 Responsible Digital Innovation in Banking:

2.2.1 Responsible digital innovation

Responsible digital innovation could be understood as the ethical and sustainable development and implementation of digital banking practices (Van Oudheusden, 2014). This section of the literature review delves into responsible digital innovation in the banking industry. It examines the ethical considerations associated with collecting, storing, and using customer data, emphasizing the importance of data privacy and security measures. It also examines the role of regulations and standards in governing responsible digital practices and protecting consumer rights.

This literature highlights the importance of responsible innovation in mitigating risks, ensuring consumer protection, and addressing social and environmental concerns. Researchers have explored various dimensions of responsible digital innovation, including data privacy, cybersecurity, customer trust, regulatory frameworks, and the ethical implications of digital banking. By examining a wide range of studies, we can gain a deeper understanding of the multifaceted nature of responsible digital innovation and its significance in the banking industry.

(Lee, 2008) researched the ethical implications of digital banking and emphasize the need for responsible data management practices. The research examines the potential risks and challenges in ensuring customer privacy and data security in an increasingly digitized banking environment. The study underscores the importance of responsible digital practices that prioritize customer trust and data protection. It also highlights the need for financial institutions to implement robust security measures, such as encryption and multi-factor authentication, to safeguard customer data from unauthorized access and cyber threats.

(Elsayed & Nasir, 2022) shed light on the ethical considerations in digital banking and advocate for responsible digital innovation. The study explores the role of responsible data management practices, including data privacy and security measures, in building customer trust and enhancing the overall ethical framework of digital banking. It emphasizes the significance of responsible digital practices in maintaining customer confidence and mitigating risks associated with data breaches and cyber threats. The research also highlights the importance of transparency and clear communication with customers regarding the collection, use, and protection of their data. The review also emphasizes the role of regulations and standards in governing responsible digital practices in the banking industry.

Lai et al. (2022) discusses the importance of regulatory frameworks in ensuring transparency, accountability, and fair treatment of customers in digital banking. The study examines the impact of regulatory measures, such as data protection laws and consumer rights regulations, on shaping responsible digital practices and safeguarding customer interests. It underscores the need for financial institutions to comply with regulatory requirements and implement effective governance mechanisms to ensure responsible data practices. Additionally, the literature review explores the concept of responsible digital innovation from a broader perspective, considering its implications for societal well-being and sustainable development.

(George et al., 2021) examines the ethical dimensions of digital innovation in the banking industry and its potential impact on financial inclusion, social equity, and environmental sustainability. The study highlights the need for responsible digital practices that promote equitable access to banking services, address the digital divide, and minimize the environmental footprint of digital banking operations. It underscores the role of financial institutions and policymakers in integrating responsible digital practices into their strategies and policies to drive positive societal outcomes.

(Seyfang & Smith, 2007) discuss the ethical challenges and opportunities of digital banking in the context of sustainable development. The study explores the potential of responsible digital innovation to contribute to environmental sustainability, such as reducing paper-based transactions, promoting electronic statements, and supporting green banking initiatives. It also emphasizes the importance of considering social and economic dimensions in responsible digital practices, such as ensuring accessibility for all customer segments and minimizing the impact on vulnerable populations.

(Jamali et al., 2008) emphasizes the significance of regulatory frameworks in ensuring transparency, accountability, and fair treatment of customers in digital banking. Their research highlights the role of regulations in establishing clear guidelines and standards for responsible digital practices. The study examines the impact of regulatory measures, such as data protection laws, consumer rights regulations, and anti-money laundering requirements, on shaping responsible digital innovation in the banking industry. It underscores the importance of regulatory compliance in maintaining trust between financial institutions and customers, protecting customer data, and preventing fraudulent activities. Furthermore, the literature review explores the social and environmental implications of digital banking and highlights the need for sustainable and inclusive practices in the industry.

(Ghauri et al., 2021) discuss the social dimensions of digital banking and emphasize the importance of inclusive practices that address the needs of all customer segments. The study highlights the potential of digital banking to enhance financial inclusion by providing accessible and affordable banking services to underserved populations. It also addresses the challenges related to digital literacy, connectivity, and trust, and suggests strategies to overcome these barriers and promote inclusive digital banking practices.

In addition to social implications, (George et al., 2021) discuss the environmental aspects of digital banking. Their research explores the potential of digital technologies to contribute to environmental sustainability in the banking industry. The study highlights the environmental benefits of paperless transactions, electronic statements, and digital document management systems. It also addresses the need for responsible energy consumption in data centers and encourages financial institutions to adopt green banking practices, such as renewable energy sources and carbon footprint reduction strategies. The research emphasizes the importance of considering the environmental impact of digital banking operations and incorporating sustainability principles into the industry's practices.

By incorporating insights from (George et al., 2021; Ghauri et al., 2021; Jamali et al., 2008) the literature review underscores the multidimensional nature of responsible digital innovation in the banking industry. It recognizes the role of regulatory frameworks in ensuring transparency, accountability, and fair treatment of customers. Additionally, it highlights the social dimension by emphasizing the importance of inclusive practices and financial inclusion, and the environmental dimension by addressing sustainability and green banking practices. By considering these aspects, financial institutions can develop strategies and policies that promote responsible digital practices, aligning with regulatory requirements, societal needs, and environmental sustainability goals.

In the realm of data privacy, researchers have examined the ethical considerations associated with collecting, storing, and using customer data in digital banking. Studies by (Van de Poel & Sand, 2021; Voegtlin & Scherer, 2017) highlight the need for financial institutions to adopt responsible data practices, such as transparent data usage policies, secure data storage, and data minimization strategies. These studies emphasize the importance of obtaining informed consent from customers, ensuring the confidentiality of sensitive information, and protecting against unauthorized access to personal data. By adhering to responsible data practices, financial institutions can maintain customer confidence and trust in their digital banking services.

Studies by (Elsayed & Nasir, 2022; Lovisotto et al., 2017) explore the importance of implementing advanced encryption techniques, multi-factor authentication, and continuous monitoring to protect against cyberattacks. They highlight the need for financial institutions to stay abreast of emerging threats and invest in cybersecurity infrastructure to ensure the integrity and safety of digital banking transactions. By prioritizing responsible cybersecurity practices, financial institutions can safeguard customer information and prevent potential financial losses or reputational damage.

Research by (Hassan & Farmanesh, 2022) reveals that financial institutions that prioritize responsible practices, such as transparent communication, fair treatment of customers, and effective complaint resolution mechanisms, are more likely to build and maintain trust.

Researchers such as (Bélanger & Crossler, 2011; Van de Poel & Sand, 2021; Voegtlin & Scherer, 2017), examine the role of regulatory bodies and industry associations in setting guidelines and standards for responsible digital practices. They highlight the importance of regulatory compliance, continuous monitoring, and accountability to ensure that financial institutions adhere to responsible innovation principles while ensuring consumer protection and maintaining systemic stability. Thus In addition to addressing privacy, cybersecurity, and regulatory concerns, this literature also explores the ethical implications of digital banking practices.

Scholars such as (Johnson et al., 2019; Pedro et al., 2019) researched issues such as algorithmic bias, fair lending practices, and responsible AI use in digital banking. They highlight the need for financial institutions to proactively address ethical challenges and ensure fairness, transparency, and accountability in their digital banking operations. These studies guide responsible decision-making, algorithmic governance, and the responsible use of emerging technologies in the banking industry.

(Owen & Pansera, 2019; Stilgoe et al., 2013; Van de Poel & Sand, 2021) literature researched Anticipation, Reflexivity, Inclusion (or deliberation), and Responsiveness as dimensions of responsible innovation, responsible research, and innovation. An understanding of these dimensions would help in the development of a conceptual framework.

2.2.2 dimensions of responsible innovation

Anticipation: Anticipation involves actively identifying and evaluating the risks and benefits associated with new technologies and feeding this information back into the innovation process. (Owen & Pansera, 2019) argue that anticipating the potential social consequences of new technologies can help prevent or mitigate negative impacts and ensure that innovations align with societal values and needs.

Reflexivity: Reflexivity entails self-awareness among innovators about their assumptions, biases, and ethical responsibilities. Through reflexivity, innovators can assess the alignment between their innovations and societal needs and make necessary adjustments to align their practices with responsible and ethical standards. (Stilgoe et al., 2013) argue that reflexivity is crucial for engaging in critical reflection and assessing the societal implications of innovation. By being self-aware of their assumptions and values, innovators can make more conscious and responsible choices, thereby minimizing unintended negative consequences.

Inclusion: Inclusion (or deliberation) refers to the active involvement and participation of all relevant stakeholders in the innovation process. It emphasizes the importance of engaging a diverse range of perspectives, including customers, regulators, policymakers, industry players, and community representatives. (Owen & Pansera, 2019) highlight the importance of involving diverse stakeholders, including marginalized communities, in decision-making processes to ensure that the benefits and risks of digital banking innovations are distributed fairly. They advocate for participatory approaches that allow for meaningful engagement and deliberation among stakeholders, leading to more inclusive and socially responsible outcomes.

Responsiveness: Responsiveness involves adapting and responding to the evolving needs, values, and expectations of society throughout the development and implementation of digital banking innovations. (Owen & Pansera, 2019) argue that responsiveness involves an ongoing dialogue between innovators and society, allowing for continuous learning and adaptation. This dimension emphasizes the importance of incorporating feedback mechanisms and incorporating societal concerns and values into the innovation process.

Trustworthiness: Trustworthy digital banking involves designing user-centric interfaces, enhancing transparency and communication, and prioritizing customer privacy and data protection. To (Yap et al., 2010), by focusing on trust-building measures, financial institutions can foster long-term customer relationships and loyalty.

Sustainability: Sustainable digital banking focuses on ensuring that digital banking practices do not harm the environment, society, or the economy. To (Meena, 2013), sustainable digital banking practices aim to reduce carbon footprints, minimize waste, and promote social responsibility. By prioritizing sustainability, financial institutions can contribute to creating a more sustainable future for all.

2.2.3 Responsible Innovation Frameworks

(Roy, 2021) propose a framework for responsible digital innovation and emphasize the importance of balancing technological advancements with ethical considerations, social impact, and sustainability. It Highlighted a framework for Integrating Trust and Delight into Technology Innovation

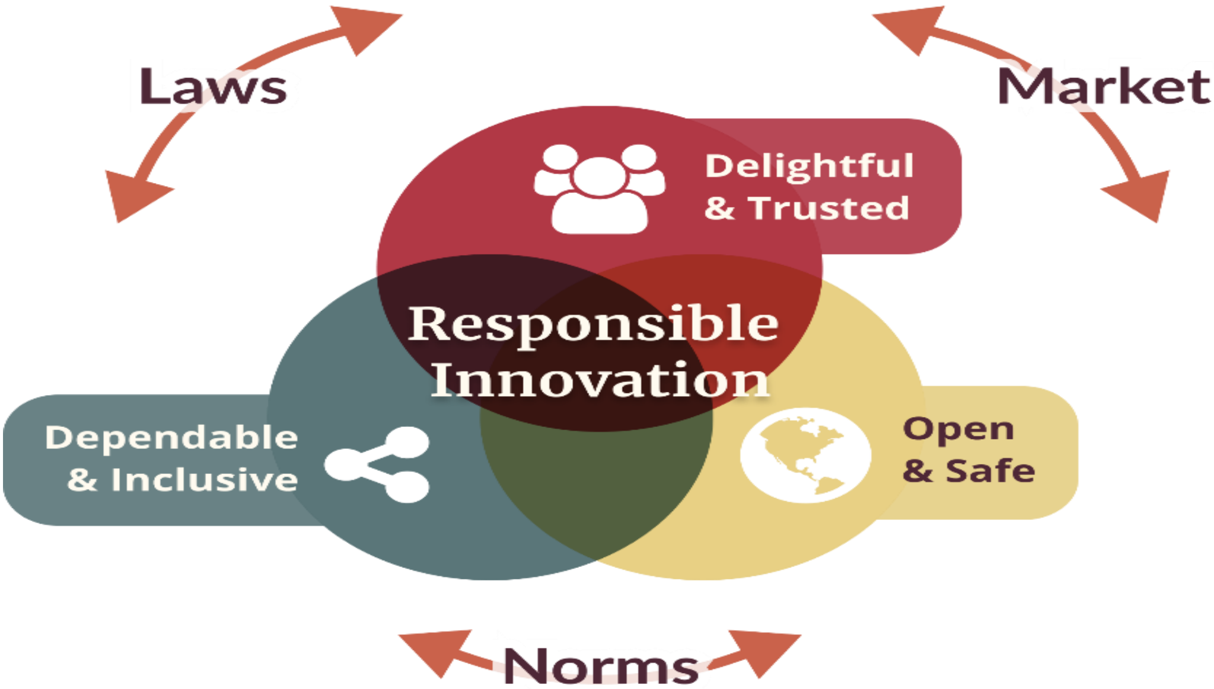


Figure 1: Responsible innovation Framework (Roy, 2021)

This framework is recognized as a tool with a reframing of stakeholders, value sets, and influences and serves as the central pillar, encompassing ethical considerations, social impact, and sustainability. The framework acknowledges that responsible innovation goes beyond mere technological advancements. It considers the interplay of law, market forces, and technology in shaping the norms and practices within the ecosystem. This recognition highlights the need for a collaborative approach involving various stakeholders, including policymakers, industry players, and technology developers, to create an environment that fosters responsible digital innovation. The framework's emphasis on

Dependability and inclusiveness: Dependability and inclusiveness reflect the importance of building technology that is reliable, secure, and accessible to all.

Delightful and Trust**:** The framework underscores the value of creating technology that is delightful and trusted. It highlights the significance of user experience, customer satisfaction, and building trust between financial institutions and customers. By prioritizing these aspects, the framework recognizes that responsible digital innovation should not only meet functional requirements but also deliver positive and engaging experiences for users.

Openness and Safety: *T*he framework emphasizes the importance of openness and safety in responsible digital innovation. It highlights the need for transparency, accountability, and ethical considerations in the development and deployment of digital banking technology. By incorporating these principles, the framework promotes the adoption of responsible practices that protect user interests and ensure the safety and security of digital banking transactions.

2.3 Public-Private-Community Partnerships (PPCPs):

Public-Private-Community Partnerships (PPCPs) are an improvement of Public-private partnerships by incorporating community. By leveraging the collective expertise, resources, and networks of multiple stakeholders, PPCPs can address societal challenges, promote financial inclusion, and ensure the benefits of society through collaboration between different stakeholders (Adnyana et al., 2015). Numerous studies have examined the roles and responsibilities of different stakeholders within PPCPs.

(Stilgoe et al., 2013) discuss the importance of government entities in providing regulatory frameworks that encourage responsible innovation and protect consumer interests. The regulators play a critical role in ensuring compliance with relevant laws and regulations, as emphasized. Financial institutions, as highlighted by (Blok et al., 2015) bring industry expertise, technological capabilities, and financial resources to the partnership. (Stilgoe et al., 2013). Local communities, as explored by (Pérez, 2015), contribute local knowledge, cultural insights, and an understanding of the specific needs and aspirations of the populations they represent.

(Etzkowitz & Leydesdorff, 2000), describes the interaction between academia, industry, and government as a Triple Helix model.

2.3.1 Triple Helix model.

This concept can provide insights into understanding and explaining public-private-community partnerships (PPCPs) in the context of responsible digital innovation in the banking industry. It suggests that innovation and economic development are driven by collaborative efforts and knowledge exchange among these three entities. In the context of public-private-community partnerships (PPCPs), the Triple Helix model can be used to explain how these partnerships bring together representatives from academia, industry, and government to address societal challenges and promote responsible digital innovation in the banking industry.

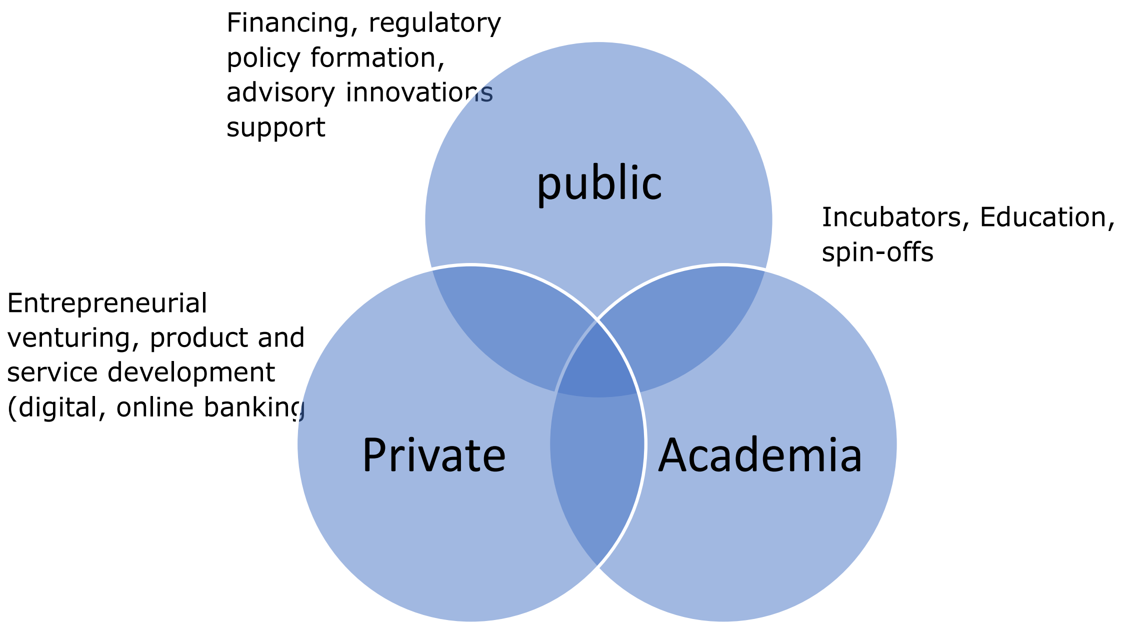


Figure 2: Triple Helix Model (Etzkowitz & Leydesdorff, 2000)

Academia, as one of the components of the Triple Helix, contributes expertise, research capabilities, and knowledge transfer to PPCPs in the banking industry. Academic institutions can provide research-based insights, conduct studies on responsible digital practices, and contribute to the development of innovative solutions. They can also offer educational programs and training to enhance digital literacy and promote awareness of responsible digital practices among stakeholders.

The industry represents the private sector in the Triple Helix model. Private financial institutions play a crucial role in PPCPs by sharing industry insights, technological expertise, and financial resources. They can contribute their practical experience in digital banking and financial services to inform the development and implementation of responsible digital innovation strategies. Through collaboration with academia and government, industry partners can also influence policy development, shape regulatory frameworks, and drive the adoption of responsible digital practices.

Government, as the third component of the Triple Helix, provides the regulatory and policy framework necessary for PPCPs in the banking industry. Governments play a pivotal role in establishing guidelines, standards, and incentives that encourage responsible digital innovation. They can create an enabling environment through regulations that protect consumer rights, ensure data privacy and security, and promote fair competition. Government agencies can also provide funding and support for research and development initiatives, as well as facilitate partnerships between academia, industry, and local communities.

2.3.1 Quadruple Helix and Quintuple models

Literature (Carayannis & Campbell, 2010)highlighted the Quadruple Helix and Quintuple models as an expansion to Triple Helix that includes stakeholders, the community, or civil society. These models recognize the importance of community, media engagement, and participation in driving innovation and sustainable development. In the context of PPCPs, the Quadruple models highlight the significance of involving community representatives, non-governmental organizations (NGOs), and other civil society actors in decision-making processes, co-creation of solutions, and ensuring the inclusion of diverse perspectives.

Community engagement in PPCPs can provide valuable insights into the needs and aspirations of local communities, promote social equity, and foster sustainable development. By including community stakeholders, PPCPs can address community-specific challenges, ensure the relevance of digital banking initiatives, and promote responsible digital practices that align with local values and priorities.

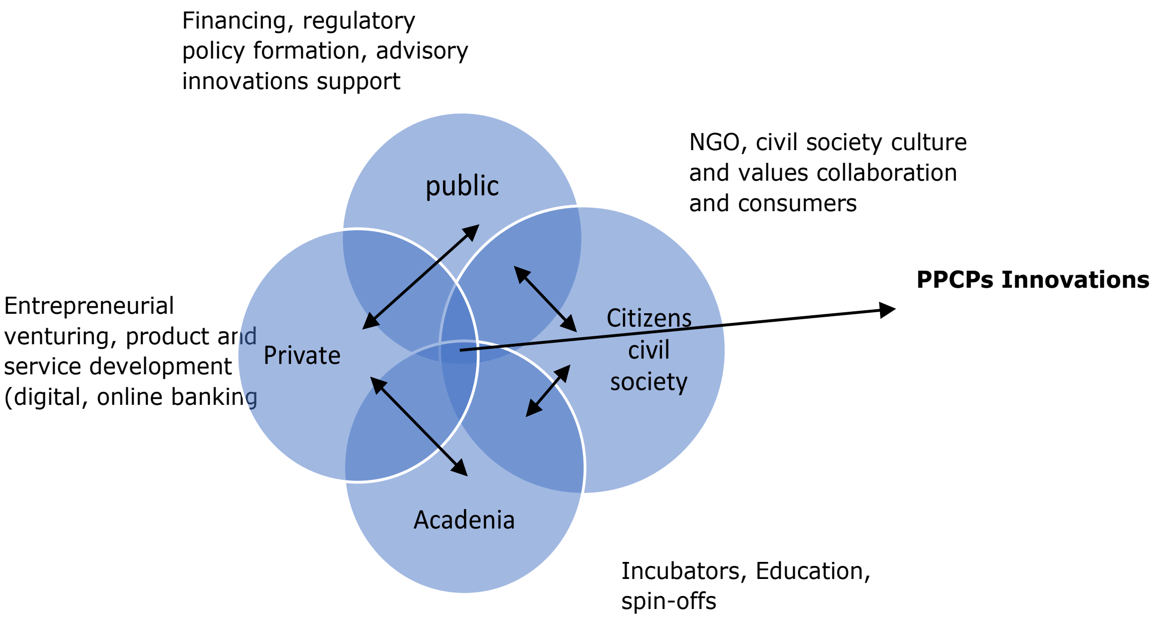


Figure 3: Quadruple Helix (Carayannis & Campbell, 2010)

The relationship between the Quadruple Helix model and PPCPs lies in their shared emphasis on collaboration and the involvement of diverse stakeholders in innovation and problem-solving processes. The Quadruple Helix model recognizes the importance of involving communities and civil society in the innovation ecosystem, which aligns with the notion of community engagement in PPCPs. By including the public as an active participant, PPCPs can tap into local knowledge, perspectives, and resources to create more inclusive and sustainable solutions.

Furthermore, the Quadruple Helix model can provide a conceptual framework for understanding the roles and interactions of different stakeholders within PPCPs. It highlights the need for collaboration and knowledge exchange between academia, industry, government, and the public, which can guide the design and implementation of effective PPCPs. The Quadruple Helix model can help identify the potential benefits and challenges associated with engaging diverse stakeholders and inform strategies to foster effective partnerships and innovation (Carayannis & Campbell, 2010).

For example (Cohen & Nelson, 2011; Kibaara, 2006), in Kenya the partnership between a leading mobile network operator, financial institutions, and community-based organizations has facilitated the development of mobile banking services that cater specifically to the needs of low-income individuals and small businesses. Through this collaboration, digital banking solutions such as mobile money transfers and micro-loans have empowered previously unbanked populations, enabling them to access financial services and participate in the formal economy.

Furthermore, For example, (Shirvanimoghaddam et al., 2022) suggest the success of PPCPs relies on factors such as shared goals, mutual accountability, and long-term commitment from all partners involved and argue that strong leadership and effective governance structures are essential for driving collaboration and ensuring the sustainability of PPCPs. Additionally, (Besong et al., 2022) emphasized the importance of building trust and addressing power imbalances among stakeholders to foster equitable partnerships

(Lobschat et al., 2021) highlights the need for supportive policy frameworks and regulatory environments. It suggests that governments should create an enabling environment that encourages and incentivizes PPCPs in the banking industry. Regulatory bodies can play a crucial role in setting guidelines, monitoring compliance, and ensuring that responsible digital innovation practices are upheld by all stakeholders. Furthermore, (Shoniwa, 2022) emphasizes the importance of knowledge sharing, capacity building, and learning from best practices to replicate and scale successful PPCPs in different contexts.

2.4 Stakeholders

The concept of stakeholders has gained significant attention in the field of business and management, as organizations recognize the importance of engaging with diverse groups that have a vested interest in their activities. Stakeholders are individuals, groups, or organizations that can affect or be affected by the decisions and actions of an organization. This literature review aims to explore the evolving understanding of stakeholders, their roles, and their impact on organizational success.

The concept of stakeholders was initially introduced by (Freeman, 2004) who defined stakeholders as "any group or individual who can affect or is affected by the achievement of an organization's objectives." Since then, scholars have expanded on this definition and identified various types of stakeholders, including internal stakeholders (e.g., employees, managers) and external stakeholders (e.g., customers, suppliers, communities, government, and NGOs).

One key aspect of stakeholder theory is the recognition that organizations have a responsibility to consider and address the interests and concerns of all relevant stakeholders. This approach goes beyond the traditional shareholder-centric view and emphasizes the importance of a broader range of stakeholders in shaping an organization's success (Du et al., 2013). Several studies have highlighted the significance of stakeholder engagement in organizational decision-making processes. (Mitchell et al., 1997) introduced the concept of stakeholder salience, which suggests that stakeholders with a higher power, legitimacy, and urgency are more likely to receive attention from the organization. This framework helps organizations prioritize their stakeholder engagement efforts and allocate resources effectively.

Moreover, stakeholder theory has been linked to corporate social responsibility (CSR) initiatives. Organizations that actively engage with stakeholders are more likely to incorporate social and environmental concerns into their business practices (Harrison & Freeman, 1999; Jones & Wicks, 1999). This alignment with stakeholder interests not only contributes to improved organizational performance but also enhances reputation and legitimacy in the eyes of stakeholders and the broader society (Maignan et al., 2005). The literature also emphasizes the importance of effective stakeholder communication and relationship management. Organizations need to establish open channels of communication and engage in dialogue with stakeholders to understand their needs, expectations, and concerns (Babić et al., 2019). Effective stakeholder engagement requires transparency, trust-building, and the ability to balance conflicting stakeholder interests (Andriof & Waddock, 2017).

Furthermore, the emergence of digital technologies has provided new avenues for stakeholder engagement. Online platforms and social media have facilitated direct and real-time interactions with stakeholders, enabling organizations to gather feedback, address concerns, and co-create value (Deszczyński, 2017). However, these digital engagement strategies also pose challenges related to privacy, data security, and the management of online reputations (Gupta & Dahiya, 2020).

Thus, the literature on stakeholders highlights their critical role in organizational success and sustainability. Stakeholder theory promotes a broader view of organizational responsibility beyond shareholder interests and emphasizes the need for active engagement, communication, and relationship management with diverse stakeholder groups. Effective stakeholder engagement contributes to improved decision-making, corporate social responsibility, and organizational reputation. As organizations continue to navigate complex business environments, understanding and effectively managing stakeholders will remain a key driver of long-term success.

2.5 Financial Inclusion

Financial inclusion is a critical aspect of economic development and poverty alleviation, and digital banking has emerged as a promising solution to enhance financial inclusion by providing convenient and accessible financial services to underserved populations. Several studies have examined the relationship between digital banking and financial inclusion, highlighting the potential benefits and challenges associated with this transformation.

According to a study (Peric, 2015), digital financial services, including mobile banking and digital payment systems, have the potential to reach previously unbanked or underbanked individuals, particularly those in remote areas with limited access to physical banking infrastructure. The study found that digital banking can reduce transaction costs, facilitate remittances, and provide a platform for savings and credit, thereby increasing financial inclusion.

Furthermore, a study conducted by (Kim et al., 2018) in Kenya demonstrated the positive impact of mobile money services on financial inclusion. The introduction of M-Pesa, a mobile money platform, significantly increased access to financial services and improved household welfare, particularly among low-income individuals. The study highlighted the convenience and accessibility of mobile banking, which enabled individuals to conduct transactions, save money, and access credit without the need for traditional banking infrastructure.

In another study by (Cicchiello et al., 2021), the authors examined the relationship between digital financial services and financial inclusion across 26 countries. The study found that countries with higher levels of digital financial services adoption experienced greater financial inclusion, as measured by account ownership, usage, and access to credit. The findings underscored the transformative potential of digital banking in bridging the financial inclusion gap.

However, it is important to note that while digital banking can enhance financial inclusion, certain challenges and barriers need to be addressed. For instance, a study (Mohammadyari & Singh, 2015), emphasized the importance of addressing issues related to digital literacy, trust, and affordability. They found that individuals with lower levels of education and limited digital literacy skills faced difficulties in fully utilizing digital financial services. Additionally, concerns regarding data privacy, security, and fraud prevention must be adequately addressed to build trust and confidence among users.

2.6 Sustainable Development

Sustainable development has become a pressing global concern, emphasizing the need for economic growth that is socially inclusive and environmentally sustainable. The banking industry plays a crucial role in driving sustainable development, and responsible digital innovation has emerged as a key approach to achieving this goal.

Several studies have examined the intersection of sustainable development and digital innovation in the banking industry, highlighting the potential benefits and challenges of adopting responsible practices.

A study (ElMassah & Mohieldin, 2020) emphasized the importance of responsible digital innovation in promoting sustainable development. The authors argued that financial institutions should incorporate social and environmental considerations into their digital innovation strategies to align with the principles of sustainable development. By adopting responsible practices, banks can contribute to inclusive economic growth, environmental conservation, and social well-being.

Furthermore, a study by (Sachs et al., 2019), explored the role of responsible digital banking in achieving the United Nations' Sustainable Development Goals (SDGs). The authors identified several ways in which digital banking can contribute to the SDGs, including increased financial access, improved efficiency in resource allocation, and enhanced transparency and accountability. The study highlighted the potential of responsible digital innovation to drive sustainable development outcomes.

In addition to its potential benefits, responsible digital innovation also comes with certain challenges. A study by (Jones et al., 2017) identified privacy concerns, ethical considerations, and data security as key challenges associated with digital banking innovation. The authors emphasized the importance of addressing these challenges to ensure that responsible digital practices align with sustainable development objectives.

Moreover, a study by (Koppenjan & Enserink, 2009), highlighted the role of collaboration and stakeholder engagement in promoting responsible digital innovation for sustainable development. The authors argued that partnerships between banks, regulators, technology providers, and community organizations are essential for designing and implementing digital banking strategies that consider social and environmental impacts.

2.7 Research Gaps

While significant progress has been made in understanding, digital banking, responsible digital innovation, and the role of Public-Private-Community Partnerships (PPCPs) in the banking industry, the existing research literature also highlights several research gaps that need to be addressed. These research gaps provide opportunities for further investigation and contribute to the development of a more comprehensive understanding of responsible digital innovation in the banking sector.

One research gap pertains to the customer experience and user satisfaction with digital banking platforms. While the literature acknowledges the importance of customer trust and engagement, there is a need for more in-depth research on the specific factors that influence customer satisfaction in the context of responsible digital innovation. Studies by (El Maliki & Seigneur, 2007) have emphasized the significance of user-centric design and personalized services in enhancing customer experience, but further research is needed to explore the relationship between responsible digital practices and customer satisfaction.

Another research gap identified in the literature is the impact of responsible digital innovation on financial well-being. While studies have explored the potential benefits of digital banking in promoting financial inclusion and reducing the digital divide, there is a need for more research on how responsible digital practices can positively impact individuals' financial well-being. Research (Sapovadia, 2018) suggests that responsible digital innovation can contribute to improved financial literacy, increased access to financial services, and better financial management. However, more empirical studies are needed to examine the causal relationship between responsible digital practices and financial well-being outcomes.

The intersection of responsible digital innovation and sustainable development is another research gap that requires further exploration. While studies have examined the environmental impact of digital banking practices, such as paperless transactions and energy-efficient data centers, there is a need for more research on how responsible digital practices can contribute to broader sustainable development goals(Gujral & Dash, 2021). This includes understanding the social and economic implications of responsible digital innovation and its potential to address issues such as income inequality and economic empowerment.

Thus, Future research could explore the integration of responsible digital practices within a broader sustainable development framework. Additionally, the literature highlights the need for cross-cultural and cross-national research on responsible digital practices in the banking industry. Many studies have focused on specific regions or countries, limiting the generalizability of findings. By conducting research across different cultural contexts and national settings, scholars can gain a more comprehensive understanding of the contextual factors that influence responsible digital innovation and the effectiveness of PPCPs. Comparative studies can provide insights into the transferability of responsible digital practices and inform policy recommendations that are applicable across diverse contexts.

2.8 Development of a conceptual framework

By integrating findings and insights from existing literature, Ethical considerations, Data privacy and security, Regulatory compliance, building customer trust, Social Impact, and Financial Inclusion, as well as Environmental Sustainability provides a roadmap for financial institutions to navigate the complex landscape of responsible digital innovation, encompassing ethical, social, and environmental considerations. It serves as a guide for fostering collaboration, engaging stakeholders, and driving positive change. To elaborate

Ethical considerations play a crucial role in responsible digital innovation within the banking sector. Studies by (Phuong et al., 2014) emphasize the need for financial institutions to establish ethical decision-making frameworks to guide their digital banking operations. These frameworks should incorporate principles of transparency, fairness, accountability, and responsible AI use. Additionally, algorithmic governance practices can help mitigate the risk of algorithmic bias and ensure fairness in lending practices. By adhering to these ethical considerations, financial institutions can build trust with customers and promote responsible digital innovation.

Data privacy and security are critical aspects of responsible digital innovation. Research by (Bhargav-Spantzel et al., 2006) highlights the importance of financial institutions adopting responsible data practices. Transparent data usage policies that inform customers about how their data will be used and protected are essential. Financial institutions should also implement robust cybersecurity measures, including encryption techniques and multi-factor authentication, to safeguard customer data. Continuous monitoring is necessary to detect and address any potential data breaches. By prioritizing data privacy and security, financial institutions can maintain customer trust and confidence in their digital banking services.

Regulatory compliance is crucial for responsible digital innovation. Research by (Cunningham, 2016; Regulation, 2018) highlights the role of regulatory bodies and industry associations in setting guidelines and standards for responsible digital practices. Financial institutions must ensure compliance with data protection regulations, such as the General Data Protection Regulation (GDPR) and adhere to consumer protection guidelines to safeguard the interests of customers. Reporting requirements, such as transparency reports on data breaches and privacy practices, can enhance accountability and promote responsible digital innovation.

Building customer trust is paramount in responsible digital innovation. (Zhang & Hon, 2020)emphasize the importance of financial institutions adopting transparent communication practices and treating customers fairly. Effective complaint resolution mechanisms should be in place to address customer concerns promptly. Financial institutions should also focus on developing customer-centric digital banking services with user-friendly interfaces that facilitate seamless interactions. Additionally, incorporating feedback mechanisms, such as customer surveys and user testing, enables continuous improvement based on customer preferences and needs.

Responsible digital innovation can contribute to social impact and financial inclusion. (Aduda & Kalunda, 2012) emphasize the potential of digital banking services to enhance financial inclusion, particularly for underserved populations. Financial institutions should focus on expanding digital banking infrastructure, especially in rural and remote areas, to ensure access to financial services for all. Additionally, financial education programs can empower individuals with the necessary knowledge and skills to make informed financial decisions and take advantage of digital banking services. By prioritizing social impact and financial inclusion, financial institutions can contribute to the sustainable development of communities and foster responsible digital innovation.

Addressing environmental sustainability is an essential aspect of responsible digital innovation in the banking sector. (Nath et al., 2014) emphasize the importance of financial institutions adopting paperless banking initiatives to reduce paper consumption and minimize their environmental footprint. Additionally, implementing energy-efficient technologies, such as data centers powered by renewable energy sources, can help reduce the carbon footprint associated with digital banking operations. Responsible supply chain management practices, including assessing the environmental impact of suppliers and promoting sustainable procurement, are also crucial. By integrating environmental sustainability into their digital banking strategies, financial institutions can contribute to the transition toward a greener and more sustainable future.

By adopting this concept drawn from the literature framework, financial institutions could navigate the complexities of responsible digital innovation and ensure a holistic approach. This has been summarized in the table below:

Pillar	Guiding Principles	Components
Ethical Considerations	Transparency, fairness, accountability, and responsible AI use	Ethical decision-making frameworks, algorithmic governance, and fair lending practices
Data Privacy and Security	Informed consent, data minimization, confidentiality, and secure storage	Transparent data usage policies, robust cybersecurity measures, and continuous monitoring
Regulatory Compliance	Adherence to regulatory frameworks and industry standards	Compliance with data protection regulations, consumer protection guidelines, and reporting requirements
Customer Trust and Engagement	Transparent communication, fair treatment, effective complaint resolution	Customer-centric digital banking services, user-friendly interfaces, and feedback mechanisms
Social Impact and Financial Inclusion	Accessible digital banking services, financial education, and inclusion	Expansion of digital banking infrastructure, innovative financial products for underserved populations, and partnerships with local communities
Environmental Sustainability	Minimizing environmental footprint, promoting green practices	Paperless banking initiatives, energy-efficient technologies, and responsible supply chain management

Table 1: Development of a conceptual framework (authors' table)

CHAPTER 3: Research Methodology

The research methodology chapter plays a vital role in any research study as it outlines the systematic approach and techniques employed to gather and analyse data. In this chapter, we present a comprehensive overview of the research methodology adopted for this study, which aimed to explore and understand the factors influencing responsible digital innovation in the banking industry. This chapter outlines the research design, data collection methods, sampling techniques, and data analysis procedures employed to achieve the research objectives.

The primary objective of this research is to develop a deeper understanding of responsible digital innovation practices in the banking industry and identify the key factors that contribute to their successful implementation. By adopting a robust research methodology, we aim to gather reliable and valid data that will allow us to draw meaningful conclusions and make informed recommendations for industry stakeholders.

This chapter begins by providing an overview of the research design chosen for this study. We discuss the rationale behind selecting a mixed-methods approach, which combines both qualitative and quantitative research methods. This approach allows us to capture both the subjective experiences and perceptions of industry stakeholders through interviews and surveys, as well as obtain objective data on industry trends and practices through secondary data analysis.

Next, we delve into the details of the data collection methods employed. We describe the process of conducting semi-structured interviews with key industry experts, regulators, and representatives from financial institutions. These interviews provide valuable insights into the challenges, opportunities, and best practices related to responsible digital innovation in the banking sector. Additionally, we outline the process of administering surveys to a representative sample of banking professionals, customers, and other relevant stakeholders. The survey responses will help us quantify and analyse the perceptions and attitudes toward responsible digital innovation in the industry.

Furthermore, we discuss the sampling techniques used to select participants for interviews and surveys. We explain the criteria for participant selection, sample size determination, and the steps taken to ensure a diverse and representative sample that reflects the characteristics of the target population.

Finally, this chapter provides an overview of the data analysis procedures. We describe the process of transcribing and coding interview data and data analysis. By employing rigorous data analysis techniques, we aim to extract meaningful patterns, themes, and insights from the collected data.

3.1 Research Design and Approach.

The research design and approach employed in this study is a qualitative case study, which is widely utilized in social science research to investigate complex phenomena within their natural setting. The case study approach is particularly appropriate when the research question focuses on contemporary events occurring in a real-life context with unclear boundaries between the phenomenon and its surrounding context (Harrison et al., 2017). In this study, data will be collected through in-depth interviews with key stakeholders, including government officials, banking executives, and community representatives, using qualitative methods. Qualitative research methods are particularly valuable for exploring complex and dynamic social phenomena that require a deep understanding of stakeholders' perspectives, experiences, and actions (Tomaszewski et al., 2020)

The case study method enables the investigation of critical issues such as the contextual factors that influence stakeholder behaviour and attitudes toward PPCPs. It is well-suited for examining the broader context in which social trends occur, such as the financial, community, and cultural aspects that shape stakeholder decision-making and behaviour (Tsang, 2013) Moreover, the case study method is effective for exploring complex and dynamic social phenomena that require an in-depth understanding of participants' views, experiences, and behaviours (Ritchie et al., 2013). By employing qualitative data collection methods, this study aims to analyze the diverse and evolving characteristics of PPCPs in Cameroon's financial services sector.

By adopting a qualitative case study approach, this research aims to capture rich and detailed insights into the phenomenon of PPCPs in the context of digital banking innovation (Yin, 2015). It seeks to understand the perspectives and experiences of various stakeholders, allowing for a comprehensive exploration of the factors influencing the development, implementation, and outcomes of PPCPs. Through in-depth interviews and careful analysis of qualitative data, this study aims to provide a nuanced understanding of the complex dynamics at play in the adoption and utilization of PPCPs in the Cameroonian banking sector.

3.2 Justification of the chosen methodology.

The chosen methodology of a qualitative case study is justified due to its suitability for capturing the complexity and dynamic nature of the phenomenon under investigation, namely PPCPs in the context of digital banking innovation. Qualitative research methods offer a holistic and in-depth understanding of social phenomena by exploring the perspectives, experiences, and actions of key stakeholders involved (Tomaszewski et al., 2020; Yin, 2015). By employing in-depth interviews with government officials, banking executives, and community representatives, this study aims to gather rich and detailed insights into their perceptions, motivations, and decision-making processes related to PPCPs. The case study approach is particularly appropriate when the research question revolves around contemporary events within a real-life context, where the boundaries between the phenomenon and its surrounding context are not clear (Ebneyamini & Sadeghi Moghadam, 2018). In the case of studying PPCPs in the financial services sector, it is essential to examine the contextual factors that shape stakeholder behaviour and attitudes towards these practices. This includes factors such as regulatory frameworks, market dynamics, and cultural influences, which can significantly impact the adoption and implementation of PPCPs (Tsang, 2013). The case study method allows for an in-depth exploration of these contextual factors and their interplay with the phenomenon of interest.

Furthermore, qualitative research methods are well-suited for capturing the dynamic and evolving nature of social phenomena. In the context of digital banking innovation, PPCPs are subject to continuous developments and changes driven by technological advancements, customer demands, and regulatory updates. Qualitative approaches provide the flexibility to adapt the research process and capture emerging themes and patterns as they evolve (Ritchie et al., 2013). By engaging with stakeholders in in-depth interviews, the study can capture their evolving perspectives, experiences, and behaviours concerning PPCPs.

Additionally, qualitative research methods offer the advantage of generating rich and nuanced data that can provide deep insights and contribute to theory building. The open-ended nature of qualitative data collection allows for a comprehensive exploration of the research topic and the emergence of unexpected themes and perspectives (Tomaszewski et al., 2020). This is particularly valuable in studying a complex phenomenon like PPCPs, where multiple factors, interactions, and stakeholders are involved.

By adopting a qualitative case study approach, this research aims to provide a comprehensive understanding of PPCPs and their implications for the financial services sector. The methodology allows for an in-depth exploration of stakeholder perspectives, contextual influences, and the dynamic nature of PPCPs. The rich and nuanced data generated through this approach will contribute to theory building and inform the development of responsible digital banking practices.

3.3 Data collection methods (interviews).

The data collection process in this dissertation involves conducting semi-structured, open-ended one-on-one interviews with government regulators, bank executives, and customers. The use of semi-structured interviews allows for in-depth discussions, information sharing, and engagement with the participants, facilitating a deeper understanding of their perspectives, thoughts, and experiences (Kunguma, 2020). This approach is preferred over other data collection methods like questionnaires because it provides more comprehensive and nuanced information in a relaxed setting (Blair et al., 2013).

The selection of government regulators, bank executives, and customer representatives as the target respondents is based on their significant knowledge, experience, and expertise in the field of digital banking. By including diverse stakeholders, the study aims to capture different viewpoints and insights related to the topic. Deep conversations in qualitative research methods are particularly valuable for exploring individuals' personal thoughts, ideas, and experiences, thereby enriching the data collected (Korhonen, 2020).

To ensure consistency and control in data collection, semi-structured interviews are recommended. This approach allows for a standardized set of questions while also providing flexibility to explore emerging ideas and probe for clarification (Muganda et al., 2012). It creates an environment where participants can express themselves confidently and provide in-depth perspectives on the research topic (Finch et al., 2003). The interviews will be conducted in a confidential setting to encourage participants to share their insights openly (Boiral et al., 2020).

3.4 Sampling Strategy and participant selection process

The sampling strategy for participant selection in this dissertation study involves a combination of purposive sampling and snowball sampling techniques. These sampling methods are chosen to ensure the inclusion of individuals who possess specific knowledge, expertise, and experiences relevant to the research topic, as well as to expand the network of potential participants within the target population.

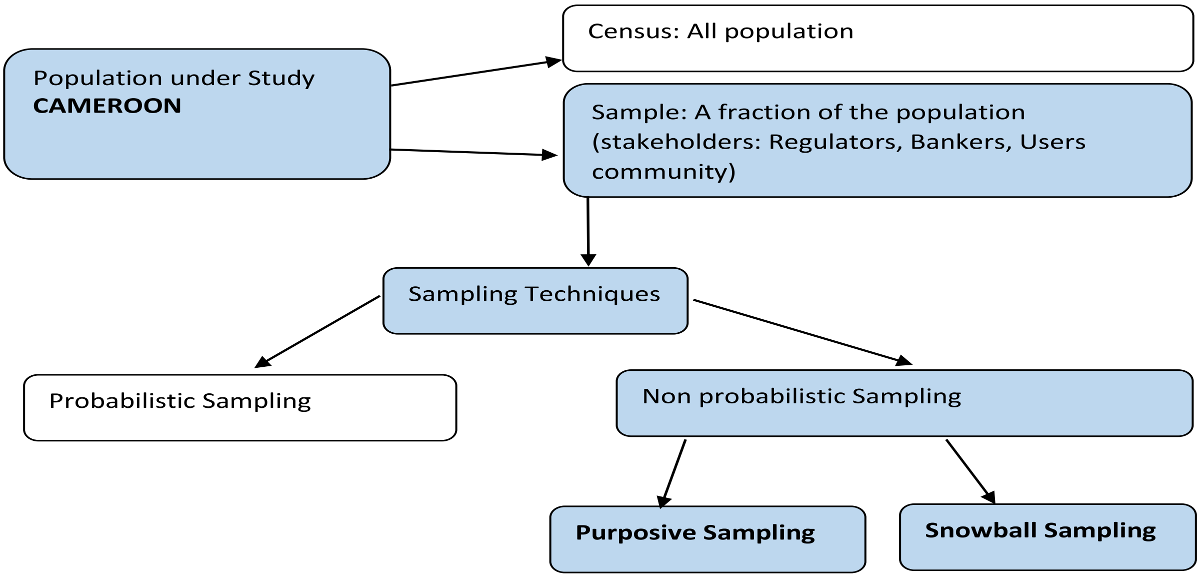


Figure 4: Sampling strategy and participant selection process (authors' design)

Purposive sampling is employed to deliberately select individuals who meet predetermined criteria and can provide valuable insights into the phenomenon under investigation (Creswell, 2013). In this study, government regulators, bank executives, and customers are selected as participants based on their roles and involvement in the digital banking sector in Cameroon. Purposive sampling ensures that participants have the necessary expertise and perspectives to contribute meaningfully to the study's objectives, allowing for a focused exploration of responsible digital innovation and PPCPs.

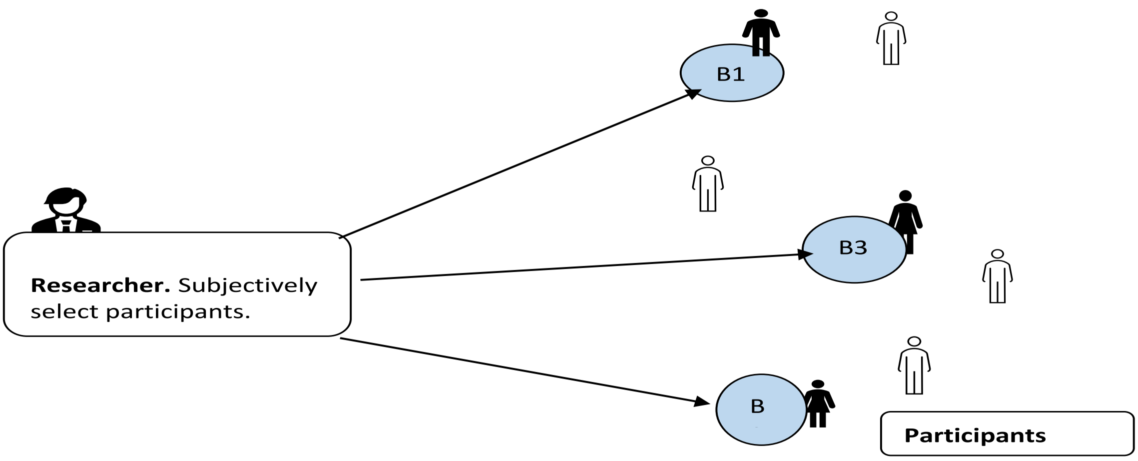
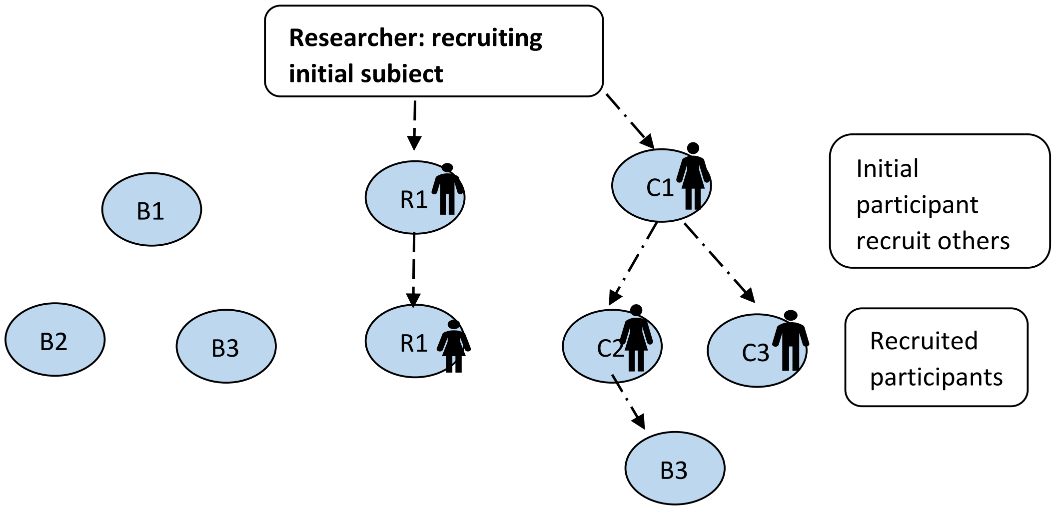


Figure 5: Purposive sampling (authors' design)

Snowball sampling, on the other hand, is utilized to identify additional participants who may not have been initially captured through purposive sampling (Biernacki & Waldorf, 1981). This sampling technique involves asking the initial participants to recommend other individuals who they believe possess relevant knowledge or experiences related to the research topic. Through this process, the researcher can tap into the participants' networks and gain access to individuals who may be difficult to reach through traditional sampling methods. Snowball sampling allows for the identification of individuals who may have unique perspectives or insights that can enrich the study.



B (banks representative), R(Regulators), C (Consumers representatives, community)

Figure 6: Snowball sampling (authors' design)

The participant selection process begins by identifying key individuals who hold positions of authority or expertise in the field of digital banking innovation. For example, government regulators in the Ministry of Finance who are responsible for overseeing and regulating digital banking activities would be identified as potential participants. Similarly, bank executives who are involved in the implementation and management of digital banking services would be targeted for inclusion.

Once the initial participants are identified, snowball sampling is initiated. These participants are asked to recommend other individuals within their professional networks who they believe would be valuable contributors to the study. For instance, government regulators may recommend colleagues or other industry experts, while bank executives may suggest professionals within their network who have insights into responsible digital innovation or PPCPs in the banking sector.

The snowball sampling process continues iteratively, with each new participant recommending additional individuals, thereby expanding the pool of potential participants. The process is repeated until the desired sample size and diversity are achieved, ensuring that a range of perspectives and experiences are represented in the study.

By combining purposive sampling and snowball sampling, this research study aims to capture a comprehensive and diverse set of participants who can provide valuable insights into responsible digital innovation and PPCPs in the banking sector. These sampling techniques help ensure the inclusion of participants with relevant expertise while also leveraging the participants' networks to access individuals who may offer unique perspectives and contribute to a rich and comprehensive understanding of the research topic.

The data collection process for this study will also involve semi-structured interviews conducted with government regulators, bankers, and customers in the banking sector. The interviews will be conducted in both English and French, and notes will be taken during and after each interview to capture the participants' opinions and experiences. Some interviews will be recorded through audio or video means and transcribed for further analysis. In addition to interviews, a focused group interview will be conducted with young participants to gather a wide range of perspectives on responsible digital innovation. Observation and analysis of secondary data sources, such as documents from banks and regulatory bodies, will also be conducted to supplement the interview findings. The data analysis will involve thematic analysis to identify patterns and themes within the interview data, as well as document analysis to extract relevant information from secondary sources. The findings will be reported objectively, addressing any biases and limitations of the study. Overall, the combination of interviews, focused group interviews, and document analysis will provide a comprehensive understanding of stakeholders' viewpoints on PPCPs and responsible digital innovation in the banking sector.

3.5 Data collection methods (interviews).

The data analysis process in this study will involve a comprehensive and rigorous approach to ensure the reliability and validity of the findings. Thematic analysis, as mentioned earlier, will be employed as the primary method for analysing the qualitative data collected from interviews and document analysis. This approach allows for a detailed exploration of the data, identification of patterns and themes, and interpretation of the underlying meanings and implications (Braun & Clarke, 2012; Guest et al., 2011). To elaborate further, the following steps will be followed during the data analysis process:

Familiarization with the data: The researcher will immerse themselves in the collected data, including interview transcripts and relevant documents. This process involves reading and re-reading the data to gain a deep understanding of the content, context, and nuances of the participants' responses and the documents analysed. It helps the researcher become familiar with the data and identify initial ideas and patterns that emerge (Braun & Clarke, 2012).

Coding*:* The next step involves coding the data, which entails systematically labeling and categorizing segments of the data with descriptive codes. The codes are derived from the data itself and capture the key concepts, ideas, or themes expressed by the participants or found in the documents. Open coding will be used initially, allowing for a flexible and exploratory approach to identify a wide range of codes. As the analysis progresses, axial coding may be applied to establish relationships between codes and develop more coherent themes (Saldaña, 2021).

Theme development: The codes will be reviewed and organized into potential themes. Themes represent higher-order patterns or categories that capture important aspects of the research topic.

The researcher will engage in a process of organizing and regrouping the codes, refining, and defining the themes, and ensuring they are coherent, meaningful, and representative of the data. This iterative process may involve revisiting the data, comparing codes, and adjusting to ensure the themes accurately reflect the data(King, 2004).

Reviewing and refining themes: The identified themes will undergo a thorough review and refinement process. The researcher will critically examine the themes, considering their relevance, coherence, and coverage of the data. This involves revisiting the data to validate the themes, comparing and contrasting codes and themes, and adjusting or revisions as needed. The goal is to develop a final set of themes that effectively capture the essence of the data and address the research questions(Thomas, 2006).

Data interpretation: Once the themes are established, the researcher will interpret and analyse the data within the framework of these themes. This involves exploring the relationships between themes, identifying patterns, and generating overarching explanations or interpretations. The researcher will engage in a process of sense-making, drawing on their expertise, the research questions, and relevant literature to provide a comprehensive and insightful analysis of the data. Interpretations will be supported by evidence from the data, including illustrative quotes or examples(Thomas, 2006).

Triangulation: To enhance the credibility and validity of the findings, the researcher will engage in triangulation by comparing and contrasting data from different sources. This may involve comparing differences and interviews with those from document analysis, examining similarities and differences, and seeking convergence or divergence of themes. Triangulation helps to strengthen the trustworthiness of the findings and provides a more comprehensive understanding of the research topic(Nowell et al., 2017).

Reporting: The final step of the data analysis process involves reporting the findings in a clear, coherent, and meaningful manner. The researcher will organize the themes and their interpretations into a structured narrative, supported by relevant quotes or examples from the data. The findings will be linked back to the research questions, objectives, and relevant literature, providing insights, implications, and recommendations. The report will also address the limitations of the study and discuss the trustworthiness and generalizability of the findings(Thomas, 2006).

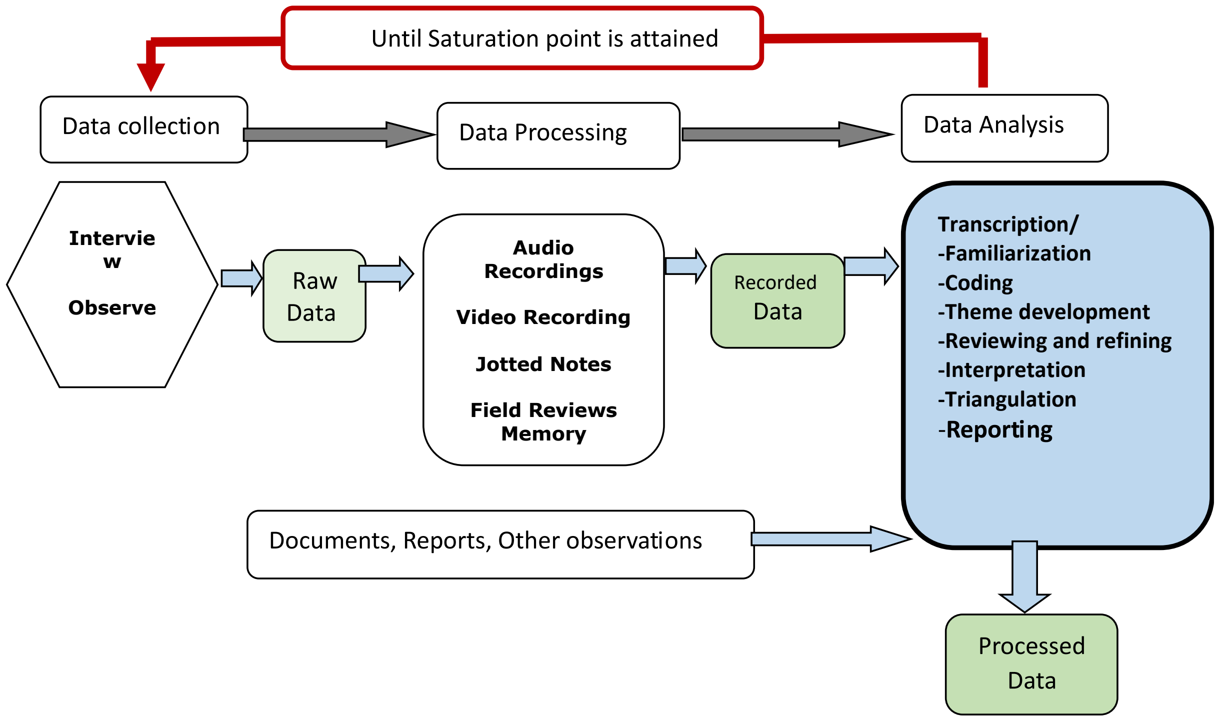


Figure 7: Qualitative data processing and analysis (adapted from reference, Public Health Notes: Qualitative Data Analysis (123phnotes.blogspot.com))

By employing a systematic and rigorous approach to data analysis, the researcher ensures that the findings are grounded in the data, accurately represent participants' perspectives, and contribute to the understanding of responsible digital innovation in the banking sector. The thematic analysis allows for a comprehensive exploration of the qualitative data, uncovering key patterns, themes, and insights that inform the research objectives and questions(Nowell et al., 2017). The process involves coding, theme development, reviewing and refining themes, data interpretation, triangulation, and reporting, ensuring a robust and rigorous analysis.

3.6 Ethical Considerations.

Ethical considerations are of utmost importance in research, and this study is no exception. When conducting research involving human subjects, it is essential to consider and address ethical issues to ensure that participants are treated with respect and dignity and their rights are protected. In this study, several ethical considerations need to be addressed to ensure that the research is conducted ethically and responsibly.

Informed consent is a critical ethical consideration in research involving human subjects. The researcher must obtain informed consent from participants, which involves providing them with information about the study, including its purpose, procedures, potential risks and benefits, and their rights as participants. Participants must also be allowed to ask questions and provide their voluntary consent to participate. In addition, confidentiality and privacy must be ensured, and participants must be informed of the measures taken to protect their personal information.

Another ethical consideration is the potential for harm or discomfort to participants. In this study, the researcher will be exploring the experiences of individuals who have experienced trauma, which may be sensitive and distressing. Therefore, the researcher must take appropriate measures to minimize any potential harm or distress to participants. This may include providing participants with access to counselling or support services and ensuring that they have the option to withdraw from the study at any time without penalty.

Furthermore, the researcher must ensure that the data collected is handled and stored in a manner that protects the privacy and confidentiality of participants. This includes ensuring that only authorized personnel have access to the data, that the data is stored securely, and that any identifying information is removed or anonymized to protect participants' identities.

It is also essential to consider the cultural and social contexts of the participants in this study. Trauma experiences may be influenced by cultural, social, and historical factors, and it is crucial to acknowledge and respect these factors in the research process. The researcher must take steps to ensure that the study is conducted in a culturally sensitive and appropriate manner and that the findings accurately reflect the participants' experiences.

Overall, ethical considerations are critical in any research involving human subjects. By addressing these considerations responsibly and respectfully, researchers can ensure that the research is conducted ethically and that the rights and well-being of participants are protected.

Several guidelines and codes of ethics guide ethical research practices. For example, the Belmont Report provides ethical principles and guidelines for the protection of human subjects in research(Biomedical & Research, 1978), and the American Psychological Association's Ethical Principles of Psychologists and Code of Conduct provides guidelines for ethical conduct in psychological research (O’Donohue, 2020).

CHAPTER 4: Findings, Results, Discussions, and Critical Considerations

4.1 Analysis of the Current State of digital banking in Cameroon.

To analyse the current state of digital banking in Cameroon, various aspects and factors need to be considered. These include understanding Cameroon as a case, the adoption and usage of digital banking services, the regulatory framework, infrastructure availability, customer behaviour and preferences, and the impact on financial inclusion and economic development. By examining these elements, a comprehensive understanding of the current state of digital banking in Cameroon can be achieved.

4.1.1 Understanding Cameroon as a Case

Cameroon, located in Central Africa, provides an interesting case for analyzing the current state of digital banking. With a population of over 26 million people and more than 200 ethnic groups speaking approximately 250 languages, Cameroon is a diverse nation. The country's history includes periods of German colonization, followed by division into British and French administrative zones.

As a lower-middle-income country, Cameroon has a mixed economy with a significant presence in both private and public sectors. Agriculture is a vital sector, with key export crops such as cocoa, coffee, cotton, and bananas driving economic activity. Additionally, Cameroon possesses significant oil reserves, contributing to its GDP. In 2020, Cameroon ranked 153 out of 189 countries in the Human Development Index (HDI).

Cameroon's financial sector encompasses commercial banks, microfinance institutions, insurance companies, and stock exchanges. The Bank of Central African States (BEAC) serves as the country's central bank, responsible for monetary policy and banking regulation. Efforts have been made to strengthen the financial sector and expand financial access, particularly in rural areas.

Politically, Cameroon operates as a republic with a presidential system of government. President Paul Biya has held power since 1982, although his administration has faced criticism for issues such as corruption, human rights violations, and the ongoing separatist crisis in the Anglophone regions.

Cameroon boasts a rich cultural heritage, including traditional music, dance, and art forms that have gained international recognition. The country is also home to diverse wildlife and natural landscapes, with national parks and reserves, such as the Waza National Park, attracting tourists.

In the global context, Cameroon is an active member of international organizations like the United Nations, the African Union, and the Commonwealth. The country has contributed troops to United Nations peacekeeping missions in various nations, highlighting its commitment to regional stability.

Considering Cameroon's unique characteristics, understanding the current state of digital banking requires analysing factors such as the adoption and usage of digital banking services, the regulatory framework, infrastructure availability, customer behaviour, and preferences, and the impact on financial inclusion and economic development. By examining these elements, a comprehensive assessment of the digital banking landscape in Cameroon can be obtained.

Figure 8: Cameroon location on the World Map (ontheworldmap.com)

4.1.2 Adoption and usage of digital banking services:

The adoption and usage of digital banking services in Cameroon have witnessed significant growth, transforming the way individuals and businesses engage with financial services. This section delves deeper into the factors driving the adoption of digital banking and provides additional literature and examples to support the analysis. The increased adoption of mobile banking services can be attributed to several factors. Firstly, the widespread availability of mobile phones has made it more accessible for individuals, even in remote areas, to engage in financial transactions. According to the International Telecommunication Union (ITU), the mobile penetration rate in Cameroon reached 80% in 2021 (ITU, 2021). This high mobile penetration provides a strong foundation for the uptake of mobile banking services. Furthermore, the convenience offered by mobile banking has played a significant role in its adoption. With mobile banking, customers can perform various financial activities such as account balance inquiries, fund transfers, bill payments, and mobile money transactions, all from the comfort of their mobile devices. This convenience factor has been highlighted in a study conducted by NFC Bank (2022), which reported that customers in Cameroon value the ability to conduct transactions anytime and anywhere (Kamdjoug et al., 2022).

One notable example of the success of mobile banking adoption in Cameroon is the case of MTN Mobile Money. MTN, one of the leading mobile network operators in the country, launched its mobile money service in 2010. Over the years, MTN Mobile Money has gained widespread popularity, with millions of customers using the service for various financial transactions. This success can be attributed to the convenience, affordability, and reliability of the service, which has made it an integral part of the daily lives of many Cameroonians.

In addition to mobile banking, internet banking has also gained traction among urban residents in Cameroon. As Internet penetration continues to grow, individuals with access to the Internet are opting for Internet banking services for their financial needs. This trend is supported by a study conducted by NFC Bank (2022), which found that urban customers prioritize the convenience and flexibility offered by Internet banking (Kamdjoug et al., 2022).

One prominent example of Internet banking adoption in Cameroon is the case of Afriland First Bank. Afriland First Bank introduced its Internet banking platform to cater to the growing demand for digital banking services. The platform enables customers to perform a wide range of banking activities online, including account management, fund transfers, bill payments, and online loan applications. The success of Afriland First Bank's Internet banking can be attributed to its user-friendly interface, robust security measures, and personalized customer support. These examples highlight the increasing adoption and usage of digital banking services in Cameroon, driven by factors such as mobile phone penetration, convenience, accessibility, and customer preferences. As technology continues to advance and financial institutions innovate their digital offerings, it is expected that the adoption of digital banking in Cameroon will continue to grow, enabling more individuals and businesses to access and benefit from formal financial services.

In addition to the factors mentioned above, the regulatory framework surrounding digital banking in Cameroon also plays a crucial role in shaping its current state. Effective regulation is necessary to ensure the security, reliability, and trustworthiness of digital banking services, protecting the interests of both customers and financial institutions.

4.1.3 Regulatory Framework:

The regulatory framework established by the Bank of Central African States (BEAC) in Cameroon is essential for governing digital banking operations and ensuring the safety and stability of the financial system. The BEAC has introduced specific guidelines and regulations that digital banking providers must adhere to, covering various aspects of their operations (Etuge, 2022).

One key area regulated by the BEAC is customer protection. The guidelines set by the BEAC include provisions for safeguarding customer information, ensuring data privacy, and implementing robust security measures to prevent unauthorized access to customers' accounts and transactions. These regulations help build trust among customers, assuring them that their financial information is adequately protected. Another aspect regulated by the BEAC is anti-money laundering (AML) measures. Digital banking platforms are required to implement stringent AML procedures to detect and prevent illicit financial activities, such as money laundering and terrorist financing. These regulations help maintain the integrity of the financial system by ensuring that digital banking services are not misused for illegal purposes (Besong et al., 2022).

Additionally, the BEAC guidelines address the licensing and operational requirements for digital banking providers. These requirements include capital adequacy, governance standards, risk management protocols, and reporting obligations. By imposing these regulations, the BEAC aims to ensure that digital banking providers have the necessary resources and capabilities to operate securely and responsibly. The regulatory framework established by the BEAC also promotes financial inclusion by encouraging digital banking innovation. The guidelines provide a framework for the development and deployment of new digital banking products and services, enabling financial institutions to expand their offerings and reach underserved populations. This, in turn, facilitates greater access to banking services, especially for individuals in remote areas who may have limited access to traditional brick-and-mortar banks (Besong et al., 2022; Mbemap, 2009)

4.1.4 Infrastructure availability:

Access to reliable infrastructure, including internet connectivity and mobile networks, is a critical factor for the successful implementation and usage of digital banking services in Cameroon. The availability and quality of infrastructure determine the reach and effectiveness of digital banking platforms, as well as the overall user experience. In recent years, Cameroon has made significant progress in expanding mobile network coverage and improving internet connectivity. Mobile network operators, such as MTN, Orange, and Nexttel, have invested in network infrastructure to extend coverage to more areas, including rural regions (Etoundi et al., 2016; Ndassi Teutio et al., 2023). This expansion has facilitated the accessibility of digital banking services to a wider population. Furthermore, the increasing affordability and availability of smartphones have contributed to the adoption of digital banking services in Cameroon. The declining prices of smartphones and the availability of entry-level smartphones have made it easier for individuals to access digital banking platforms. This has led to an increase in the number of users engaging in mobile banking and other digital financial services(Lien et al., 2015; Tchouassi, 2012).

Despite these advancements, challenges persist, particularly in rural areas where network coverage and internet access can be limited. The digital divide between urban and rural regions poses barriers to financial inclusion and hinders the widespread adoption of digital banking services. Limited infrastructure and inadequate network coverage in rural areas hinder the access and usage of digital banking services by individuals residing in those areas (Mariscal et al., 2019). To address these challenges, efforts have been made to improve internet connectivity in rural areas through initiatives such as the National Broadband Network project in Cameroon. These initiatives aim to bridge the digital divide and promote equal access to digital services, including digital banking, across the country. Additionally, partnerships between financial institutions and mobile network operators have been formed to leverage existing mobile network infrastructure and expand access to digital banking services in underserved areas (Zavratnik et al., 2018).

An example of a digital banking service that has addressed infrastructure challenges in Cameroon is Express Union Mobile Money. Express Union, in partnership with MTN Cameroon, offers mobile money services that allow customers to conduct financial transactions using their mobile phones. This service has been particularly beneficial in rural areas where access to traditional banking services is limited. By leveraging the existing mobile network infrastructure, Express Union Mobile Money provides a convenient and accessible financial solution to individuals in underserved areas (Tengeh & Gahapa Talom, 2020).

4.1.5 Customer Behaviour and Preferences:

The study conducted by NFC Bank (2022) highlights the importance of convenience, security, and data privacy in customers' preferences for digital banking services in Cameroon. This is in line with global trends, where customers increasingly expect seamless and secure digital experiences from their financial service providers (Kamdjoug et al., 2022; MOHAMMED, 2022). The study also reveals that customers in Cameroon prefer digital banking platforms that offer a range of services, including bill payments, money transfers, and mobile top-ups. This suggests that digital banking providers in Cameroon should offer a diverse range of services to meet customer needs and increase adoption rates. Moreover, the study found that customers in Cameroon value the accessibility of digital banking services, with a preference for platforms that are easy to use and navigate. This highlights the importance of user-centred design and user experience in digital banking service development (Fonchamnyo, 2013).

Overall, customer behaviour and preferences are critical considerations in the development and adoption of digital banking services in Cameroon. By understanding customer needs and preferences, digital banking providers can develop targeted and effective strategies to increase adoption rates and promote financial inclusion.

4.1.6 Impact on financial inclusion and economic development:

Digital banking has emerged as a powerful tool for enhancing financial inclusion and fostering economic development in many countries, including Cameroon. The accessibility and convenience offered by digital banking services can overcome barriers such as distance, time, and cost, enabling previously underserved individuals and businesses to access and utilize financial services. Financial inclusion, which refers to the access to and use of formal financial services, is a crucial aspect of inclusive economic growth. According to a world bank report (2021), Digital banking plays a pivotal role in expanding financial inclusion by providing individuals with access to basic banking services, such as savings accounts, payment services, and credit facilities, even in remote or underserved areas (Bayar et al., 2021). By leveraging digital platforms and mobile technology, digital banking enables individuals to conduct financial transactions, such as sending and receiving money, making bill payments, and accessing credit, without the need for traditional brick-and-mortar banking infrastructure. This has a significant impact on marginalized populations, such as rural communities and low-income individuals, who may have limited physical access to banks (Hammouri et al., 2021)

Furthermore, digital banking can foster entrepreneurship and economic development by offering financial services tailored to the needs of small and medium-sized enterprises (SMEs). SMEs often face challenges in accessing credit from traditional financial institutions due to a lack of collateral or credit history. Digital banking platforms provide innovative solutions such as alternative credit scoring models and quick loan processing, enabling SMEs to obtain financing for business expansion, investment, and working capital (Bayar et al., 2021; Eniola & Entebang, 2015).

In the context of Cameroon, the adoption and expansion of digital banking services have the potential to empower individuals and businesses, particularly those in underserved areas, by providing them with the tools and resources to participate more actively in the formal economy. This, in turn, can drive economic growth, reduce poverty, and promote sustainable development in the country.

4.2 Examination of Challenges and Opportunities in Cameroon's digital banking sector.

Cameroon's digital banking sector presents both challenges and opportunities for financial inclusion. While digital banking can expand access to financial services, certain factors can limit its potential impact. This section will examine the challenges and opportunities for financial inclusion in Cameroon's digital banking sector.

One significant challenge for financial inclusion in Cameroon's digital banking sector is the low level of financial literacy among the population. Many individuals **lack the necessary knowledge and skills** to use digital banking services effectively, limiting their ability to participate in the formal economy (Okello Candiya Bongomin et al., 2018). Additionally, language barriers may exist, as many digital banking platforms are offered in languages other than French or English, Cameroon's official languages(Ferguson, 2012).

Another challenge is the **limited access to infrastructure** in some areas, particularly in rural areas, where network coverage and internet access can be unreliable. This can hinder the use of digital banking services, particularly for those who are more remote (Kouladoum et al., 2022). Also, digital banking introduces new risks, particularly in terms of cyber threats, data breaches, and financial fraud (Tariq, 2018).

Furthermore, there is still a significant portion of the population that is unbanked, which is a significant obstacle to financial inclusion. As of 2021, the World Bank estimates that 40% of Cameroon's population does not have access to formal financial services (Agwu, 2021). Therefore, even if digital banking services become more widely available, there is still a need to expand access to banking services more generally.

Despite these challenges, there are also opportunities for responsible digital innovation on financial inclusion and sustainable development in Cameroon's digital banking sector. For instance, the increasing adoption and **usage of mobile phones in Cameroon**, particularly among younger people, provides a significant opportunity for digital banking services to reach more individuals (Verkijika, 2018). Another opportunity is the ability of digital banking services to offer financial services at a **lower cost** than traditional banking methods. This can reduce the financial burden on individuals and small businesses, potentially increasing their **participation in the formal economy** (Okello Candiya Bongomin et al., 2018). Moreover, digital banking can provide access to financial services in areas where traditional banking services may not be available. For example, mobile banking services can be used to transfer money or make payments without the need to travel to a physical bank branch, which can be particularly beneficial for those living in remote areas (Kouladoum et al., 2022). Thus, to fully leverage the potential of digital banking services to promote *responsible* digital innovation and financial inclusion, efforts must be made to address the challenges and expand access to banking services more generally such as collaboration between stakeholders in a PPCP.

4.3 Investigation of the role of PPCPs in promoting responsible digital innovation in the banking industry in Cameroon.

Public-Private-Community Partnerships (PPCPs) can play a crucial role in promoting responsible digital innovation in the banking industry in Cameroon. By bringing together stakeholders from the public, private, and community sectors, PPCPs can create collaborative platforms for addressing challenges and opportunities in digital banking (Vargas-Hernández & Noruzi, 2010).

One example of such a partnership is the Digital Financial Services (DFS) Working Group, established by the Cameroon Banking Association in 2016. This working group brings together representatives from financial institutions, regulators, telecom companies, and other stakeholders to promote digital financial inclusion and responsible digital innovation in Cameroon (Roessler, 2018). PPCPs can help address some of the challenges facing digital banking in Cameroon. For example, infrastructure limitations in rural areas can be addressed through partnerships between financial institutions and telecom companies to expand network coverage and improve internet connectivity. Similarly, partnerships between banks and community-based organizations can help promote financial literacy and increase awareness of digital banking services among underserved communities. PPCPs can also promote responsible digital innovation by establishing guidelines and standards for data privacy, security, and consumer protection. For example, the BEAC, in collaboration with financial institutions and other stakeholders, has developed regulations for digital financial services to ensure the safety and integrity of digital transactions (Besong et al., 2022).

Overall, PPCPs can be a powerful tool for promoting responsible digital innovation in the banking industry in Cameroon. By leveraging the strengths of different stakeholders and creating collaborative platforms, PPCPs can help address challenges, unlock opportunities, and drive inclusive economic growth this could be seen in the findings that follow from interviews with PPCP stakeholders in Cameroon.

4.4 Presentation and discussion of research findings and results.

The findings from the interviews conducted with stakeholders in the banking industry in Cameroon revealed the significant role of Public-Private-Community Partnerships (PPCPs) in promoting responsible digital innovation. These partnerships create collaborative platforms that bring together stakeholders from the public, private, and community sectors to collectively address challenges and drive positive change in the digital banking sector.

During the interviews conducted with stakeholders, several challenges were identified in the implementation of PPCPs. For instance, a **representative from, a digital banking company(B1)** highlighted the regulatory complexities in the financial sector, stating that *"the regulations are constantly changing, and it's difficult to keep up with them. This can create barriers for collaboration between different stakeholders."* Similarly, a representative from a **community organization(C1)** emphasized the need for capacity building, stating that *"many communities lack the technical skills and resources needed to fully participate in digital innovation initiatives. There needs to be more investment in training and education."*

One key challenge identified by stakeholders was the need for effective coordination and communication among the different stakeholders. A representative from a regulatory authority (RI) highlighted that *"there is often a lack of coordination between the public, private, and community sectors. This can hinder the smooth implementation of PPCPs and limit their effectiveness."* This emphasizes the importance of establishing clear channels of communication and fostering strong partnerships among stakeholders.

Another challenge discussed by stakeholders was the issue of data privacy and security. A representative from a **consumer advocacy group(C2)** emphasized the need for robust data protection measures, stating that *"while digital banking offers convenience, there are concerns about the security of personal and financial data. It is crucial to ensure that appropriate safeguards are in place to protect customer information."* This highlights the importance of addressing data privacy and security concerns to build trust and confidence in digital banking services.

Despite these challenges, stakeholders also highlighted the benefits of PPCPs. For example, a representative from a **public sector organization(R3)** noted that "PPCPs can bring together stakeholders with different perspectives and expertise, leading to more innovative and sustainable solutions*." Similarly, a representative from a **private sector organization** stated that "PPCPs can help to identify and mitigate risks associated with digital innovation, such as data privacy and security concerns."*

One key opportunity identified was the potential for increased financial inclusion. A representative from a **community-based organization** mentioned that *"PPCPs can help reach underserved communities and provide them with access to affordable and convenient financial services. This can contribute to reducing the financial inclusion gap in Cameroon."* This highlights the transformative potential of PPCPs in extending financial services to marginalized populations.

Furthermore, stakeholders emphasized the role of PPCPs in fostering innovation and driving economic growth. A representative from a **digital banking company(B2)** mentioned that *"PPCPs create a collaborative environment where stakeholders can share ideas, resources, and expertise. This collaboration can lead to the development of innovative digital banking solutions that meet the needs of customers and drive economic development."* This highlights the importance of stakeholder collaboration in driving responsible digital innovation.

One of the key insights obtained from the interviews was the importance of collaboration in expanding digital banking services to underserved areas. For instance, a representative from a prominent financial institution shared their experience of partnering with local government agencies and community organizations to extend their digital banking services to remote regions. Through these collaborations, the financial institution was able to leverage existing government infrastructure development initiatives and community networks to overcome infrastructure challenges and reach previously unbanked populations. This not only expanded their customer base but also contributed to financial inclusion by providing access to essential banking services to marginalized communities.

Overall Looking at findings, a representative from a leading **financial institution (B1, B2,.)** highlighted the importance of partnering with government agencies and community organizations to overcome barriers to digital banking adoption. They explained that through these partnerships, they were able to leverage the government's infrastructure development initiatives and community networks to expand their digital banking services to remote areas. This collaboration not only enhanced their market reach but also contributed to financial inclusion by providing access to banking services to previously underserved communities.

Additionally, **A representative from a regulatory body (R1, R2. R3)** mentioned a specific instance where they collaborated with financial institutions and consumer advocacy groups to develop comprehensive guidelines and standards for data protection in the digital banking sector. This collaborative effort aimed to strike a balance between innovation and safeguarding customer interests. The guidelines provided a framework for financial institutions to adopt robust cybersecurity measures and implement responsible data handling practices, thereby instilling customer trust and confidence in digital banking services.

Furthermore, during the interviews **with community representatives (C1, C2.)**, it was evident that PPCPs fostered knowledge sharing and resource mobilization. Community organizations shared their insights into the needs and preferences of their respective communities, which helped financial institutions design tailored digital banking solutions. This collaborative approach resulted in the development of user-friendly interfaces, provide localized language options, and offer innovative financial products that catered to the specific requirements of different communities. This collaborative approach not only enhanced the user experience but also fostered financial inclusion by ensuring that digital banking services were accessible and relevant to diverse population segments.

The interviews also revealed that PPCPs facilitated collective problem-solving in the digital banking industry. Stakeholders from different sectors (R, B, C) came together to address common challenges, such as enhancing cybersecurity measures, improving digital literacy, and promoting responsible financial behaviour. Through collaborative efforts, stakeholders pooled their expertise and resources to devise effective strategies and initiatives. For example, partnerships between financial institutions, educational institutions, and government agencies resulted in the implementation of financial literacy programs targeting vulnerable populations.

Thus, the interviews with stakeholders provided valuable insights into the challenges, opportunities, and benefits associated with PPCPs in the banking industry in Cameroon. These perspectives will be further explored and discussed in the finding’s implication section in the next chapter.

CHAPTER 5: Implication, Conclusions, Recommendations, and Future Research

5.1 Summary of the research findings and their Implications.

The research findings provide valuable insights into the role of Public-Private-Community Partnerships (PPCPs) in promoting responsible digital innovation in the banking industry in Cameroon. These findings have important implications for various stakeholders and offer potential avenues for action and improvement. The following is a detailed summary of the research findings and their managerial and theoretical implications:

Firstly, the study highlights the importance of Collaboration and Knowledge Sharing: The study revealed that PPCPs create collaborative platforms for stakeholders from the public, private, and community sectors to come together and address challenges in the digital banking industry. The interviews with stakeholders highlighted the value of knowledge sharing, resource mobilization, and collective problem-solving within PPCPs. This finding underscores the significance of fostering collaboration and creating a supportive environment for stakeholders to share insights, expertise, and best practices. It suggests that policymakers and industry leaders should encourage and facilitate platforms and initiatives that promote collaboration among stakeholders to drive responsible digital innovation. For example, one stakeholder interviewee mentioned how participating in a PPCP allowed them to learn from their peers, share experiences, and gain a broader perspective on responsible digital innovation practices. This exchange of knowledge and ideas contributed to the development of more effective strategies and solutions.

Secondly, the research findings highlighted the challenges posed by **regulatory complexities** in the implementation of PPCPs. Interviews with stakeholders emphasized the need for harmonizing regulations, aligning interests, and streamlining processes across different stakeholders and sectors. These complexities can hinder the smooth functioning of PPCPs and create barriers to responsible digital innovation. To address this challenge, policymakers and regulators need to work closely with industry stakeholders to develop clear and consistent regulatory frameworks that support the objectives of PPCPs while ensuring consumer protection, data privacy, and financial stability. For instance, one stakeholder interviewee discussed the difficulties they faced in navigating the regulatory landscape when collaborating with multiple partners from different sectors. This experience highlighted the importance of regulatory clarity and coordination to foster an enabling environment for responsible digital innovation.

Thirdly, the research findings underscored the significance of data **privacy and security** in the digital banking sector. Stakeholders expressed concerns about protecting customer data and ensuring secure digital transactions. The interviews revealed the need for robust data protection measures, including encryption, secure authentication, and transparent data handling practices. These measures are crucial for building trust and confidence among customers and stakeholders. To address these concerns, stakeholders emphasized the importance of incorporating data privacy and security as core components of PPCPs. This includes implementing robust data protection policies, conducting regular security audits, and investing in advanced cybersecurity infrastructure. By prioritizing data privacy and security, PPCPs can foster a safe and trustworthy environment for digital banking transactions. For example, a stakeholder interviewee shared their organization's commitment to implementing stringent data protection measures within their PPCP. They emphasized the importance of ensuring the privacy and security of customer data as a foundational element of responsible digital innovation.

Fourthly, Capacity the research findings highlighted the need for **capacity building** among stakeholders involved in PPCPs. Interviews revealed that stakeholders recognized the importance of enhancing their knowledge and skills in digital technologies and responsible innovation. Capacity-building programs can equip stakeholders with the necessary expertise to navigate the rapidly evolving digital landscape, adopt best practices, and effectively contribute to responsible digital innovation in the banking sector. To address this need, stakeholders suggested the development and implementation of targeted capacity-building initiatives, including training programs, workshops, and knowledge-sharing platforms. These initiatives should focus on enhancing digital literacy, promoting ethical and responsible practices, and fostering a culture of continuous learning and innovation. For instance, a stakeholder interviewee emphasized the positive impact of capacity-building programs on their organization's ability to drive responsible digital innovation. They highlighted how training sessions on digital security and ethical practices improved their team's understanding and implementation of responsible digital banking solutions.

Fifthly the research findings indicated that PPCPs have the potential to contribute to **financial inclusion and sustainable development**. The interviews with stakeholders revealed that responsible digital innovation, facilitated through PPCPs, can help bridge the financial access gap by providing underserved populations with access to formal financial services. By leveraging digital technologies and innovative solutions, PPCPs can enable individuals and businesses to participate more actively in the formal economy, access credit, and engage in productive economic activities. For example, one stakeholder interviewee shared their organization's experience in implementing a digital banking solution targeting rural communities. Through the PPCP, they were able to leverage mobile banking technology to reach previously unbanked individuals and provide them with essential financial services. This initiative not only improved financial inclusion but also stimulated economic activities in these communities.

The research findings have theoretical implications for the field of responsible digital innovation in the banking industry. They contribute to existing knowledge by providing insights into the challenges and opportunities in Cameroon's digital banking sector and highlighting the role of public-private community partnerships (PPCPs) in promoting responsible digital innovation. The findings also identify best practices and lessons learned from existing PPCPs, which can enhance theoretical frameworks in this area. Furthermore, the research expands the understanding of how PPCPs can foster financial inclusion and sustainable development. Overall, the findings advance theoretical understanding and lay the groundwork for further research in responsible digital innovation and PPCPs in the banking industry.

Overall, the research findings highlight the transformative potential of PPCPs in promoting responsible digital innovation in the banking industry in Cameroon. The implications derived from these findings call for collaborative efforts among policymakers, regulators, financial institutions, technology providers, and community organizations to establish a conducive ecosystem for PPCPs. This includes addressing regulatory complexities, prioritizing data privacy and security, promoting capacity building, and fostering a culture of collaboration and knowledge sharing. By embracing the opportunities offered by PPCPs and addressing the identified challenges, Cameroon's digital banking sector can thrive, driving financial inclusion, stimulating economic growth, and ultimately improving the overall well-being of individuals and communities. findings also help expands knowledge on challenges, opportunities, and the role of PPCP and contribute to best practices and understanding of fostering financial inclusion and sustainable development.

5.2 Conclusions are drawn from the analysis conducted.

Based on the comprehensive analysis conducted, several robust conclusions can be drawn regarding the effectiveness of Public-Private-Community Partnerships (PPCPs) in promoting responsible digital innovation in the banking industry in Cameroon.

First and foremost, the research findings highlight the crucial role of collaboration and knowledge sharing within PPCPs. The study reveals that PPCPs create collaborative platforms that foster interactions among stakeholders from various sectors, facilitating the exchange of insights, expertise, and best practices. These collaborative efforts contribute to more effective problem-solving, resource mobilization, and knowledge dissemination. By bringing together stakeholders from the public, private, and community sectors, PPCPs establish a foundation for collective action and collaboration in driving responsible digital innovation.

Moreover, the analysis emphasizes the significance of addressing regulatory complexities to ensure the success of PPCPs. The study reveals that navigating complex and fragmented regulatory frameworks poses challenges for PPCPs, hindering their ability to effectively promote responsible digital innovation. Harmonizing regulations, aligning interests, and streamlining processes among different stakeholders and sectors are critical steps toward creating an enabling environment for PPCPs to thrive. Policymakers and regulators must work closely with industry stakeholders to develop clear, consistent, and flexible regulatory frameworks that support responsible digital innovation while ensuring consumer protection, data privacy, and financial stability.

Data privacy and security emerge as key concerns within the digital banking sector, and the research findings emphasize the need for robust measures to address these challenges. Stakeholders highlighted the importance of implementing strong data protection policies, secure authentication mechanisms, and transparent data handling practices. By prioritizing data privacy and security as integral components of PPCPs, trust, and confidence can be built among customers and stakeholders, fostering a secure and trustworthy environment for digital banking transactions.

Furthermore, capacity building emerges as a critical factor in promoting responsible digital innovation. The study reveals that stakeholders recognize the need to enhance their knowledge and skills in digital technologies and responsible innovation practices. Capacity-building initiatives, including training programs, workshops, and knowledge-sharing platforms, can equip stakeholders with the necessary expertise to navigate the evolving digital landscape effectively. By investing in capacity building, PPCPs can ensure that stakeholders have the requisite skills to adopt best practices, implement responsible digital banking solutions, and effectively contribute to the development of the sector.

Finally, the research findings highlight the potential of PPCPs to contribute to financial inclusion and sustainable development. Through responsible digital innovation, facilitated by PPCPs, underserved populations can gain access to formal financial services, enabling them to participate more actively in the formal economy. By leveraging digital technologies and innovative solutions, PPCPs can empower individuals and businesses, providing them with opportunities for economic advancement and entrepreneurship. This, in turn, can contribute to overall economic growth, job creation, and poverty reduction in Cameroon.

Thus, the analysis conducted underscores the transformative potential of Public-Private-Community Partnerships in promoting responsible digital innovation in the banking industry in Cameroon. Collaboration, regulatory harmonization, data privacy and security, capacity building, and the promotion of financial inclusion and sustainable development emerge as key factors that should be addressed to maximize the impact of PPCPs. By recognizing and addressing these aspects, stakeholders can establish an ecosystem conducive to responsible digital innovation, driving the advancement of the digital banking sector and fostering inclusive economic development in Cameroon.

5.3 Recommendations, guidelines for stakeholders, and suggestions for future study.

Based on the findings and conclusions of this dissertation, several recommendations and guidelines can be provided to stakeholders in the banking industry, including government agencies, financial institutions, regulators, community organizations, and consumers, to enhance the effectiveness of Public-Private-Community Partnerships (PPCPs) in promoting responsible digital innovation. These recommendations aim to foster financial inclusion, address challenges, and ensure the sustainable development of the banking sector.

5.3.1 Recommendations to Stakeholders

Government and Regulators:

To foster responsible digital innovation, the government and regulators need to streamline regulations, encourage collaboration, and establish innovation sandboxes. Harmonizing and simplifying regulatory frameworks can create a conducive environment for digital banking innovation. A centralized regulatory body or task force should develop clear guidelines and standards for responsible digital innovation, considering consumer protection, data privacy, and cybersecurity.

Encouraging collaboration between government agencies, regulators, and industry stakeholders is crucial. Regular dialogues, workshops, and forums should be organized to facilitate the exchange of ideas, best practices, and lessons learned. The government can also incentivize and support public-private-community partnerships (PPCPs) through funding mechanisms or tax incentives.

Furthermore, establishing innovation sandboxes or regulatory sandboxes can provide a controlled environment for testing new technologies and business models. This approach allows for experimentation and innovation while addressing regulatory concerns. A dedicated department or task force within the Ministry of Finance or the Central Bank should be responsible for overseeing PPCPs, addressing regulatory challenges, and promoting responsible digital innovation.

Financial Institutions and Technology Providers:

Embracing responsible innovation is crucial for financial institutions in Cameroon's digital banking sector to ensure the successful integration of digital technologies while maintaining ethical practices. By embedding responsible digital innovation as a core value and integrating it into their organizational culture, financial institutions can prioritize data privacy, security, and ethical practices. This involves developing internal policies and guidelines that outline protocols for data handling, implementing robust cybersecurity measures, and conducting regular audits to ensure compliance.

Additionally, collaboration with stakeholders is essential to foster knowledge sharing and resource pooling. Financial institutions should actively participate in PPCPs and engage with government agencies, regulators, technology providers, and civil society organizations to collectively address challenges and share best practices. Furthermore, investing in training and capacity-building programs for employees is vital to enhance digital literacy, cybersecurity awareness, and knowledge of responsible innovation practices. This can be achieved through internal training initiatives, external workshops, and partnerships with academic institutions and industry experts. By establishing dedicated departments or innovation labs focused on responsible digital innovation, financial institutions can harness the expertise of diverse professionals to design and implement innovative solutions that align with responsible practices. Through these efforts, financial institutions in Cameroon can drive sustainable digital transformation, foster financial inclusion, and contribute to the overall growth and development of the country.

Civil Society and Consumers Advocacy Group:

Advocating for consumer protection and promoting financial literacy are essential roles for civil society organizations in the context of Cameroon's digital banking sector. By engaging in advocacy efforts, these organizations can collaborate with government agencies, financial institutions, and regulators to develop and enforce consumer protection regulations. This involves organizing awareness campaigns, conducting research, and advocating for policy changes that prioritize the rights and interests of consumers.

Additionally, promoting financial literacy is crucial in empowering individuals and communities to make informed financial decisions and protect themselves from potential risks. Civil society organizations can provide resources, workshops, and educational initiatives that educate consumers about digital banking services, their benefits, and potential risks. Furthermore, fostering transparency and accountability in the digital banking sector is vital. Civil society organizations can encourage financial institutions to be transparent about their practices, including data handling, security measures, and responsible innovation initiatives. By advocating for the adoption of industry standards for transparency and accountability, civil society organizations can contribute to building trust and ensuring the well-being of consumers in the digital banking sector. For example, a consumer rights organization in Cameroon can collaborate with local communities to organize workshops that cover topics such as data privacy, secure online transactions, and the importance of understanding terms and conditions.

Through these efforts, civil society organizations play a crucial role in safeguarding consumer rights, promoting financial literacy, and fostering responsible practices in Cameroon's digital banking sector.

Consumers:

Consumers play a crucial role in ensuring responsible digital banking practices by educating themselves, practising secure behaviour, and providing feedback. By proactively seeking information from reputable sources and attending financial literacy workshops, consumers can equip themselves with the knowledge needed to make informed decisions about digital banking services. Adopting secure behaviour, such as creating strong passwords, enabling two-factor authentication, and staying vigilant against phishing attempts, helps consumers protect their personal and financial information.

Additionally, actively providing feedback to financial institutions and regulators allows consumers to voice their concerns, suggest improvements, and report any suspicious activities, contributing to the ongoing dialogue around responsible digital banking. By taking these proactive steps, consumers can empower themselves and contribute to the development of a safer and more responsible digital banking environment.

In conclusion, enhancing the effectiveness of PPCPs in fostering responsible digital innovation in the banking sector of Cameroon requires collaborative efforts from multiple stakeholders. Government and regulators should streamline regulations, foster collaboration, and establish innovation sandboxes. Financial institutions should embrace responsible innovation, collaborate with stakeholders, and invest in training and capacity building. Civil society should advocate for consumer protection, promote financial literacy, and foster transparency and accountability. Consumers, on their part, should educate themselves, practice secure behaviour, and provide feedback. By implementing these recommendations, stakeholders can work together to create an environment that fosters responsible digital innovation and contributes to the development of a robust and inclusive digital banking sector in Cameroon.

5.3.2 Guidelines and steps for successful implementation of PPCPs to promote responsible digital innovation.

Successful implementation of Public-Private-Community Partnerships (PPCPs) to promote responsible digital innovation in the banking sector requires careful planning, collaboration, and adherence to specific guidelines. These guidelines aim to ensure clarity of objectives, engagement of key stakeholders, effective governance, resource mobilization, and continuous monitoring and improvement. Here is an elaboration of the guidelines with literature and examples:

First, developing a shared vision is crucial for aligning stakeholders' efforts and driving responsible digital innovation. Research by (Jacobson & Ok Choi, 2008) emphasizes the importance of developing a common understanding and purpose. For example, the government of Cameroon has stressed the significance of collaboration and partnerships between the public and private sectors to foster innovation and generate new prospects for economic growth in the country's digital economy.

Second, engaging key stakeholders is essential for leveraging their expertise and resources. (Proctor, 2007) highlight the need to identify and involve relevant stakeholders in the decision-making process. In the context of the banking sector in Cameroon, major stakeholders may include the Ministry of Finance, the Central Bank of Cameroon, commercial banks, microfinance institutions, fintech companies, and civil society organizations. For instance, the Central Bank of Cameroon has set regulations for mobile money services that require providers to adhere to strong data protection and customer protection standards.

Third, Collaboration and engagement among stakeholders are crucial for harnessing their collective knowledge, expertise, and resources. Regular meetings, workshops, and forums facilitate open dialogue, knowledge sharing, and the generation of innovative ideas.

Fourth, defining stakeholders' roles and responsibilities need to be clearly defined to avoid confusion and ensure effective coordination. This includes identifying the specific tasks and areas of expertise that each stakeholder will contribute to the PPCP.

Fifth, a well-defined governance structure ensures effective coordination and decision-making within the PPCP. (Pongsiri, 2002) emphasizes the importance of establishing a governance framework. This structure may include a steering committee with representatives from each stakeholder group, as well as working groups focusing on specific aspects of digital innovation, such as mobile money services, agent banking networks, or regulatory frameworks.

Sixth, develop a detailed action plan, and roadmap outlines the specific goals, objectives, and timelines of the PPCP. (Harrison & Graham, 2012) highlight the importance of developing a roadmap to ensure focused and effective implementation. The roadmap should be aligned with the shared vision and include clear milestones and performance indicators. The Cameroon Digital Economy Strategic Plan 2020-2025 serves as an example, containing a roadmap for strengthening the country's digital economy with goals for extending broadband access, enhancing digital literacy, and promoting e-commerce.

Seventh, mobilize adequate resources, both financial and non-financial, need to be mobilized to support the implementation of the PPCP. This includes securing funding, forming partnerships, and leveraging existing infrastructure to ensure the smooth execution of initiatives.

Eighth, Data privacy and security are critical for building trust in digital financial services. (Ozili, 2020) emphasizes the importance of strong data protection policies and regulatory frameworks. This can be achieved through establishing consumer protection mechanisms and ensuring compliance with data protection standards. For example, the Central Bank of Cameroon has set regulations for mobile money services that require providers to be licensed and adhere to data protection and customer protection standards.

Ninth fostering innovation is a key objective of PPCPs focused on digital innovation in the banking industry. (Romanova et al., 2018) highlights the importance of collaboration between financial institutions and fintech firms to drive innovation. In Cameroon, fostering innovation could involve initiatives such as hackathons, incubators, and accelerators that bring together entrepreneurs, developers, and investors to create new solutions and business models. For instance, collaborations between traditional banks and fintech startups can lead to the development of innovative digital banking services and products.

Lastly, regularly monitoring and evaluating PPCP's progress is crucial to ensure its effectiveness and make necessary adjustments. Brinkerhoff and Brinkerhoff (2011) stress the importance of monitoring the impact and outcomes of initiatives. This can be done through performance evaluations, stakeholder feedback, and data analysis. Key performance indicators could include the number of new financial products and services, the increase in digital banking adoption, and the level of financial inclusion achieved.

By following these guidelines and steps, stakeholders in the banking sector of Cameroon can effectively implement PPCPs that promote responsible digital innovation. It is important to continuously evaluate and refine these guidelines based on the evolving needs of the industry and the changing digital landscape. In summary, these guidelines could be tabulated and figured out as seen next.

Steps	**Description**	**Example**
1	Establish Clear Objectives	Enhancing financial inclusion, and sustainable economic growth.
2	Identify Key Stakeholders	Government agencies, financial institutions, technology providers, and civil societies
3	Foster Collaboration and Engagement	Open dialogue, trust, knowledge sharing, and the generation of innovative ideas
4	Define Roles and Responsibilities	The government creates a regulatory framework, financial institutions implement responsible banking practices, Civil society organizations advocating consumer protection and privacy rights.
5	Establish Governance Structure	steering committee, to oversee coordination, decision-making, and conflict resolution.
6	Develop an Action Plan	Specific activities, timelines, milestones, and resource requirements
7	Mobilize Resources	Allocate funds, expertise, and technological resources
8	Ensure data privacy and security	frameworks, data protection policies, and consumer protection
9	Foster innovation	collaboration between financial institutions and fintech firms e.g., blockchain and artificial intelligence
10	Monitor and evaluate	Regularly assess progress, measure impact, and make necessary adjustments through performance evaluations and stakeholder feedback

Table 2: concise representation of steps and guidelines to promote responsible digital innovation in Cameroon's banking industry. (Authors own table).

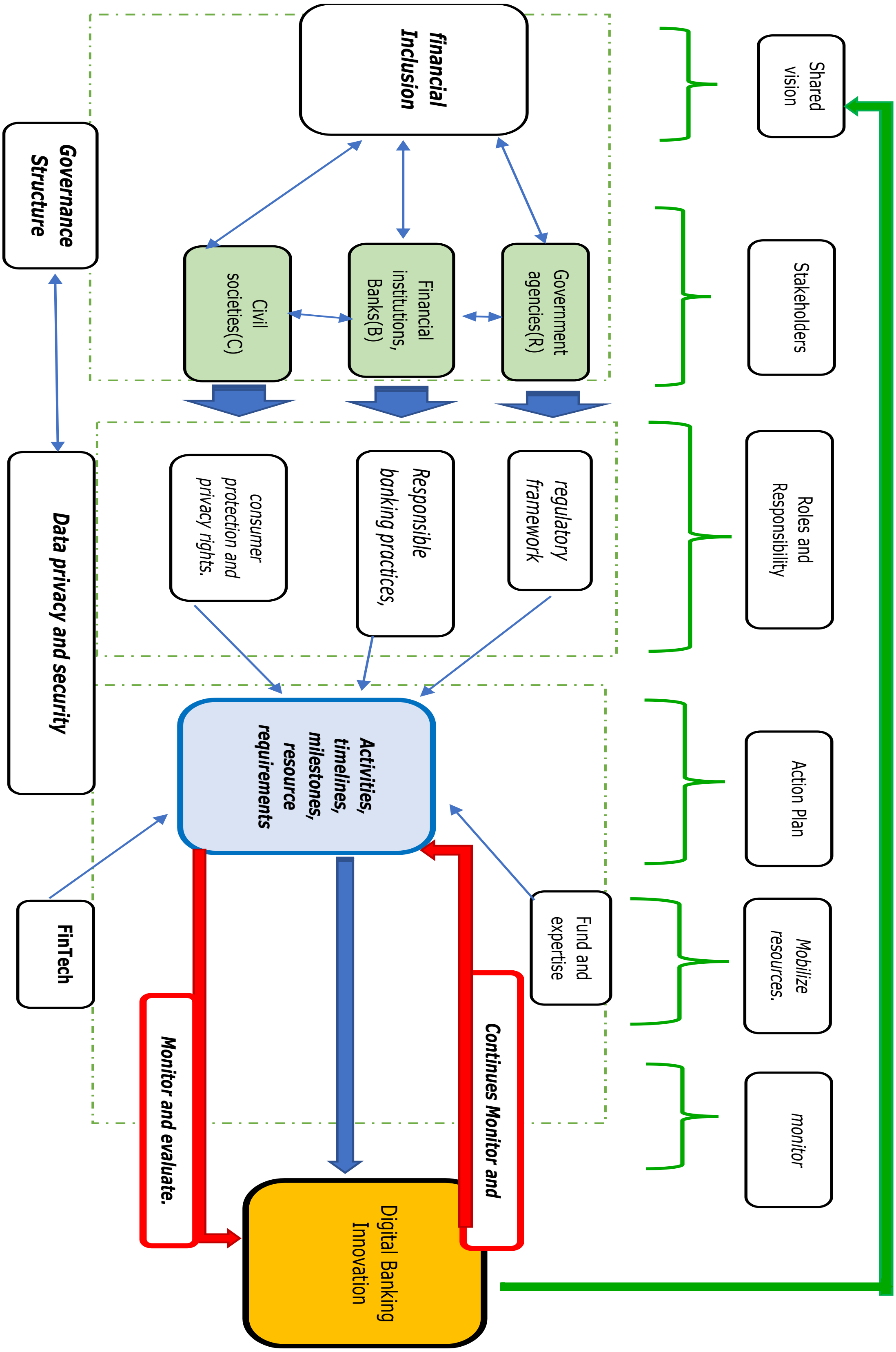


Figure 9: Guide to the successful process of promoting responsible digital innovation in the banking sector through PPCPs s (authors' design).

The diagram demonstrates the logical progression of the steps and highlights that present the successful implementation of PPCPs requires a systematic approach that encompasses various aspects, including objective setting, stakeholder engagement, governance, action planning, resource mobilization, implementation, monitoring, and learning from best practices.

The process of promoting responsible digital innovation in the banking sector through Public-Private-Community Partnerships (PPCPs) involves a series of sequential steps. The process begins with the establishment of clear objectives, which guide the initiatives and ensure a common understanding among stakeholders. The next step is identifying the key stakeholders who can leverage their expertise and resources toward the success of the initiative. Once the relevant stakeholders are identified, fostering collaboration and engagement is the next step. This is important in building a collaborative environment that harnesses the collective intelligence and creativity of stakeholders. The next step is to define the roles and responsibilities of each stakeholder to avoid confusion and duplication of efforts. A governance structure is then established to ensure effective coordination and decision-making within the PPCP. The structure may include a steering committee or task force that oversees the implementation, sets strategic directions, and resolves any conflicts or challenges that arise. Clear lines of communication and decision-making processes should be established to facilitate efficient collaboration.

The next step is to develop an action plan that provides a roadmap for the implementation of responsible digital innovation initiatives. The plan should outline specific activities, timelines, resource requirements, and milestones. It should be flexible enough to accommodate unforeseen circumstances and evolving technologies, ensuring adaptability and agility in execution. Mobilizing resources is crucial for the successful implementation of PPCPs. This includes securing funding, forming partnerships with technology providers, and leveraging existing infrastructure. Stakeholders should collaborate to pool resources, both financial and non-financial, to ensure the smooth execution of initiatives. Conducting small-scale pilot projects allows for the testing and refinement of responsible digital innovation initiatives. Pilots provide an opportunity to assess the feasibility, effectiveness, and scalability of initiatives before full implementation. Lessons learned from pilot projects can inform the scaling up of successful initiatives and help identify necessary adjustments.

Establishing monitoring and evaluation mechanisms is essential for tracking the progress and impact of the PPCP. Key performance indicators should be defined to measure the success of initiatives. Regular feedback from stakeholders, impact assessments, and data analysis can provide valuable insights for decision-making and continuous improvement. Studying and learning from successful PPCPs and responsible digital innovation initiatives implemented elsewhere can inform the design and implementation of initiatives in the banking sector. Best practices, lessons learned, and success factors can be adapted and applied to the specific context, taking into consideration the unique challenges and opportunities in the local market. A commitment to continuous improvement is crucial for the long-term success of PPCPs. Stakeholders should actively seek feedback, monitor emerging trends and technologies, and adapt strategies to address evolving challenges and opportunities. Regular evaluation and learning cycles ensure that the PPCP remains relevant, effective, and responsive to the changing needs of the digital banking industry.

5.3.3 Suggestions for future research related to the topic.

This dissertation opens avenues for further research to deepen the understanding of responsible digital innovation and PPCPs in the banking industry. The following suggestions can guide future studies. Future research related to the topic of PPCPs and responsible digital innovation in the banking sector of Cameroon can focus on a variety of areas. One potential avenue for further research could be to investigate the impact of different types of PPCPs on consumer behaviour and financial literacy. Additionally, researchers could explore the role of education and training programs in promoting responsible digital innovation in banking, as well as the effectiveness of regulatory frameworks in promoting the use of PPCPs.

Another potential area for future research could be to examine the intersection of PPCPs with emerging technologies, such as artificial intelligence and blockchain, and their potential impact on digital innovation in banking. Additionally, researchers could investigate the potential of PPCPs to promote financial inclusion and access to banking services for underserved populations, such as those in rural areas or with limited financial literacy.

By pursuing these future research directions, the knowledge and understanding of responsible digital innovation and PPCPs in the banking industry can be further expanded, leading to more effective strategies, policies, and technologies that drive financial inclusion and sustainable development.

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