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**UNLOCKING SUSTAINABLE INNOVATIONS: SUCCESS FACTORS FOR GROWING E-
HEALTH STARTUPS IN KENYA**

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148876

**DISSERTATION SUBMITTED IN PARTIAL FULFILMENT OF THE
REQUIREMENTS FOR THE DEGREE OF MASTER OF BUSINESS
ADMINISTRATION- HEALTH CARE MANAGEMENT AT STRATHMORE
UNIVERSITY**

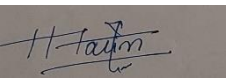


STRATHMORE UNIVERSITY BUSINESS SCHOOL

2025

DECLARATION

I solemnly declare that this research thesis, titled "*Unlocking Sustainable Innovations: Success Factors for Growing E-Health Startups in Kenya*", represents my original intellectual work. This thesis has not been previously submitted, either in whole or in part, for any academic degree or qualification at Strathmore University or any other institution. All sources of information, data, and ideas used in this document have been appropriately cited and referenced in accordance with academic standards.

Signed: 
Salim Hussein Mwatamaa
12/5/2025

Supervisor


Dr. Ben Ngoye



ABSTRACT

The rapid advancement of digital health technologies presents significant opportunities to transform healthcare delivery, particularly in low- and middle-income countries (LMICs) such as Kenya. E-Health startups increasingly leverage these innovations to improve healthcare accessibility, quality, affordability, and efficiency. However, many of these ventures in Kenya encountered challenges in scaling and sustaining operations beyond the pilot stage. This study examined the success factors that influence the growth of e-health startups in Kenya through the lens of the Service–Technology–Organization–Finance (STOF) model. A qualitative phenomenological approach was adopted, involving in-depth interviews with founders, senior leaders, and unit managers from nine purposefully selected e-health startups across Kenya. Data were transcribed, organized in NVivo, and analysed thematically. The findings revealed that growth is driven by four interdependent domains. Service factors such as accessibility, affordability, user-centred design, and trust-building mechanisms enhanced user adoption and retention. Technological factors—including interoperability, data security, user-friendly interfaces, inclusive and adaptable digital infrastructure—enabled scalability and efficiency. Organizational factors, particularly visionary leadership, strong team culture, talent development, and strategic partnerships, were essential for sustaining innovation. Financial factors such as financial access & functional revenue models, diversified income strategies and pricing flexibility, financial management & long-term sustainability balance, determined long-term viability. The study concludes that the success of Kenya’s e-health startups depends on their ability to integrate user-focused service design, inclusive and secure technologies, resilient organizational structures, and sustainable financial strategies. Strengthening these four domains enhances scalability and supports Kenya’s broader digital-health transformation agenda. The study recommends further quantitative research to validate these findings across a wider range of e-health ventures and comparable LMIC settings.

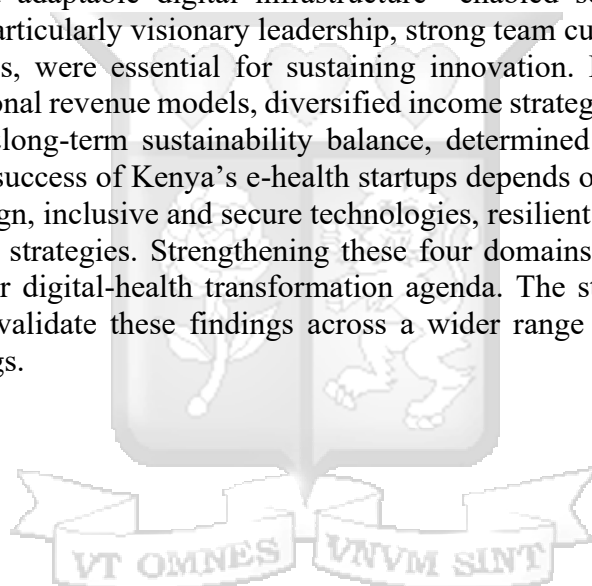


TABLE OF CONTENTS

DECLARATION.....	ii
ABSTRACT.....	iii
LIST OF FIGURES	vii
LIST OF TABLES	viii
LIST OF ABBREVIATIONS	ix
ACKNOWLEDGEMENT.....	x
DEDICATION.....	xi
CHAPTER ONE	1
INTRODUCTION.....	1
1.1 Background Information.....	1
1.1.1 The STOF Model in Technological Service Innovations.....	2
1.1.2 E-Health Start-Ups.....	3
1.1.3 Success for E-Health Start-Up	3
1.2 Problem Statement.....	4
1.3 Research Objectives.....	5
1.4 Research Questions	5
1.5 Scope of Study	6
1.6 Significance of the Study	7
CHAPTER TWO	8
LITERATURE REVIEW	8
2.1 Introduction.....	8
2.2 Theoretical Review.....	8
2.2.1 Resource-Based View (RBV)	8
2.2.2 Diffusion of Innovations (DOI) Theory.....	10
2.2.3 Integration of RBV and DOI for Growing E-Health Startups	11
2.3 Empirical Review	11

2.3.1 Global insights	11
2.3.2 LMIC and Regional Perspectives	13
2.3.3 Cross-Sectoral Lessons from Kenya	14
2.4 Research Gap	15
2.5 Conceptual Framework.....	17
2.5.1 Operationalization of the conceptual frame work	18
CHAPTER THREE	20
RESEARCH METHODOLOGY	20
3.1 Introduction.....	20
3.2 Research Design.....	20
3.3 Population and Sampling	20
3.3.1 Study population	20
3.3.1 Sampling Technique	22
3.3.2 Respondent Size.....	22
3.4 Data Collection Methods	23
3.5 Data Analysis.....	24
3.6 Research Quality	25
3.6.1 Validity and Reliability.....	25
3.7 Ethical Consideration	26
CHAPTER FOUR.....	28
PRESENTATION OF RESEARCH FINDINGS.....	28
4.1 Introduction.....	28
4.1.1 Profile of Respondents.....	28
4.2 Key themes on success factors for growing of e-Health startups in Kenya	29
CHAPTER FIVE	45
DISCUSSION, CONCLUSION, AND RECOMMENDATIONS.....	45
5.1 Introduction.....	45

5.2 Discussion.....	45
5.2.1 Service Factors.....	45
5.2.2 Technological Factors.....	47
5.2.3 Organizational Factors.....	48
5.2.4 Financial Factors.....	49
5.3 Conclusions.....	50
5.4 Strengths and Limitations of the Study	51
5.5 Recommendations	52
REFERENCES.....	54
APPENDICES.....	62
Appendix A: Interview Guide.....	62
Appendix B: participant information & Informed consent form.....	65
Appendix C :List of Ehealth Startup in Kenya.....	70
Appendix D; Study Budget	72
Appendix E: study work plan.....	73
Appendix F: ethical clearance.....	74
Appendix G: NACOSTI Permit.....	75
Appendix G: Turnitin Report.....	76

LIST OF FIGURES

Figure 1: Conceptual Framework	18
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LIST OF TABLES

Table 1: Summary of Research Gaps.....	16
Table 4.1: Profile of Study Respondents.....	29
Table 4.3 Summary of key findings themes by STOF Domain.....	45



LIST OF ABBREVIATIONS

CAGR-Compound Annual Growth Rate

CFS- Critical success factors

DOI- Diffusion of innovation

E-HEALTH– Electronic health

EMR- electronic medical record

EHR- electronic health records

GDP- Gross domestic product.

ICT- Information and Communication Technology

NACOSTI -National Commission for Science Technology and Innovation.

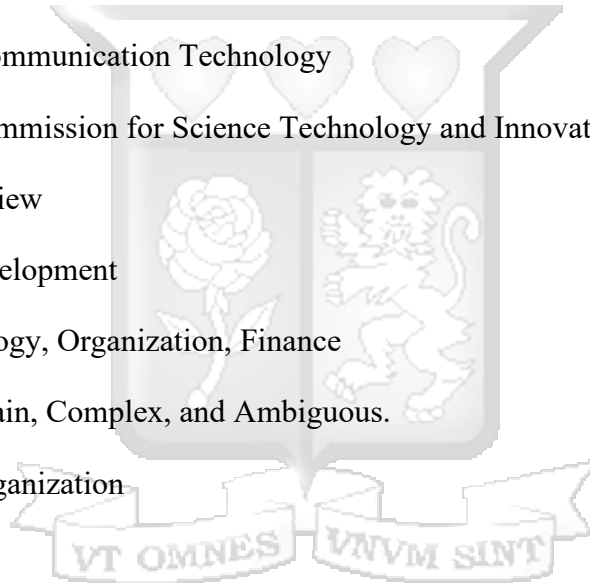
RBV- Resource Based View

R&D -Research and Development

STOF- Service, Technology, Organization, Finance

VUCA- Volatile, Uncertain, Complex, and Ambiguous.

WHO -World Health Organization



ACKNOWLEDGEMENT

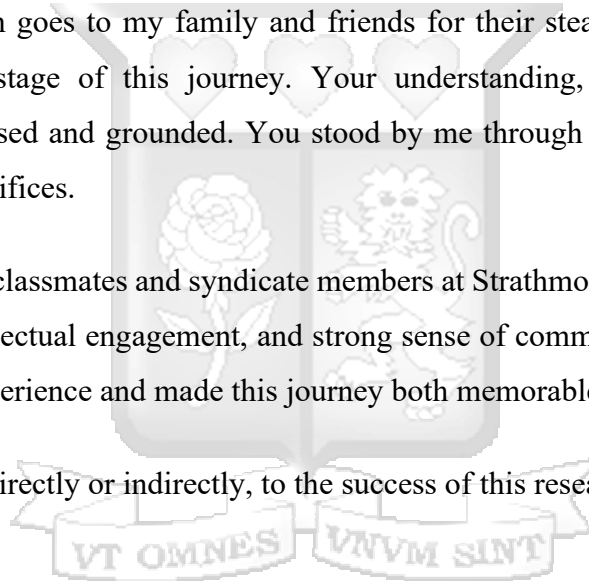
First and foremost, I give all thanks and praise to the Almighty Allah, whose grace, mercy, and countless blessings have guided me throughout my life. From the inception to the completion of this research, it is through His divine power and favour that this work has come to fruition.

I extend my sincere gratitude to my supervisor, Dr. Ben Ngoye, for his invaluable guidance, patience, and unwavering support. His mentorship was not only academic but also personal—marked by a fatherly dedication to nurturing growth and excellence. His commitment to shaping future leaders is truly inspiring, and I am honoured to have benefited from his wisdom.

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I am also thankful to my classmates and syndicate members at Strathmore Business School for the shared experiences, intellectual engagement, and strong sense of community. Your collaboration enriched my learning experience and made this journey both memorable and fulfilling.

To all who contributed, directly or indirectly, to the success of this research—thank you.



DEDICATION

I dedicate this work to my beloved parents, Hussein Salim Mwatasa and Mwanasiti Mohamed Juma. Your selfless sacrifices, unwavering support, and deep belief in the value of education laid the foundation for this achievement. You put aside your own career aspirations to ensure I had the opportunity to learn and grow; and I want you to know it was not in vain.

I carry your legacy with pride, and I am committed to honouring it in all that I do.



CHAPTER ONE

INTRODUCTION

1.1 Background Information

Healthcare systems globally are undergoing rapid transformation driven by the integration of digital technologies that promise to enhance access, quality, and efficiency of care delivery (Kruk, et al., 2018). Yet, despite this technological progress, low- and middle-income countries (LMICs) continue to face persistent health system challenges such as limited access to care, workforce shortages, and high service costs, that hinder progress toward universal health coverage (WHO, 2024a). Sub-Saharan Africa bears the heaviest burden, accounting for 24% of the global disease load while hosting only 3% of the global health workforce (Africa CDC, 2024). Kenya's healthcare system mirrors these challenges but also stands out as one of Africa's most dynamic innovation environments. Guided by vision 2030, the Kenya Digital Health Policy (2020–2030), and the recent launch of its “Silicon Savannah,” the country has emerged as a leading hub for e-health innovation. Kenya has made significant strides in adopting digital health solutions, driven by a growing tech-savvy population and a vibrant startup ecosystem. A recent report ranks it second in Africa's startup ecosystem and among the top 100 emerging ecosystems globally (Muathe, et al., 2020).

E-health, defined as the secure and cost-effective use of information and communication technologies (ICT) in health and health-related fields (WHO, 2016), has therefore emerged as a critical tool for expanding access and addressing systemic inefficiencies. Recent studies show increasing adoption of e-health innovations such as telemedicine, electronic medical records, and mobile health (mHealth) platforms in Kenya, which have improved efficiency, data management, and continuity of care (Njoroge, et al., 2017). During the COVID-19 pandemic, 83% of Kenyan physicians reported increased use of telemedicine, and 91% indicated their intention to continue its use in the future (Onsongo S. , Kamotho, Wit, & Lowrie, 2023) Moreover, digital health platforms such as M-TIBA have been implemented in Kenya as innovative health financing tools designed to reduce out-of-pocket payments and expand access to essential healthcare services (Awosiku, et al., 2025) .Nonetheless, many of these ventures continue to struggle to scale or sustain

their operations, echoing regional and global trends where over 80% of digital health startups fail to move beyond the pilot stage (Chakraborty, et al., 2023; Ibeh, et al., 2025)

Kenya's e-health landscape exemplifies both opportunity and fragility, as many e-health startups face complex barriers related to funding, interoperability, data privacy, and fragmented health regulations (Onsongo, et al., 2023). These constraints underscore the need to understand what drives the successful scaling of such innovations within Kenya's unique regulatory and socio-economic environment.

1.1.1 The STOF Model in Technological Service Innovations

The Service–Technology–Organization–Finance (STOF) model, initially developed by Bouwman and colleagues to analyze mobile service innovations, provides a robust framework for understanding the success and sustainability of technology-driven enterprises (Nyakaisiki, 2012). The model posits that a business model's success depends on the strategic alignment and interaction of four domains: service, technology, organization, and finance (Bouwman, et al., 2008).

The service domain focuses on value creation and user satisfaction, emphasizing how innovative solutions meet customer needs. The technology domain encompasses the digital infrastructure that supports scalable, reliable, and secure service delivery. The organization domain refers to internal capabilities such as leadership, human capital, and partnerships, which influence operational effectiveness. Finally, the finance domain addresses the sustainability of funding mechanisms and revenue models, ensuring that innovations can thrive beyond initial development stages (Bouwman, et al., 2008).

In the context of eHealth startups, the STOF model provides a structured lens for examining how these ventures balance innovation with sustainability in environments characterized by regulatory complexity, limited financing, and evolving technological ecosystems. The model's holistic nature enables researchers and policymakers to analyze how interdependencies among service delivery, technological capability, organizational readiness, and financial strategy influence the overall success of health-tech innovations (Kraus et al., 2022).

However, while the STOF framework has been widely applied in telecommunications and other ICT-driven sectors, its application in digital health entrepreneurship; especially within sub-Saharan Africa, remains limited (Mengiste et al., 2023). Most existing studies have concentrated on technical adoption and regulatory barriers, often overlooking how these four domains interact to determine the scalability and sustainability of e-health ventures (Ibeh et al., 2025). In Kenya, where digital health startups are rapidly emerging, empirical research grounded in the STOF framework is scarce. There is limited understanding of how the STOF model can be contextualized to capture the unique dynamics influencing e-health startup growth in Kenya's digital health ecosystem.

Accordingly, this study adopts the STOF model as the guiding framework to identify and analyze the key success factors for growing e-health startups in Kenya. By integrating the service, technology, organization, and finance dimensions, the research contributes to extending the STOF model into a new sectoral and geographical context while providing practical insights for entrepreneurs, investors, and policymakers seeking to strengthen the country's digital health innovation landscape

1.1.2 E-Health Start-Ups

Startups are typically young companies, often less than five years old, that introduce a unique product or service not previously implemented or adopt a distinctive approach or mindset that sets them apart from others (Haapalainen, 2021). According to Reis “a startup is a human institution designed to create a new product or service under conditions of extreme uncertainty” (Reis, 2011).

For this study, an e-Health startup is operationally defined as a new venture that aims to develop innovative healthcare services or information systems through digital technologies, operating in conditions of significant uncertainty.

1.1.3 Success for E-Health Start-Up

Santisteban & Mauricio defined a successful startup in terms of providing products and/or services well-received in the market, achieving profitability, scalability, and repeatability, creating jobs, and transforming the way people accomplish tasks (Santisteban & Mauricio, 2017). Reis et al.,

defined success in terms of the number of customers, customer satisfaction, timely delivery within agreed timeframes, minimal bureaucracy, staff satisfaction, and the achievement of targeted goals (Reis, 2017).

This study draws on both definitions to define growth success as creating a product or service that meets the needs of the customer and being able to adapt and change direction quickly based on customer feedback, giving the firm a sustained competitive edge in the industry and ensuring profitability and returns to the investors.

1.2 Problem Statement

Despite the rapid growth of Kenya's digital health ecosystem, many e-health startups continue to face scalability and sustainability challenges (Onsongo, et al., 2023). Numerous initiatives have been launched to improve healthcare access through mobile health (mHealth), telemedicine, and digital record systems, yet most remain at pilot stage or collapse within a few years (Njoroge, et al., 2017) (Muathe, et al., 2020). While previous studies have explored the adoption of digital health technologies and the regulatory or infrastructural constraints surrounding them, there remains limited empirical evidence on success factors for growing e-health startups in Kenya and achieving sustainability.

Theoretically, the Service–Technology–Organization–Finance (STOF) model provides a comprehensive framework for understanding how technological service innovations achieve success through the alignment of service value, digital capability, organizational readiness, and financial sustainability (Bouwman, et al., 2008). However, most existing studies applying the STOF model have focused on telecommunications or general ICT enterprises (Mengiste et al., 2023). Its application to healthcare entrepreneurship; particularly in low- and middle-income contexts such as Kenya; remains under-examined (Chakraborty, et al., 2023). This presents a theoretical gap, as the model has not been empirically contextualized to capture how these four domains interact to influence startup growth in the digital health sector, where social value creation and public health objectives coexist with market and regulatory complexities.

Addressing this gap is not only theoretically important but also policy-relevant and economically urgent. Kenya's Vision 2030 and the Digital Health Policy (2020–2030) position innovation and

technology as key enablers of universal health coverage and economic growth. Understanding the success factors for growing e-health startups can therefore inform government strategies for digital health integration, guide investors toward sustainable business models, and strengthen local entrepreneurial ecosystems.

Accordingly, this study seeks to identify and understand the success factors for growing e-health startups in Kenya through the lens of the STOF model. By analyzing the interplay among service, technology, organizational, and financial factors, the research contributes to filling both the theoretical and empirical gaps while providing actionable insights for policymakers, entrepreneurs, and health-sector stakeholders.

1.3 Research Objectives

The main objective of this study was to identify and understand the relative influence of the success factors for growing e-Health startups in Kenya.

The specific objectives of this study are:

- i. To assess the relative influence of service factors on the growth of e-Health startups in Kenya
- ii. To explore the relative influence of technology factors on the growth of e-Health startups in Kenya
- iii. To assess the relative influence of organization factors on the growth of e-Health startups in Kenya
- iv. To identify the relative influence of financial factors on the growth of e-Health startups in Kenya

1.4 Research Questions

The main research question is, what are the relative influences of the success factors for growing e-Health startups in Kenya?

The specific research questions are:

- i. What is the relative influence of service factors on the growth of e-Health startups in Kenya?
- ii. How do technological factors influence the growth of e-Health startups in Kenya?
- iii. How do organizational factors influence the growth of e-Health startups in Kenya?
- iv. What is the relative influence of financial factors in the growth of e-Health startups in Kenya?

1.5 Scope of Study

This study focuses on identifying and understanding the success factors that drive the growth of e-health startups in Kenya, covering both national and regional contexts, with emphasis on urban and peri-urban areas where digital health innovation ecosystems are most active. The analysis is guided by the Service–Technology–Organization–Finance (STOF) model, which examines how service value, technological capability, organizational capacity, and financial sustainability interact to determine startup growth and long-term viability.

The study is confined to e-health startups, with particular attention to those that have progressed beyond the pilot stage and are actively expanding their operations: that is, startups considered successful according to the adapted definition applied in this research. It excludes traditional healthcare providers, such as hospitals and clinics that do not integrate digital service components, as well as non-digital enterprises operating in unrelated sectors.

A qualitative research design was employed, involving in-depth interviews with senior leaders, entrepreneurs, and unit managers from selected e-health startups who are directly involved in strategic operations and decision-making. Participants were purposively selected to ensure rich, experience-based insights. Data from these respondents provide an in-depth understanding of how the four STOF dimensions collectively influence startup growth, performance, and sustainability within Kenya's emerging digital health landscape.

1.6 Significance of the Study

This study holds significance on theoretical, practical, and policy fronts.

Theoretically, the study contributes to existing literature on digital health entrepreneurship by extending the application of the Service–Technology–Organization–Finance (STOF) model to the Kenyan context. While the model has been extensively applied in telecommunications and general ICT sectors, its use in e-health innovation within low- and middle-income countries remains limited. By analyzing how the four STOF dimensions interact to influence startup growth, this study provides an empirically grounded understanding of how business model components align to ensure sustainability in resource-constrained environments. The findings therefore advance theoretical understanding of technology-driven service innovations in healthcare

Practically, the study provides actionable insights for entrepreneurs, startup founders, and investors operating within Kenya’s growing digital health ecosystem. By identifying and understanding the factors that determine scalability and sustainability, the results can guide strategic decision-making on organizational design, partnership models, financial planning, and technology adoption. The findings also help early-stage startups anticipate common challenges and adopt practices that enhance long-term viability.

From a policy perspective, the study aligns with Kenya’s Vision 2030 and the Kenya Digital Health Policy (2020–2030), both of which emphasize innovation and technology as enablers of Universal Health Coverage (UHC) and economic growth. The insights generated can support government agencies, regulators, and development partners in designing frameworks that foster innovation, facilitate interoperability, and improve access to sustainable digital health solutions. Ultimately, the study strengthens the evidence base for integrating entrepreneurship and innovation into Kenya’s health-sector transformation agenda.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents a review of existing literature relevant to the study's focus on identifying the success factors for growing e-health startups in Kenya. It establishes the theoretical foundation of the research by examining key concepts, frameworks, and previous studies related to e-health innovation, startup growth, and the challenges faced by digital health ventures in low- and middle-income countries. The review also highlights gaps in existing knowledge, particularly within the Kenyan context, to underscore the need for this study and to justify the adopted research approach.

While drawing from both global and regional perspectives, the chapter situates the discussion within Kenya's emerging digital health ecosystem to provide contextual relevance. It concludes by identifying the conceptual and empirical gaps that inform the development of the study's framework and by linking these insights to the study's objectives.

2.2 Theoretical Review

Success factor research posits that organizational success depends on specific variables; known as *success factors* that can be strategically influenced to achieve desired outcomes. These factors form the central focus of entrepreneurial management during the formulation, development, and execution of strategies that foster the growth and sustainability of e-health startups (Lux & Kempf, 2021).

This section examines two theoretical frameworks: The Resource-Based View (RBV) and The Diffusion of Innovations (DOI) Theory, which provide complementary perspectives into the internal and external factors influencing the successful growing of e-health startups in Kenya.

2.2.1 Resource-Based View (RBV)

The Resource-Based View (RBV), originally advanced by J. Barney, posits that a firm's sustained competitive advantage arises from its ability to effectively leverage resources that are valuable, rare, inimitable, and non-substitutable (VRIN) (Barney, 1991) (Barney, 2001). These resources may include both tangible assets—such as financial capital, infrastructure, and technology—and intangible assets such as knowledge, skills, leadership, and innovative culture. The theory emphasizes that firm sustainable success is contingent upon the effective acquisition, development,

and deployment of resource to create value and outperform competitors (Alvarez & Busenitz, 2001).

The RBV is highly relevant to this study because it provides a theoretical lens for understanding how internal resources and capabilities drive the growth success and sustainability of e-health startups. Startups that effectively mobilize their technological capacity, innovative service designs, strong leadership and culture, and sound financial management can create unique value that competitors cannot easily replicate. In Kenya's rapidly evolving e-health sector, where startups often face funding limitations, regulatory uncertainty, and intense competition, the ability to transform internal resources into distinctive competencies is central to long-term growth (Teece, et al., 1997) (Grant, 1996)

This theory closely relates to all four domains of the Service–Technology–Organization–Finance (STOF) model. It underpins the *Service* domain by emphasizing the creation of superior value through innovation; the *Technology* domain by recognizing technological capability as a strategic asset; the *Organization* domain by highlighting human capital, leadership, and partnerships; and the *Finance* domain by acknowledging resource mobilization and sustainability. Through this integration, the RBV complements the STOF framework by explaining how internally driven capabilities collectively enhance startup growth and competitive advantage within Kenya's digital health ecosystem (Bouwman, et al., 2008) (Mengiste, et al., 2023).

While the RBV provides valuable insights into how internal resource optimization drives competitive advantage, it tends to overlook the influence of external environmental factors that shape how innovations emerge, diffuse, and grow within dynamic societies (Kraaijenbrink, Spender, & Groen, 2010). In rapidly evolving ecosystems; such as Kenya's digital health sector, factors like policy shifts, technological adoption rates, and market receptiveness play a critical role in determining innovation success. This limitation necessitates the integration of complementary perspectives, such as the Diffusion of Innovations (DOI) Theory, to provide a more holistic understanding of how both internal capabilities and external contextual factors influence the success and sustainability of e-health startups

2.2.2 Diffusion of Innovations (DOI) Theory

The Diffusion of Innovations (DOI) Theory, introduced by Everett M. Rogers, explains how new ideas, technologies, or practices spread through a social system over time. The theory identifies five key attributes that influence the adoption of an innovation: *relative advantage*, *compatibility*, *complexity*, *trialability*, and *observability*. It further categorizes adopters into five groups—*innovators*, *early adopters*, *early majority*, *late majority*, and *laggards*—each with distinct characteristics that shape the diffusion process. (Rogers, 1962; 2003)

This theory is particularly relevant to the study of success factors for growing e-health startups in Kenya, where digital health innovations must be accepted by healthcare professionals, patients, and institutions within a complex social and regulatory environment. The DOI framework provides insights into how the perceived benefits of digital health solutions, their alignment with existing healthcare systems, and the readiness of users and organizations affect adoption and scalability. For instance, innovations with high perceived usefulness and ease of integration are more likely to achieve widespread adoption and sustainability (Greenhalgh, et al., 2004).

The DOI theory also aligns with the Service–Technology–Organization–Finance (STOF) model. It informs the *Service* domain by explaining how end-user adoption influences service value creation; the *Technology* domain by examining the perceived usefulness and ease of use of technological innovations; the *Organization* domain by emphasizing leadership and communication strategies that facilitate diffusion; and the *Finance* domain by relating adoption rates to revenue sustainability. Through this integration, the DOI complements the STOF framework by explaining how external diffusion dynamics shape the growth and sustainability of e-health startups in Kenya (Bouwman, 2008) (Limburg, et al., 2011).

While DOI effectively addresses external factors influencing innovation adoption, it tends to neglect internal organizational capabilities that are critical for sustaining innovation (MacVaugh & Schiavone, 2010) Integrating DOI with RBV provides a more holistic understanding of both the internal and external factors affecting the success of e-Health startups.

2.2.3 Integration of RBV and DOI for Growing E-Health Startups

The integration of the Resource-Based View (RBV) and the Diffusion of Innovations (DOI) theory offers a comprehensive framework for analyzing the multifaceted factors that influence the success of e-health startups in Kenya. This combined approach provides a holistic understanding of both internal and external dimensions of innovation growth. From the RBV perspective, the focus is on how startups leverage strategic resources such as proprietary technologies, skilled human capital, and strategic partnerships to create and sustain competitive advantages. From the DOI perspective, emphasis is placed on how these innovations diffuse within Kenya's healthcare ecosystem, highlighting the importance of cultural compatibility, stakeholder collaboration, and the perceived benefits that drive adoption. By integrating these two perspectives, the study captures the dynamic interplay between internal resource capabilities and external adoption processes that collectively determine the success factors for growing e-health startups in Kenya.

2.3 Empirical Review

This section critically reviews existing empirical studies on the growth and sustainability of e-health startups, focusing on how service, technology, organizational, and financial factors influence their performance. It draws from both global and low- and middle-income contexts, with special attention to Kenya, to identify patterns, contextual complexities, and knowledge gaps relevant to the country's digital-health ecosystem. The review is organized into three thematic areas: global and cross-industry insights, which provide broad lessons on innovation and startup success; evidence from low- and middle-income and regional contexts, which highlight contextual challenges and enablers of digital-health growth; and cross-sectoral lessons from Kenya, which explore transferable experiences from related innovation ecosystems. The insights derived here form the empirical foundation for this study and guide its analytical focus on the four domains of the Service–Technology–Organization–Finance (STOF) model.

2.3.1 Global insights

Global evidence consistently highlights the interplay between organizational capacity, technological adaptability, financial viability, value-driven services, and enabling ecosystems as determinants of startup success.

Jeamwittayanukul and Vuthisopon, in a quantitative study involving 230 participants in Thailand, identified government policy, startup support systems, human capital, market conditions, finance, and cultural influences as key drivers of health-tech growth (Jeamwittayanukul & Vuthisopon, 2022).

In contrast, Chakraborty and colleagues conducted a qualitative exploration of critical success factors for startups in the e-health domain using in-depth interviews with 16 respondents in India. The study identified knowledge and communication processes among actors, revenue generation capacity, technological robustness, regulatory management, and value-driven services as key enablers of success (Chakraborty, et al., 2023). However, the findings were generalized across all startup stages and did not distinguish between early-stage and growth-stage dynamics, limiting their contextual applicability.

Together, these studies suggest that internal resource capabilities, communication effectiveness, and stakeholder collaboration jointly shape growth outcomes—an observation consistent with the Resource-Based View (RBV) and the Diffusion of Innovations (DOI) theories.

Building on these insights, Pfitzer and colleagues conducted a systematic review synthesizing findings from 36 studies specifically focused on growth-stage digital health companies, thereby addressing gaps in earlier research. The authors identified 52 success factors grouped into internal (products, operations, business models, team composition) and external (customers, regulators, investors, partners, competitors) categories. Financial viability, market demand, regulatory alignment, data security, and system interoperability emerged as the most critical factors. Notably, subcategories of digital health technologies demonstrated different priorities: operational software companies emphasized affordability and integration, whereas digital therapeutics firms prioritized regulatory approval (Pfitzer et al, 2024).

These findings reinforce the STOF model's service, technological, and financial dimensions, and align with the RBV's focus on strategic resource mobilization and capability development. Simultaneously, they echo the Diffusion of Innovations (DOI) theory by illustrating how factors such as perceived value, regulatory alignment, and user confidence shape the adoption and scaling of digital health technologies. However, while these global studies provide a robust foundation for understanding e-health startup growth, most originate from high- and upper-middle-income economies. Consequently, they overlook the structural and contextual dynamics that characterize

low-resource environments like Kenya, where infrastructural deficiencies, fragmented regulatory regimes, and evolving user behaviors complicate innovation diffusion. Addressing these contextual disparities therefore requires an integrated analytical approach that combines the internal resource logic of RBV, the external adoption lens of DOI, and the multi-dimensional business framework of STOF to better explain the success and sustainability of e-health startups in such settings.

2.3.2 LMIC and Regional Perspectives

Empirical research from low- and middle-income countries (LMICs) provides deeper insight into how resource constraints, contextual adaptation, and policy environments influence the sustainability of digital health ventures.

Shuvo and colleagues, through a systematic review of 14 studies across Africa and Asia, identified six determinants of e-health implementation success: alignment with national health priorities, establishment of enabling environments, integration with existing information systems, strong stakeholder partnerships, implementation readiness, and user trust (Shuvo, et al., 2015).

While this work was among the first to consolidate operational success factors in LMICs, it overlooked the long-term financial viability and organizational capability that underpin sustainable scaling—limitations later echoed by Sundin, and colleagues (Sundina, Callan, & Mehta, 2016)

Sundin and colleagues analyzed 35 entrepreneurial health ventures and 17 telemedicine and mHealth case studies to examine why many digital ventures in developing countries fail to scale. Their findings revealed seven recurring barriers: financial instability, undefined revenue models, limited technological literacy, inadequate managerial expertise, weak customer relationships, cultural and accessibility barriers, and regulatory fragmentation (Sundina, Callan, & Mehta, 2016). These challenges highlight that while technical feasibility is important, sustainability depends equally on managerial, financial, and relational competencies—factors that align with the STOF model's organizational and financial dimensions and RBV's focus on leveraging internal capabilities.

Building on these insights, Ibeh and colleagues examined scaling strategies among healthcare startups in emerging markets, introducing a platform-based model grounded in technological integration, stakeholder collaboration, and scalable business processes. Case studies from Kenya,

Nigeria, and Uganda demonstrated that interoperability, cost-efficiency, and trust-based partnerships foster both financial viability and social impact (Ibeh, et al., 2025).

Similarly, Labrique and colleagues synthesized lessons from multiple LMIC case studies to identify five critical practices for scaling digital health solutions: responding to unmet needs, engaging and training stakeholders, ensuring technical simplicity and adaptability, aligning innovations with policy frameworks, and securing long-term funding (Labrique, et al., 2018).

Together, these studies provide converging evidence that successful e-health innovation in LMICs depends on the ability to balance internal resource optimization with external ecosystem engagement.

However, despite these valuable contributions, much of the regional evidence remains fragmented and generalizable only to limited contexts. Few studies systematically link internal resource strategies (as posited by RBV) with the diffusion mechanisms that drive user and institutional adoption (as proposed by DOI). Moreover, the absence of integrative models—such as the STOF framework that connects service design, technology capability, organizational structure, and financial sustainability—limits comprehensive understanding of how these factors interact to influence growth.

Therefore, to fully explain digital health innovation in countries like Kenya, empirical research must adopt a multi-theoretical and multi-dimensional approach that captures both the internal and external dynamics shaping startup scalability and sustainability.

2.3.3 Cross-Sectoral Lessons from Kenya

Insights from related industries in Kenya further illuminate transferable strategies for e-Health growth. Okiyo and Kihara, examining the effect of organizational capabilities on fintech providers' growth through a descriptive cross-sectional study, found that leadership quality, resource management, and marketing capacity were strongly associated with success (Okiyo & Kihara, 2024). These capabilities mirror RBV's emphasis on non-substitutable human and relational capital and directly map onto the Organization and Finance domains in the STOF model. The fintech experience suggests that, regardless of sector, ventures that combine strong leadership with efficient resource use, strategic market positioning, and adaptability to regulatory and customer

environments are more likely to achieve sustainable growth: an insight particularly relevant for digital health entrepreneurs in Kenya and comparable LMIC contexts.

Collectively, these insights affirm that internal resources such as leadership, human capital, and innovation culture (as emphasized by RBV) must be complemented by external ecosystem linkages and user adoption dynamics (as posited by DOI) for startups to thrive. For Kenya's e-health startups, this implies that success depends not only on the design and deployment of digital solutions but also on the ability to build user trust, secure partnerships with public and private institutions, and adapt to evolving regulatory and financial landscapes. Integrating these insights within the STOF framework provides a holistic lens for understanding how service value, technological adaptability, organizational capacity, and financial sustainability interact to drive e-health startup growth and resilience in Kenya

2.4 Research Gap

The reviewed empirical evidence shows that while studies across global, regional, and national contexts identify common success drivers; such as strong leadership, technological adaptability, effective partnerships, and sustainable financing, research remains fragmented and unevenly distributed. Global literature has largely concentrated on high-income countries with mature digital infrastructures, providing limited insight into how similar success factors operate in low- and middle-income countries (LMICs) with more constrained ecosystems. Regional studies in sub-Saharan Africa and other LMICs have begun addressing operational and sustainability challenges but often examine them in isolation, without integrating the service, technology, organization, and finance dimensions that jointly shape startup growth.

In Kenya, much of the available empirical evidence comes from related sectors such as fintech, where innovation success has been linked to leadership capability, regulatory adaptability, and strategic resource management. While these findings offer transferable lessons, they do not specifically address the unique dynamics of digital health entrepreneurship, where public-private partnerships, health regulation, and patient trust play defining roles. Consequently, there remains a critical contextual and theoretical gap: limited empirical understanding of how internal resources and external ecosystem factors interact to influence the growth and sustainability of e-health startups. This study therefore applies the Service-Technology-Organization-Finance (STOF) model supported by insights from the Resource-Based View (RBV) and Diffusion of Innovations

(DOI) theories to provide an integrated framework for analyzing the success factors driving e-health startup growth within Kenya's evolving digital health landscape.

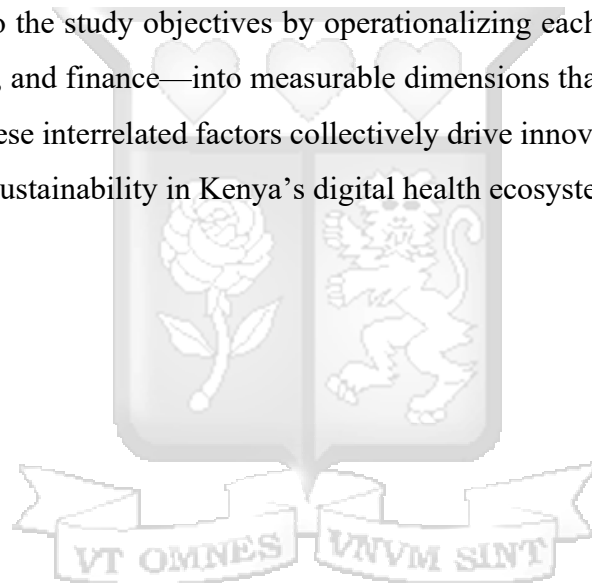
Table 1: Summary of Research Gaps

Gap Area	Existing Focus	Gap Identified	How This Study Addresses It
Context-Specific Research	Evidence largely from high-income countries, multi-country LMIC analyses, or broader Sub-Saharan African case studies.	Lack of Kenyan-specific insights into regulatory, cultural, and infrastructural dynamics.	Focuses exclusively on Kenya's e-Health startup ecosystem to capture context-specific success factors.
Growth Phase Focus	Many studies emphasize early-stage or pilot projects.	Limited insights into factors critical for scaling and sustainability beyond the pilot phase.	Concentrates on growth-stage startups, addressing long-term viability and expansion.
Theoretical Integration	Prior work applies operational or technological lenses, often using STOF, RBV, or DOI in isolation.	Limited integration of holistic frameworks that capture resources, innovation adoption, and market adaptation together.	Integrates STOF with RBV and DOI for a comprehensive, multi-dimensional perspective.
Interplay of Success Factors	Existing literature treats factors such as service design, technology, organization, and finance independently.	Lack of understanding of how these success factors interact to influence startup growth.	Examines the dynamic interplay between service value, technological adaptability, organizational capacity, and financial sustainability.
Strategic Solutions for Overcoming Barriers	Challenges like funding instability, regulatory hurdles, and weak integration with healthcare systems are well-documented.	Limited empirically validated, Kenya-specific strategies for overcoming these obstacles.	Identifies and analyzes practical strategies used by Kenyan startups to navigate these barriers.

Qualitative, Context-Rich Evidence	Many studies rely on surveys or secondary data, offering broad but shallow insights.	Scarcity of in-depth qualitative evidence capturing lived experiences of entrepreneurs and stakeholders.	Uses in-depth qualitative interviews to provide nuanced, context-rich insights into Kenya's digital health ecosystem.
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2.5 Conceptual Framework

The conceptual framework for this study integrates insights from the Resource-Based View (RBV) and the Diffusion of Innovations (DOI) theories through the Service–Technology–Organization–Finance (STOF) model. It illustrates how internal capabilities and external adoption factors interact to influence the growth and sustainability of e-health startups in Kenya. The framework links the theoretical foundations to the study objectives by operationalizing each STOF domain—service, technology, organization, and finance—into measurable dimensions that shape startup success. It further highlights how these interrelated factors collectively drive innovation scalability, financial viability, and long-term sustainability in Kenya's digital health ecosystem.



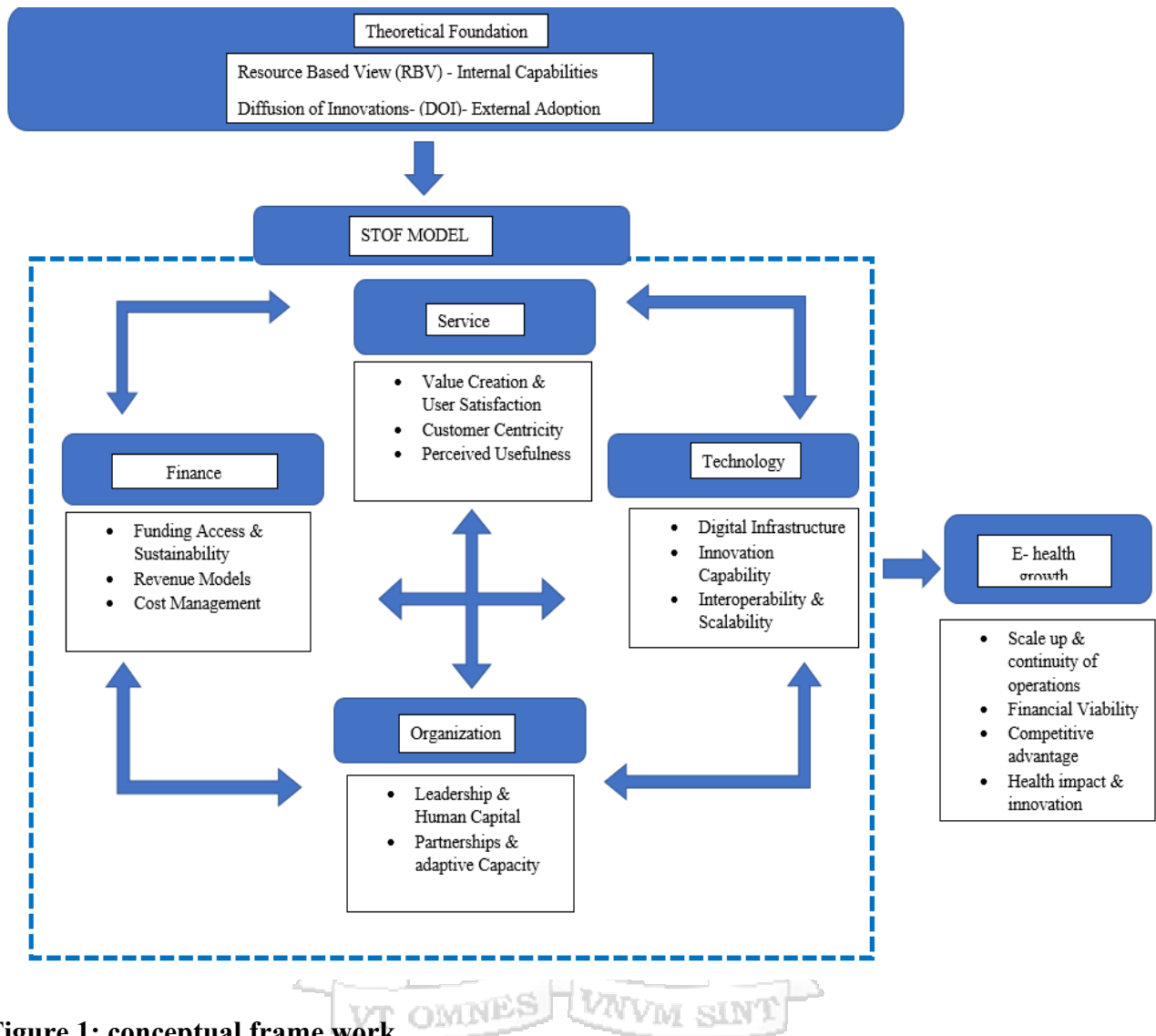


Figure 1: conceptual frame work

2.5.1 Operationalization of the conceptual frame work

This study adopts an integrated conceptual framework grounded in the Service–Technology–Organization–Finance (STOF) model and supported by the Resource-Based View (RBV) and the Diffusion of Innovations (DOI) theories. The framework illustrates how the interaction between internal capabilities and external ecosystem factors shapes the growth and sustainability of e-health startups in Kenya. It operationalizes the four STOF dimensions—Service, Technology, Organization, and Finance—as the key domains through which success factors are examined in alignment with the study objectives.

The Service dimension focuses on how startups create and deliver value through innovative, user-centered health solutions. It relates to service quality, customer satisfaction, perceived usefulness, and the overall value proposition of e-health platforms. The Technology dimension captures the digital infrastructure and innovation capability that enable service scalability, data integration, and efficiency. It emphasizes system reliability, interoperability, and adaptability to user needs.

The Organization dimension examines the internal structures, leadership, human capital, and partnerships that influence strategic decision-making, learning, and coordination within startups. It reflects the importance of organizational readiness and relational capital in driving innovation success. The Finance dimension explores access to funding, revenue generation, financial planning, and investment sustainability as critical determinants of long-term viability and scale-up potential.

The integration of RBV and DOI provides theoretical depth to this framework. RBV explains how startups leverage valuable, rare, inimitable, and non-substitutable (VRIN) resources—such as intellectual capital, leadership expertise, and technological capabilities—to achieve competitive advantage. Conversely, DOI explains how innovation acceptance, user adoption, and ecosystem diffusion shape the external growth trajectory of e-health solutions. Together, these perspectives enrich the STOF framework by linking internal resource optimization with external innovation adoption dynamics.

The conceptual framework (Figure 1) therefore links the four STOF dimensions to the study's overarching goal: to identify and understand the success factors that drive the growth of e-health startups in Kenya. Each dimension corresponds to a specific research objective—examining how service value, technological capability, organizational capacity, and financial sustainability interact to influence startup growth. This integrated model guided the study's design, data collection, and thematic analysis.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines the research methodology employed to explore the success factors for growing e-Health startups in Kenya. It provides a detailed description of the research design, philosophical underpinnings, data collection methods, and analysis techniques adopted to address the research problem.

3.2 Research Design

This study aimed to investigate the factors that drive the success of growing e-Health startups in Kenya. While such factors remain largely underexplored in low- and middle-income countries like Kenya, existing literature highlights a significant knowledge gap in identifying and understanding these elements (Mengiste, et al., 2023). To bridge this gap, the research employed a cross-sectional observational phenomenological qualitative design grounded in the social constructivist paradigm. This philosophy recognizes that reality is not singular but is shaped by diverse social contexts, allowing for the exploration of varied perspectives and experiences to deepen understanding of social phenomena (Amineh & Asl, 2015). This approach emphasizes that knowledge is constructed through social interaction, interpretation, and shared understanding (Vygotsky, 2012). The phenomenological perspective was particularly appropriate because it seeks to uncover how individuals experience and interpret real-world phenomena; in this case, the dynamics of service and value creation, organizational capability, technological adaptation, and financial sustainability within Kenya's digital health ecosystem (Creswell & Poth, 2018).

3.3 Population and Sampling

3.3.1 Study population

The study population consisted of e-Health startups in Kenya that have progressed beyond the pilot phase and are actively operating in the market. These startups were leveraging digital technologies to address healthcare challenges, such as improving accessibility, affordability, and efficiency of healthcare services. At the time of the study, Kenya hosted around 36 digital health ventures that were looking up to scale, reflecting a dynamic and rapidly growing e-Health landscape (healthtechalpha, 2024).

To gather in-depth insights, the study engaged key informants from purposefully selected e-Health startups, including: founders' (entrepreneurs), senior leadership and unit managers.

Each key informant represented a distinct e-Health startup, which ensured a diverse range of experiences and perspectives. By engaging individuals who held critical roles in decision-making and implementation processes, the study grounded its findings in the lived realities (hence the constructivism paradigm) of those directly involved in the e-Health sector. These firsthand experiences and insights formed the foundation for understanding the success factors that contributed to the growth and sustainability of e-Health startups in Kenya.

This approach not only strengthened the academic rigor of the study but also generated practical insights that were relevant and valuable to entrepreneurs, policymakers, and other stakeholders within the broader e-Health ecosystem.

Inclusion Criteria

Participants and organizations included in the study met the following conditions:

- i. The startup had been operational for at least two years.
- ii. The startup had moved beyond the pilot phase and demonstrated active market engagement
- iii. Participants were senior leaders, entrepreneurs, or unit managers from e-Health startups operating in Kenya.
- iv. Participants were actively involved in strategic decision-making, business development, or operational management within their organizations.

Exclusion Criteria

The following individuals and organizations were excluded from the study:

- I. Startups still in the conceptual or pilot phase.
- II. Participants not directly involved in strategic or operational management.
- III. Startups that had been operational for less than two years.
- IV. Individuals without direct involvement in the strategic or operational management of e-Health startups.

Unit of Observation

The unit of observation was the individual, specifically, senior leaders, entrepreneurs, and unit managers within e-Health startups. Their personal experiences, perspectives, and insights formed the primary data collected through in-depth interviews.

Unit of Analysis

The unit of analysis for the study was the e-Health startup itself. The research focused on identifying patterns, themes, and critical success factors following the STOF framework with a focus on the collective input of individual participants.

3.3.1 Sampling Technique

The study employed a purposive sampling technique to select participants who met the defined inclusion criteria, ensuring that the data collected was relevant, contextually rich, and aligned with the study objectives. Purposive sampling is widely used in qualitative research because it enables the researcher to intentionally select participants who possess specific characteristics, experiences, or knowledge that can provide deep insights into the phenomenon under investigation (Etikan, Musa, & Alkassim, 2016)

Additionally, snowball sampling was used to identify other potential participants through referrals from initial respondents, which is particularly useful when studying specialized populations such as e-health startup founders and senior managers who may not be easily accessible (Naderifar, Goli, & Ghaljaie, 2017). This combination ensured diversity of perspectives while maintaining relevance to the study's focus on e-health startup growth and sustainability in Kenya. The list of selected e-health startups is provided in Appendix C.

3.3.2 Respondent Size

In qualitative phenomenological research, sample size is guided not by statistical calculation but by the principle of thematic saturation, which refers to the point at which no new ideas or themes emerge from the data (Mason, 2010). In this study, thematic saturation was reached after the eighth interview, when subsequent responses began to reflect patterns already identified from earlier participants. To ensure completeness, one additional interview was conducted, bringing the total number of respondents to nine key informants, after which no new information emerged, confirming that saturation had been achieved.

The selected respondents comprised founders, senior leaders, and unit managers of e-health startups in Kenya that met the inclusion criteria. Each participant represented a distinct startup, ensuring that the unit of analysis—the e-health enterprise—was considered independently. This approach was appropriate for the phenomenological design, which seeks to capture the depth and diversity of individual experiences rather than numerical representation.

A smaller yet information-rich sample was therefore methodologically sound and efficient given the relatively homogeneous nature of the target population and the study's focus on understanding rather than generalization. This is consistent with prior methodological evidence showing that saturation in qualitative health research typically occurs between 9 and 17 interviews (Hennink & Kaiser, 2022) and some qualitative health studies achieve adequate thematic depth with 6 to 12 interviews (Vasileiou, et al., 2018). Accordingly, the chosen sample size provided sufficient breadth and depth of insights while maintaining analytical rigor within Kenya's digital health innovation context.

3.4 Data Collection Methods

Data for this study were collected through semi-structured in-depth interviews, which are widely used in phenomenological research to explore participants' lived experiences, perceptions, and meanings related to a phenomenon (Kallio, Pietilä, Johnson, & Kangasniemi, 2016). This method allowed for flexibility in probing and clarification, enabling participants to describe their experiences of growing and sustaining e-health startups in their own terms while maintaining consistency across interviews through a structured guide.

An interview guide was developed based on the study objectives and the four domains of the Service–Technology–Organization–Finance (STOF) model. The guide was pre-tested with one participant to ensure clarity, relevance, and flow of questions before being used in the main data collection process. Interviews were conducted between April and June 2025 either face-to-face or virtually via secure video conferencing platforms, depending on participant availability and preference. Each interview lasted approximately 45 to 60 minutes and was conducted in English.

With participants' informed consent, all interviews were audio-recorded to ensure accurate capture of responses and later transcribed verbatim for analysis. Field notes were also taken to document non-verbal cues, contextual details, and emerging reflections. The use of multiple data sources:

recordings, transcripts, and field notes, enhanced the credibility and dependability of the data (Lincoln & Guba, 1985). The combination of semi-structured interviewing and phenomenological inquiry enabled deep exploration of participants' subjective realities, consistent with the study's constructivist orientation.

3.5 Data Analysis

Data analysis in this study followed a thematic approach consistent with phenomenological research principles, focusing on identifying, analyzing, and interpreting patterns of meaning within participants' lived experiences (Braun & Clarke, 2006). The process aimed to capture both the shared and unique perspectives of e-health startup founders, managers, and leaders on the factors influencing their ventures' growth and sustainability.

After data collection, all audio recordings were transcribed verbatim and carefully reviewed alongside field notes to ensure completeness and contextual accuracy. Transcripts were imported into NVivo qualitative analysis software to facilitate systematic coding, organization, and retrieval of data. NVivo was used as a tool to manage and visualize relationships among codes, themes, and sub-themes while maintaining an audit trail of analytical decisions.

The analysis proceeded through several iterative stages. First, the researcher engaged in familiarization, reading and re-reading transcripts to gain an in-depth understanding of participants' experiences. Second, initial codes were generated inductively from the data and deductively guided by the four domains of the Service–Technology–Organization–Finance (STOF) model. Third, related codes were grouped to form themes that reflected key patterns and relationships across the dataset. These themes were then reviewed, refined, and defined to ensure they accurately represented participants' perspectives and aligned with the study objectives.

The phenomenological orientation of the study guided the researcher to focus on participants' lived meanings rather than merely describing behaviors or frequencies. Reflexivity was maintained throughout the analysis to ensure that the researcher's interpretations remained grounded in the participants' narratives rather than personal assumptions. The final themes were organized in alignment with the STOF framework to illustrate how service, technology, organizational, and financial dimensions collectively influence the growth and sustainability of e-health startups in Kenya. The findings were presented using narrative descriptions and illustrative quotes from

respondents to provide nuanced insights whilst highlighting the similarities and differences among participants and startups.

3.6 Research Quality

3.6.1 Validity and Reliability

Validity and reliability are essential for ensuring the quality and credibility of research findings. Validity refers to how accurately a research instrument measures the intended information to answer the research question, while reliability pertains to the consistency of results when the same phenomenon is measured multiple times (Taherdoost, 2016).

To ensure the validity of the study, the researcher conducted a pilot test of the interview guide prior to the main data collection phase. This pilot was carried out with representatives from e-health startups that met the study's inclusion criteria, however, these were not included in the main analysis. The purpose of this process was to assess the clarity, relevance, and appropriateness of the interview questions in relation to the research objectives. Feedback from the pilot informed necessary adjustments to the wording, flow, and structure of the guide, ultimately enhancing its ability to elicit rich, meaningful data aligned with the study's aims. This step helped ensure that the research instrument accurately captured the perspectives and lived experiences of the target participants.

To strengthen the reliability of the study, the researcher adopted a deliberate strategy of respondent diversification. Participants were selected from a variety of e-Health startups, representing a range of roles, organizational sizes, and stages of growth. Efforts were also made to include individuals with diverse backgrounds in terms of age, gender, and areas of expertise. This diversity allowed for a broader spectrum of viewpoints and contributed to the consistency of findings across different organizational contexts. By capturing recurring themes across varied perspectives following the STOF framework, the study enhanced the credibility and trustworthiness of its conclusions.

Additionally, all interviews followed a semi-structured format guided by the same thematic framework, which allowed for both comparability across interviews and flexibility to explore unique insights. Audio recordings, detailed field notes, and verbatim transcription further ensured accuracy and consistency in data handling. Collectively, these measures supported a rigorous and transparent research process, enhancing the overall reliability and validity of the findings.

3.7 Ethical Consideration

The research upheld the highest ethical standards to protect the rights, safety, and well-being of all participants throughout the study. The specific ethical considerations were as follows:

Participants were fully informed about the purpose, objectives, methods, and any potential risks or benefits involved in the study. They voluntarily agreed to participate by signing a consent form, either physically or by signing, scanning, and sending a copy to the principal investigator in cases where virtual interviews were conducted. No participant was coerced or misled into participating, and they retained the right to withdraw from the study at any point without facing any penalties.

Privacy and Confidentiality

The research safeguarded participants' privacy and identities. All personal and sensitive information collected remained confidential and was used strictly for the purposes outlined in the study. Data were anonymized during transcription and securely stored on password-protected computers in restricted-access rooms to prevent unauthorized access. No identifying information was shared in publications or reports without explicit participant consent.

Beneficence

The study aimed to maximize potential benefits for both participants and society, while minimizing any possible harm. The researcher stayed alert to any unexpected risks or discomforts and addressed them promptly. Every effort was made to ensure that the research contributed positively to the understanding of success factors for growing e-Health startups in Kenya.

Respect for Participants

The study respected the dignity, rights, and values of all participants by treating them fairly and equitably. There was no discrimination or exploitation based on age, gender, race, ethnicity, religion, socioeconomic status, or any other factor. The input and contributions of all participants and stakeholders were acknowledged and deeply valued.

Ethical Approval and Licensure

The researcher obtained ethical approval from the Strathmore University Institutional Ethics Review Committee and secured a research license from the National Commission for Science,

Technology, and Innovation (NACOSTI). These steps ensured the study complied with all relevant ethical guidelines and legal requirements.

Transparency and Feedback

Study findings were made available to participants who expressed interest. A summary of the results was shared with them as a gesture of transparency and appreciation for their meaningful involvement in the research process.



CHAPTER FOUR

PRESENTATION OF RESEARCH FINDINGS

4.1 Introduction

This chapter presents the results of the study exploring the success factors that drive the growth of e-health startups in Kenya. The findings are organized according to the four domains of the Service–Technology–Organization–Finance (STOF) model, which guided both the research objectives and the interview guide. Each domain captures the main themes and sub-themes that emerged from participants’ perspectives. Quotations are provided verbatim to illustrate key insights and ensure authenticity of voice.

4.1.1 Profile of Respondents

A total of nine (9) key informants participated in the study, each representing a unique e-health startup. Participants included founders, chief executive officers, and senior managers actively involved in strategic or operational decision-making. Table 4.1 summarizes their characteristics while maintaining anonymity for confidentiality.

Table 4.1: Profile of Study Respondents

Respondent Code	Role/Position	Type of Startup	Location	Years in Operation
Interviewee 1	Founder & CEO	Telemedicine	Nairobi	4
Interviewee 2	Unit Manager	Mobile Health (mHealth)	Kisumu	3
Interviewee 3	Co-Founder	Health Systems Management Solutions	Mombasa	5
Interviewee 4	Co-Founder	Blood Service Information System	Nairobi	4
Interviewee 5	Senior Manager	Telemedicine	Nakuru	6
Interviewee 6	Technical Lead	Digital Health Records Provider	Eldoret	5
Interviewee 7	Managing Director	Pharmacy & Telehealth	Nairobi	4
Interviewee 8	general manager	Insurtech Management	Nairobi	3
Interviewee 9	Unit Manager	e-Consultation System	Nairobi	2

Participants represented startups at different growth stages, most operating between two and six years, and primarily concentrated in urban or peri-urban innovation hubs.

4.2 Key themes on success factors for growing of e-Health startups in Kenya

4.2.1 Service Factors

Service emerged as a foundational driver of user acquisition, retention, and long-term sustainability for e-health startups in Kenya. Two major themes were identified under this domain: (i) value proposition and customer-centric solutions, and (ii) customer engagement and feedback mechanisms. Across these themes, four recurring sub-themes: accessibility and affordability, quality and reliability, user trust, and proactive communication, consistently shaped how service offerings were designed and delivered.

Value Proposition and Customer-Centric Solutions

Startups emphasized that a strong and relevant value proposition was central to their growth strategies. This theme reflected how service features were intentionally aligned with user needs, demand patterns, and contextual constraints.

A primary focus for e-health startups was ensuring that services remained accessible and affordable, particularly for cost-sensitive and underserved populations. Respondents emphasized that digital health solutions must reflect the socioeconomic realities of Kenyan users, many of whom face financial and geographic barriers to care. As such is affordability, whether through low consultation fees, the use of generic medications, or the design of systems that function on low-bandwidth networks, was consistently positioned as a core element of the value proposition.

One manager highlighted this commitment:

“We offer healthcare that is accessible and affordable to all. We are trying to educate Kenyans that, yes, you can use generic medication — and it still works.” (Interviewee 2, Unit Manager, Kisumu)

To ensure affordability aligned with user expectations, several startups conducted feasibility assessments and market surveys during the early development stages. These assessments helped founders determine users’ willingness to pay and adjust services accordingly. As one co-founder explained:

“...you come up with an idea... the first thing is to conduct a feasibility [study]... to test its viability — whether your customer or client would be willing to pay.” (Interviewee 3, Co-Founder, Mombasa).

Another respondent further emphasized that affordability was not only about pricing but also about reducing the indirect burdens of accessing care, such as time and transportation costs:

“For us, accessibility also means saving the patient the trip to the facility. If someone in a rural area can talk to a doctor with just a basic phone, that is affordability in real terms.” (Interviewee 5, Senior Manager, Nairobi)

Together, these perspectives illustrate that for e-health startups, accessibility and affordability extend beyond price considerations to include service design choices, infrastructural adaptability, and practical cost-saving benefits for end-users.

Furthermore, respondents emphasized that service quality and reliability were indispensable to building user confidence and sustaining long-term engagement. Startups sought to differentiate themselves by integrating technology that directly addressed enduring operational pain points within Kenya’s healthcare system such as; manual documentation errors, slow turnaround times, and inconsistent service delivery.

One CEO illustrated how technology-driven features strengthened reliability:

“Our system has the ability to read handwritten notes... Claims processed through our technology save 12 to 15% of the total claim pay-out as it curbs rejections.” (Interviewee 1, Founder & CEO, Nairobi)

Such innovations were not only technological upgrades, but purposeful solutions designed to eliminate inefficiencies that previously constrained healthcare providers and insurers. Respondents noted that when digital tools reduced errors, improved workflow speed, or enhanced clinical documentation, users perceived the service as more dependable, thereby increasing adoption and satisfaction.

Another respondent highlighted the consistency achieved through automated processes:

“Automation has really improved our turnaround time. Patients get responses faster, and clinicians don’t have to repeat the same tasks over and over.” (Interviewee 4, Co-founder, Nairobi)

Service reliability was also strengthened through strategic partnerships with pharmacies, hospitals, laboratories, and insurance companies. These collaborations expanded service coverage, improved continuity of care, and signaled credibility to users who were initially hesitant to trust digital solutions.

As one manager explained:

“When users see that we work with recognized pharmacies and insurance companies, they feel safer using our platform. It shows that the service is legitimate.” (Interviewee 7, Managing Director, Nairobi)

Collectively, these strategies demonstrate that e-health startups viewed quality and reliability not as isolated objectives but as outcomes of technology integration, operational efficiency, and collaborative ecosystem building—all of which were essential for competing in Kenya’s evolving digital health landscape

Customer Engagement and Feedback Mechanisms

The second theme reflected the centrality of ongoing engagement in shaping user experience, strengthening trust, and informing service refinement.

A central sub-theme was proactive communication using multiple channels. Startups relied on multi-channel communication—including SMS reminders, follow-up calls, email, and social media—to keep users informed and connected.

“We use social media for that — it really connects with the younger generation.” (Interviewee 5, Senior Manager, Nakuru)

“We also use SMS and call reminders to let patients know about their appointments... It’s a simple way to show that we care.” (Interviewee 6, Unit manager, Eldoret).

Follow-up communication was also used as a quality assurance mechanism, enabling providers to monitor outcomes and adjust services where necessary:

“Since 2022, we’ve been doing follow-up calls for our patients after treatment, reviewing them if they haven’t really improved.” (Interviewee 9, Unit Manager, Nairobi).

Another prominent sub-theme that emerged within customer engagement and feedback mechanisms was the central role of user trust—a critical determinant of retention in digital healthcare, where physical interaction with providers is minimal. Respondents emphasized that trust was not built through technology alone, but service designed through consistent, personalized, and empathetic engagement that reassured users of confidentiality, reliability, and genuine care.

One founder highlighted the pivotal role of confidentiality in fostering long-term user loyalty:

“Our users stay because they trust the confidentiality of consultations. Once trust is built, retention becomes natural.” (Interviewee 1, Founder & CEO, Nairobi)

Participants noted that proactive communication strategies—such as follow-up calls, check-ins, and progress reviews—not only improved clinical outcomes but also signaled attentiveness, thereby deepening trust. As one general manager explained:

“Since 2022, we’ve been doing follow-up calls for our patients after treatment, reviewing them if they haven’t really improved.” (Interviewee 4, Co-founder, Nairobi)

These personalized efforts reassured users that the digital platforms were not transactional, but rather extensions of caring, supportive healthcare relationships. The combination of responsiveness, confidentiality, and continuity of care created a strong perception of reliability, which respondents described as essential for user retention.

Trust therefore emerged as the cumulative result of secure platforms, consistent engagement, and demonstrated concern for patient outcomes—all of which enabled digital health startups to overcome initial skepticism and sustain user commitment in Kenya’s evolving e-health landscape.

4.2.2 Technology Factors

Technology emerged as a vital enabler of scalability, operational efficiency, and innovation for e-health startups in Kenya. Two major themes were identified under this domain: (i) technology and innovation as a strategic enabler, and (ii) scalability, operational efficiency, and user adoption. Within these themes, four key sub-themes consistently appeared across participant responses: system interoperability, data security, user-friendliness, and technological adaptability and inclusivity—especially in environments with low internet bandwidth and among non-smartphone users.

Technology and Innovation as a Strategic Enabler

Respondents described technology as the backbone of their business models and the central catalyst for innovation. Startups leveraged emerging tools such as artificial intelligence (AI), blockchain, and telemedicine to enhance service delivery, improve efficiency, and ensure data accuracy. Many systems were intentionally designed to operate across multiple devices and to remain functional even in areas with limited connectivity, demonstrating adaptability and inclusivity.

“We are an AI- and blockchain-enabled platform, automating claims adjudication systems. Blockchain ensures data security. But with the current era of digital advancement also come challenges—so having very strong and reliable firewalls and security systems has been critical in advancing the e-health department.” (Interviewee 1, Founder & CEO, Nairobi)

“Our solutions are deployed across any of those devices ... We’re trying to ensure that we account for every user in the market.” (Interviewee 3, Co-Founder & CEO, E-Health 3)

“We had to design our platform to work even with very low internet speeds, because most of our users are in rural areas. If it can’t work there, then it’s not a real solution.” (Interviewee 2, Unit Manager, Kisumu)

Startups also faced challenges with **system interoperability**, particularly when integrating their digital solutions with pre-existing hospital or insurance platforms.

“Our main struggle was integrating with hospital systems, since most of them use different EMR platforms.” (Interviewee 6, Unit Manager, Eldoret)

These experiences underscore that technology in e-health startups functions as a **strategic enabler**—both a differentiating resource for value creation and a means of navigating operational constraints such as fragmentation, regulatory compliance, and infrastructure gaps.

Scalability, Operational Efficiency, and User Adoption

The second major theme centered on the role of technology in scaling operations, improving efficiency, and promoting user adoption. Respondents noted that automation, cloud computing, and user-centered design were pivotal in optimizing workflows and ensuring smooth service delivery.

“We have a labour model... automation helps us to scale... we can handle increasing demand.”
(Interviewee 4, Co-founder, Nairobi)

“We moved our entire system to the cloud so we can easily expand without heavy investment in servers. It also means updates are seamless and users get better reliability.” (Interviewee 6, Unit Manager, Eldoret)

User experience was prioritized through **user-friendly interfaces** that minimized digital barriers and fostered trust. Startups integrated **inclusive design** features—such as SMS and USSD codes—to accommodate users with limited digital literacy or without smartphones.

“Our app and website were built to be extremely user-friendly. Even someone with very basic digital literacy can navigate it. That has helped us overcome cultural resistance and build trust.”
(Interviewee 8, Unit Manager, Nairobi)

“We didn’t want to only rely on smartphones. That’s why we built USSD and SMS options—so even patients with a basic phone can access our services. It has made a huge difference in rural uptake.” (Interviewee 9, Unit Manager, Nairobi)

Respondents also noted that **data security** was a growing concern, particularly among investors and partners who demanded assurance of strong cybersecurity frameworks before providing funding or integration approval.

“Investors always ask about cybersecurity measures before they commit funds.” (Interviewee 3, Co-founder, Mombasa).

Despite ongoing challenges such as infrastructure costs and inconsistent connectivity, many startups mitigated these barriers through cloud-based solutions and application programming interface (API) integrations that improved scalability and reduced operational overheads.

Overall, the findings demonstrate that technological success for e-health startups in Kenya depends on inclusive innovation, robust data security, interoperable systems, and user-centered design. Technology functions not merely as an operational tool but as a strategic growth driver, enabling startups to overcome infrastructural limitations, expand access across diverse user segments, and sustain long-term scalability within the digital health ecosystem.

4.2.3 Organizational Factors

Findings revealed that the success and resilience of e-health startups in Kenya depend heavily on organizational capacity — particularly in how leadership, team culture, talent management, and partnerships are structured to sustain innovation and adaptability. Respondents highlighted that financial, human, technical, and strategic resources collectively determine an organization’s ability to scale and sustain growth. Three major themes emerged under this domain: (i) leadership and organizational culture, (ii) talent attraction, development, and retention, and (iii) strategic partnerships and collaborations.

Leadership and Organizational Culture

Leadership was consistently identified as a cornerstone of organizational success. Founders and top executives shaped startup culture through their **vision, inclusivity, and agility**, setting the tone for innovation, commitment, and accountability across teams. Many startups adopted participatory and transparent management styles that encouraged ownership of ideas, experimentation, and learning from failure.

“Our co-founder is very clear with his vision—he wants to provide healthcare to patients—and it’s something we all relate to. As the general manager for Africa, that vision has become mine as well.” (Interviewee 6, Unit Manager, Eldoret)

“We have a very open-door policy... everyone can make decisions, and most importantly, make mistakes and learn. Every idea is judged on the same standard. If it’s good, we implement it. If not, we help improve it.” (Interviewee 3, Co-Founder, Mombasa)

“Our leaders lead by example. They’re hands-on with operations, which keeps the whole team focused and motivated.” (Interviewee 2, Unit Manager, Kisumu).

Respondents also emphasized the role of structured **performance management systems** and key performance indicators (KPIs) in aligning staff efforts with organizational goals.

“We have our KPIs... our performance has been marked according to the KPIs.” (Interviewee 6, unit Manager, Eldoret)

An empowering leadership culture fostered innovation, agility, and collective accountability — enabling startups to remain resilient amid resource constraints and regulatory uncertainty.

Talent Attraction, Development, and Retention

Attracting and retaining skilled personnel was viewed as both a **strategic priority and a persistent challenge**. Startups competed with larger healthcare institutions by offering flexible work environments, professional growth opportunities, and non-monetary benefits to enhance job satisfaction and retention.

“We’re in the 75th percentile—we hire based on market rates. When internal opportunities arise, we advertise internally first before looking externally.” (Interviewee 3, Co-Founder, Mombasa)

“In our organization, we have menstrual days for women—it’s not deducted from their leave. These fringe benefits go beyond just the salary.” (Interviewee 6, Unit Manager, Eldoret)

Upskilling and capacity-building initiatives were widely practiced. Mentorship programs, in-house training, and dedicated professional development budgets encouraged continuous learning and performance improvement.

“We provide our new staff with mentors who’ve been in the system longer to guide them.” (Interviewee 6, unit Manager, Eldoret)

“Each staff member has a budget set aside to boost or upskill themselves.” (Interviewee 3, Co-Founder, Mombasa).

“We use a very specific performance management system to ensure we track people who are performing really, really well.” (Interviewee 7, Managing Director, Nairobi)

However, retaining trained staff proved challenging. Several respondents reported losing high-performing employees to larger hospitals or better-paying organizations, hindering continuity and growth.

“You attract and train young clinicians, but before the dust settles, they move to bigger facilities. Retaining talent in the e-health space is a big challenge.” (Interviewee 1, Founder & CEO, Nairobi)

“Scaling means you need more people, but at the same time, you’re losing some of your best to bigger hospitals. It’s a constant balancing act.” (Interviewee 4, Co-Founder, Nairobi)

These insights underscore that while startups are agile and innovative, sustaining a motivated, skilled workforce remains a critical organizational hurdle in Kenya's competitive digital health landscape.

Strategic Partnerships and Collaborations

Strategic partnerships emerged as an indispensable factor in **enabling scalability, innovation, and sustainability**. Collaborations with insurers, laboratories, government agencies, and donor organizations provided access to financial resources, technical expertise, and established customer bases — enhancing startups' market visibility and credibility.

“Partnering with big insurance companies helps—the population already trusts them, which reduces our marketing costs since we tap into their base.” (Interviewee 5, Senior Manager, Nakuru).

“Partnerships help you reach a wider audience. Some are for branding, others for capital. We've raised grant funding by collaborating with different organizations.” (Interviewee 3, Co-Founder, Mombasa).

“Collaborations are vital, especially given the financial limitations of startups. For example, some partners offer capitation payments that we use to run key operations.” (Interviewee 8, General Manager)

“We work with government bodies and professional associations so that our solutions are trusted. Without those relationships, adoption would be much slower.” (Interviewee 2, Unit Manager, Kisumu)

Partnerships not only enhanced operational capacity but also helped startups navigate **regulatory and cultural barriers** that often delay innovation uptake. Through cross-sector collaboration, e-health ventures established trust, legitimacy, and pathways for long-term sustainability.

The findings reveal that organizational capacity in e-health startups extends beyond resources to include leadership vision, team culture, human capital management, and external partnerships. Startups that nurture inclusive leadership, invest in workforce development, and build collaborative networks demonstrate stronger adaptability and resilience — key ingredients for sustained growth and competitive advantage in Kenya's digital health ecosystem.

4.2.4 Financial Factors

Financial sustainability emerged as one of the most critical yet persistent challenges for e-health startups in Kenya. Respondents emphasized that the ability to sustain innovation and scale operations depended on securing stable funding, diversifying revenue models, and ensuring sound financial management. Three interrelated sub-themes were identified within this domain: (i) financial access and functional revenue models, (ii) diversified income strategies and pricing flexibility, and (iii) financial management and long-term sustainability balance.

Financial Access and Functional Revenue Models

Participants consistently underscored that while technological innovation is essential, it cannot be sustained or scaled without a robust financial foundation. In their early stages, many startups relied heavily on donor funding and grants to establish operations. However, respondents acknowledged the limitations of this approach and highlighted the need to transition toward self-sustaining financial models.

“The best way is to look at the income you're able to generate and the necessary expenditure, then fix everything within what you're able to achieve... We also have partnerships with companies that pay capitation.” (Interviewee 6, Unit Manager, Eldoret)

“We rely on grants and donor support, but long-term sustainability means building a viable business model.” (Interviewee 8, General Manager, Nairobi)

“Without investor confidence, we cannot scale technology adoption.” (Interviewee 2, Unit Manager, Kisumu)

Respondents agreed that sustainable growth requires access to flexible and continuous funding streams that support not only daily operations but also investment in innovation, compliance, and talent development.

Diversified Income Strategies and Pricing Flexibility

Startups increasingly experimented with diversified revenue models to reduce dependence on a single income source and to stabilize cash flow. Common strategies included subscription-based access, fee-for-service, licensing arrangements, and capitation through corporate partnerships.

These models allowed startups to cater to different client segments and adapt to varying market demands.

“We give our software as a service... some choose monthly, quarterly, or annually.” (Interviewee 3, Co-Founder, Mombasa)

“We charge per claim that we are processing, depending on the volume of claims.” (Interviewee 6, Unit Manager Eldoret)

Strategic pricing emerged as a key determinant of sustainability. Startups reported that mispricing—whether too high or too low—could hinder both adoption and profitability. Several ventures had to pivot from flat-fee to subscription-based models after realizing their initial pricing structures discouraged uptake.

“Initially, we thought charging a one-off setup fee would work, but it locked out smaller facilities. We had to shift to subscription so that more clients could afford the service and we could still remain sustainable.” (Interviewee 4, Co-Founder, Nairobi)

These insights highlight that adaptability in pricing and product monetization is crucial to aligning with market realities and maintaining financial viability.

Financial Management and Long-Term Sustainability Balance

Effective financial management was viewed as the bridge between short-term survival and long-term scalability. Respondents noted that startups often faced trade-offs between reinvesting in innovation and covering immediate operational costs. Balancing these competing demands required prudent planning, resource efficiency, and realistic growth targets.

“You sometimes have to choose between pushing for growth versus just keeping the lights on. The key is to strike a balance—cover operational costs today while also setting aside for the bigger vision.” (Interviewee 2, Unit Manager, Kisumu)

“We try to ensure efficiency in how we use resources. In the short term, we prioritize survival, but we also have to plan for scalability so that we don’t get stuck at the same level forever.” (Interviewee 5, Senior Manager, Nakuru)

Moreover, before seeking external funding, investors required startups to **demonstrate financial viability** by proving that customers were willing to pay for their services — a key signal of business maturity and market traction.

“Before you even raise funding, you need to showcase or demonstrate that you actually have customers who are either willing to pay or already paying... That’s the first step in building for sustainability.” (Interviewee 3, Co-Founder, Mombasa)

The findings reveal that financial sustainability for e-health startups in Kenya depends on the integration of three interrelated strategies. First, startups must secure flexible and diverse funding sources that provide both operational stability and resources for strategic growth. Second, they need to develop inclusive and adaptive revenue models that reflect user capacity, market realities, and the dynamic nature of the healthcare ecosystem. Third, the effective practice of financial management is essential to balance short-term survival with long-term scalability, ensuring that startups can sustain their operations while progressively expanding their impact. Startups that successfully combine these financial strategies with technological innovation, organizational capacity, and strong service delivery are better positioned to attract investor confidence, achieve steady growth, and maintain their innovations within Kenya’s evolving digital health landscape.

4.2.6 General Challenges and Success Factors

The growth and sustainability of e-health startups are shaped by four interconnected domains: service design, financing, organizational capacity, and technology. The findings indicate that all four factors are equally critical for growth. As participants emphasized:

“It’s not just about the tech or just about the money. If you don’t align your service to the users, structure your team well, and plan your finances, the project will collapse. All of these things have to move together.” (Interviewee 4, co-Founder, Nairobi)

“For us, growth has depended on being very strategic across the board — service design, financing, organization, and technology. If even one lags behind, the whole system is affected.” (Interviewee 2, Unit Manager, Kisumu)

While the adoption and scaling of e-health innovations in Kenya have shown promising outcomes, startups continue to navigate a range of challenges that shape their growth trajectories: cultural resistance, regulatory barriers, and financial constraints that collectively influence success.

Cultural Resistance

Several participants observed that cultural perceptions continue to pose significant hurdles. In some regions, users demonstrated reluctance to embrace digital platforms due to mistrust, limited digital literacy, and entrenched preferences for in-person healthcare services. This resistance slowed adoption and required startups to invest in awareness creation and patient education.

“Here in the coastal region, it has been a bit hard to adapt to e-health services.” (Interviewee 2, Unit Manager, Kisumu)

“Many of our clients still prefer walking into the clinic even when the same service is available online. We spend a lot of time convincing them that it is safe and reliable.” (Interviewee 5, Senior manager, Nakuru)

Regulatory and Policy Barriers

The absence of a harmonized regulatory environment was repeatedly flagged as a major challenge. Startups pointed to slow approvals, fragmented regulatory processes, and uncertainty in government policy, all of which constrained scaling efforts and integration with public health systems.

“The lack of comprehensive or proper government support... sometimes, as much as government is already doing much, there are other areas where they could extend their reach.” (Interviewee 3, Co-founder, Mombasa)

“Regulation is not always clear. Sometimes you don’t know which ministry or authority you should engage with for approval, and that delays us.” (Interviewee 1, Founder & CEO, Nairobi)

Financial Constraints

Dependence on donor support or grants left many startups financially vulnerable. Withdrawal or delays in external funding disrupted operations, forcing organizations to quickly adapt by

restructuring or exploring new revenue streams. Participants underscored that navigating financial uncertainty demanded both agility and a focus on building sustainable business models.

“We had a very dire challenge when we lost one grant because that was our main source of fund. We had to maneuver very fast and restructure, but it was a great challenge. We learnt the hard way that we need to diversify and at the same time be lean and aim for sustainability even in early stages.” (Interviewee 9, Unit Manager, Nairobi)

“When donor money dries up, most projects collapse. We are now trying to build subscription models so that we don’t depend entirely on grants.” (Interviewee 6, Unit Manager, Eldoret)

Despite these challenges, some startups demonstrated resilience and strategic foresight; a trait closely tied to a theme that stood out as a key success factor: Long-Term Vision and Sustainability.

Long-Term Vision and Sustainability

Startups that appeared to thrive over time were those that moved beyond short-term goals such as market entry and early customer acquisition, and instead embraced a long-term vision anchored in adaptability and sustainability. This included a commitment to evolving with the digital health landscape and responding to dynamic financing models common in low- and middle-income countries (LMICs).

From the interviews, it was evident that forward-looking organizations were actively exploring new technologies and service models. These included future integration of smart diagnostic tools, virtual consultations supported by medical machinery, and use of cutting-edge innovations to deliver timely and quality care.

“We want to integrate visual consultations with machinery... we are very excited with one technology that is known as brain technology... it has like a small gadget that you use to take the readings and once the readings have been done, it’s taken to the neurologist and you will have to get that report within four to six hours.” (Interviewee 5, Senior Manager, Nakuru)

Additionally, scalability was viewed as an essential part of their sustainability strategy—not just in terms of user base, but also in geographical expansion and long-term relevance.

“So now we are looking to grow to all 47 counties with all the solutions that we provide, and then hopefully also see how to go beyond Kenya.” (Interviewee 3, Co-Founder, Mombasa)

This future-focused outlook, coupled with strategic investments in innovation and expansion planning, emerged as a differentiating factor for startups with staying power in the evolving digital health ecosystem.

4.2.7 Cross-Domain Interactions

The findings revealed significant interconnections among the four STOF domains, demonstrating that the success of e-health startups in Kenya results from a dynamic interplay rather than isolated factors. Analysis of NVivo matrix coding queries showed frequent co-occurrence between service accessibility and technological adaptability, suggesting that the effectiveness of service delivery is heavily influenced by the usability and reliability of underlying technologies. Startups that integrated interoperable, user-friendly platforms were also more likely to achieve higher patient retention and trust, reinforcing the link between the service and technology domains.

Similarly, the relationship between organizational capacity and financial sustainability emerged as mutually reinforcing. Startups with strong leadership, efficient internal processes, and a culture of accountability were better positioned to attract investors, manage resources prudently, and scale operations sustainably. NVivo queries also highlighted intersections between technology and finance, where recurring references to cybersecurity and data protection appeared alongside discussions of investor confidence and regulatory compliance. This suggests that robust technological infrastructure not only improves operational efficiency but also enhances credibility with funders and partners.

Furthermore, organizational leadership and cross-sector partnerships served as integrative mechanisms bridging the four domains. Effective leaders cultivated innovation-friendly cultures that balanced financial prudence with technological advancement and customer-centric service design. These interrelationships underscore that sustainable growth in e-health startups cannot be achieved by optimizing single domains in isolation. Rather, success depends on how well startups align their service value, technological capability, organizational strength, and financial strategy within Kenya's evolving digital health ecosystem.

Table 4.3 Summary of key findings themes by STOF Domain

STOF Domain	Key Themes	Sub-themes Identified
Service	Value Proposition and Customer-Centric Solutions Customer Engagement and Feedback Mechanisms	Accessibility & Affordability; Quality & Reliability; User Trust; Proactive Communication
Technology	Technology and innovation as a strategic enabler scalability, operational efficiency, and user adoption.	Interoperability; Data Security; User-friendliness; technological adaptability; Inclusivity (USSD)
Organization	Leadership and Organizational Culture Talent Attraction, Development, and Retention Strategic Partnerships and Collaborations	
Finance	Financial Access & functional Revenue Models Diversified income strategies and pricing flexibility Financial management & long-term sustainability balance	

CHAPTER FIVE

DISCUSSION, CONCLUSION, AND RECOMMENDATIONS

5.1 Introduction

This chapter presents a detailed interpretation and synthesis of the study findings in relation to existing literature and the theoretical frameworks underpinning the research. Anchored in the Service-Technology-Organization-Finance (STOF) model and informed by the Resource-Based View (RBV) and Diffusion of Innovation (DOI) theories, the discussion explores how the identified themes contribute to understanding the success factors for growing e-Health startups in Kenya.

The researcher systematically links the findings from in-depth interviews to broader academic debates, highlighting both alignment and divergence with prior studies. This approach allows for a nuanced understanding of how internal capabilities, external conditions, and innovation dynamics interact to influence startup growth in the digital health sector. Each subsection within the discussion corresponds to the key domains explored in the results, ensuring thematic consistency and theoretical depth.

In addition to interpreting the results, this chapter outlines the study's key conclusions, practical implications, limitations, and recommendations for future research and policy.

5.2 Discussion

5.2.1 Service Factors

The findings showed that service design and delivery constitute the foundation upon which e-health startups in Kenya build user adoption, trust, and long-term sustainability. Respondents emphasized that value propositions must be strongly aligned with user needs—particularly accessibility, affordability, responsiveness, and convenience—if digital health innovations are to gain meaningful traction. This is consistent with empirical evidence from Shuvo and colleagues, who observed that digital health interventions in low- and middle-income countries (LMICs) succeed when they are explicitly designed to address identifiable gaps in access and affordability (Shuvo, et al., 2015). The study further aligns with Indian empirical evidence that customer knowledge, service value, and effectiveness are central determinants of e-health innovation success (Chakraborty, et al., 2023).

The Kenyan findings reinforce these insights by demonstrating that startups intentionally integrate affordability through low consultation fees, generic drug sensitization, and low-bandwidth service delivery models. These efforts highlight the emphasis placed on delivering value that fits the socioeconomic realities of Kenyan populations. From the perspective of the Diffusion of Innovation (DOI) theory, this reflects the attribute of relative advantage, whereby innovations are adopted more readily when users can clearly see their benefits compared to traditional options. By offering cost savings, convenience, and reduced travel time, e-health startups make their value proposition more visible and compelling, thereby accelerating adoption.

The findings also demonstrate that startups prioritize quality and reliability by incorporating technologies such as automation, AI-driven documentation, and error reduction tools. This echoes Chakraborty et al.'s emphasis on technological robustness as a determinant of scaling digital health ventures. In RBV terms, these technological capabilities represent internal assets—difficult for competitors to imitate—that strengthen the organization's unique advantage and enhance its ability to deliver consistently reliable services. The service domain also revealed that strategic partnerships with insurers, pharmacies, and hospitals are necessary to reinforce reliability and extend services to broader populations. This mirrors findings from the LMIC literature which emphasizes partnerships as essential for overcoming infrastructural limitations and creating trust in digital solutions (Labrique, et al., 2018) (Ibeh, Oso, Alli, & Babarinde, 2025)

Customer engagement emerged as equally essential, with startups using SMS reminders, follow-up calls, call centers, and social media campaigns to maintain close relationships with users. This finding is consistent with LMICs empirical evidence which highlight that iterative engagement throughout the innovation lifecycle is critical for scaling and sustaining digital health startups (Labrique, et al., 2018) (Sundina, Callan, & Mehta, 2016). In DOI terms, such engagement strengthens the attributes of compatibility and observability, as users can see firsthand how the service aligns with their needs and contributes to improved outcomes.

The study further illustrated that user trust plays a central role in service success. Respondents repeatedly noted that perceived confidentiality, responsiveness, and continuous communication were essential for retaining users. This supports findings from Shuvo and colleagues, who recognized trust as a fundamental determinant of digital health uptake (Shuvo, et al., 2015). Through the RBV lens, relational capital—manifested through trust, communication, and user-

centered support—becomes a strategic intangible resource that is difficult to replicate and therefore strengthens a startup’s competitive positioning.

Overall, the findings affirm that service success in Kenya’s e-health space depends on the integration of accessibility, affordability, reliability, and user trust, supported by continuous engagement and strong value communication. These insights support global and regional evidence while revealing how Kenyan startups customize service strategies to local constraints, thus reinforcing the need for contextually grounded service innovation.

5.2.2 Technological Factors

The study found that technology operates simultaneously as a strategic enabler and an operational backbone for e-health startups. Respondents reported using advanced technologies such as AI, blockchain, and telemedicine to enhance accuracy, streamline workflows, and deliver services across diverse user environments. This finding aligns closely with Labrique and colleagues, who emphasize that digital health tools in LMICs must prioritize simplicity, interoperability, and adaptability to infrastructural constraints (Labrique, et al., 2018). The Kenyan case offers direct validation: startups designed solutions to work on low-end smartphones, in low-bandwidth settings, and across multiple devices, demonstrating contextual sensitivity.

The emphasis on secure, reliable, and user-centered technologies reflects the findings of Chakraborty and colleagues, who identified technological robustness and reliability as essential for scaling digital health ventures (Chakraborty, et al., 2023). In RBV terms, these technological capabilities represent high-value, rare, and difficult-to-imitate resources that contribute to sustainable competitive advantage. For example, startups with advanced claims automation systems not only improve accuracy but also signal maturity and operational excellence to insurers and investors, enhancing both adoption and institutional trust.

Scalability emerged as another critical dimension, with startups leveraging cloud computing, automation, and API integrations to expand seamlessly and reduce operational overheads. This aligns with study of Ibeh and colleagues, who argue that scalability in African digital health ventures depends on flexible digital architectures, ecosystem integration, and cost-efficient growth strategies (Ibeh, Oso, Alli, & Babarinde, 2025). The findings from Kenya demonstrate how

startups operationalize these principles by adopting cloud-based systems, enabling real-time updates, and ensuring platform inclusivity through SMS and USSD channels.

The centrality of data security in the findings also resonates with global literature which stressed on data security as one of the most critical factors required for growth-stage digital health companies, especially in high-regulation environments (Pfizer, et., 2024). Respondents' emphasis on cybersecurity as a prerequisite for investment further reinforces this. In DOI terms, strong security capabilities enhance trialability and observability, enabling users and institutional partners to safely adopt and evaluate digital solutions.

Overall, the findings provide strong empirical support for theoretical perspectives suggesting that technological adaptability, inclusive design, interoperability, robust security, scalable architectures, and ecosystem compatibility frameworks are essential for innovation diffusion and competitive advantage in e-health ecosystems. Kenya's startups demonstrate the importance of designing technologies that bridge infrastructural gaps, support diverse user groups, and maintain operational flexibility.

5.2.3 Organizational Factors

The findings illustrated that organizational capacity—particularly leadership, culture, human capital, and partnerships—is a decisive factor in determining whether e-health startups can scale and sustain their innovations. Leadership emerged as a particularly strong driver, with respondents highlighting participatory management styles, visionary founders, and transparent decision-making as catalysts for innovation and team cohesion. This strongly resonates with the RBV framework, which identifies human capital and leadership as non-substitutable strategic resources. The findings affirm the work of Sundin and colleagues and that of Okiyo & Kihara 2024 both whom emphasize leadership quality and governance capability as major determinants of startup success in digital and technology-driven sectors (Sundina, Callan, & Mehta, 2016) (Okiyo & Kihara, 2024).

Talent management also played a central role, with startups investing in mentorship, upskilling, and flexible benefits to retain skilled personnel. Yet, the study revealed significant talent flight, particularly as larger healthcare institutions attracted highly trained staff. This challenge mirrors a common weakness in digital health startups across LMICs (Sundina, Callan, & Mehta, 2016).

From an RBV perspective, this underscores the difficulty of maintaining human capital resources that are rare and hard to imitate—particularly in competitive labor markets.

The findings further highlighted the importance of strategic partnerships and collaborations with insurers, laboratories, donors, technology providers, and government agencies. These partnerships offered not only financial and technical support but also legitimacy, market access, and trust among users. This is consistent with both global and regional empirical studies which emphasize stakeholder collaboration as essential for innovation scaling in LMICs (Jeamwittayanukul & Vuthisophon, 2022) (Shuvo, et al., 2015). In DOI terms, such partnerships enhance observability and compatibility, enabling users and institutions to better understand and align with new technologies.

The study therefore reinforces a multidimensional view of organizational success where leadership, culture, human capital, and external partnerships converge to create agility, resilience, and innovation capacity. These findings suggest that organizational strength is not merely an internal characteristic but is intertwined with ecosystem engagement and strategic networks.

5.2.4 Financial Factors

The study found that financial sustainability remains the most persistent and structural challenge for e-health startups in Kenya. Startups frequently relied on grants and donor support during early stages, but respondents acknowledged the limitations of depending on time-bound or unpredictable funding streams. This finding aligns with regional empirical evidence, which note that digital health initiatives often struggle when external funding does not transition into stable, long-term financial models (Labrique, et al., 2018) (Sundina, Callan, & Mehta, 2016) (Ibeh, Oso, Alli, & Babarinde, 2025).

The findings also demonstrate that startups pursued diversified revenue strategies—including subscription models, licensing, software-as-a-service, capitation through insurers, and fee-for-service—to ensure financial resilience. This directly supports the work of Sundin and colleagues who identified poorly structured or narrowly defined revenue models as major contributors to startup failure in LMICs. Similarly, from a global perspective empirical data emphasize that functional and adaptable revenue strategies are fundamental for sustaining e-health ventures (Chakraborty, et al., 2023).

The emphasis on demonstrating customer willingness to pay before seeking investment reflects broader global evidence showing that investor confidence depends on proof of revenue traction and market acceptance (Pfitzer, et al., 2024). Also Jeamwittayanukul & Vuthisopon highlight the importance of financial credibility and institutional partnerships in accelerating digital health scaling (Jeamwittayanukul & Vuthisopon, 2022). From an RBV standpoint, effective financial management becomes a valuable and inimitable organizational capability that supports long-term survival. In DOI terms, sustainable financial models enhance the perceived stability of innovations, improving adoption among institutional partners.

Overall, the findings indicate that financial sustainability hinges on three interconnected elements: access to diverse and flexible funding, the development of viable and inclusive revenue models, and careful financial planning that balances short-term survival with long-term scalability. Startups that successfully integrate these capabilities are more likely to attract investment, scale their innovations, and maintain resilience in an uncertain and evolving digital health ecosystem.

5.3 Conclusions

This study examined the success factors influencing the growth of e-health startups in Kenya through the STOF model, supported by the Resource-Based View (RBV) and Diffusion of Innovation (DOI) theories. The findings demonstrate that sustainable growth arises from the combined influence of four domains: service quality, technological adaptability, organizational capacity, and financial sustainability.

Startups that placed users at the center of service design—through affordability, accessibility, inclusivity, and continuous engagement—were better positioned to attract and retain clients. Technological innovation, particularly secure, interoperable, scalable, and adaptable systems, enhanced operational efficiency and strengthened trust among users, partners, and investors. Organizational capacity, enabled by strong leadership, an adaptive and collaborative culture, skilled talent, and strategic partnerships, emerged as a critical internal resource consistent with RBV. Financially, startups that diversified revenue streams and balanced short-term operational demands with long-term sustainability strategies demonstrated greater resilience.

The study's findings are largely consistent with existing empirical literature but extend prior knowledge by offering context-specific evidence from Kenya's digital health ecosystem. The

results validate the integration of RBV and DOI with the STOF model, illustrating how internal capabilities and external adoption dynamics jointly shape the scalability and sustainability of e-health innovations. Practically, the study provides actionable insights for entrepreneurs, investors, and policymakers seeking to strengthen digital health systems in Kenya and similar low- and middle-income settings.

Overall, the growth of e-health startups in Kenya is shaped by their ability to innovate, adapt to contextual realities, and deliver meaningful value to users—transforming digital solutions into scalable, sustainable, and impactful healthcare services.

5.4 Strengths and Limitations of the Study

One of the primary strengths of this study lies in its use of a qualitative approach rooted in the social constructivist paradigm. This enabled the researcher to capture rich, context-specific insights from key informants actively involved in the growth and operation of e-Health startups in Kenya. The study also benefited from the use of NVivo software, which supported a rigorous thematic analysis process and improved the consistency and depth of coding. Additionally, the alignment of the findings with both the STOF model and established theories (RBV and DOI) strengthens the conceptual robustness and academic contribution of the research.

However, the study also has several limitations. First, its reliance on the STOF model, while useful, may have constrained the exploration of other potentially relevant factors that fall outside the four domains of service, technology, organization, and finance. Secondly, as a qualitative study with a relatively small sample size drawn from purposively selected startups, the findings are not statistically generalizable to all e-Health ventures in Kenya. Furthermore, the data relied solely on self-reported experiences, which may have been subject to respondent bias. Finally, the focus on startups beyond the pilot stage may exclude insights from earlier-stage ventures that also face distinct success or failure dynamics.

Despite these limitations, the study provides valuable exploratory insights and lays the groundwork for future research that can adopt broader theoretical lenses and quantitative approaches to test the relationships suggested here

5.5 Recommendations

Based on the study findings and guided by the STOF model, the following recommendations are proposed to support the growth and sustainability of e-Health startups in Kenya:

e-Health Entrepreneurs and Startups Leadership

1. Embrace Customer-Centric Design and Feedback Loops

Startups should continuously engage users through structured feedback mechanisms and adapt services based on evolving needs. This fosters user loyalty and aligns with the DOI theory's emphasis on relative advantage and compatibility.

2. Develop Scalable and Sustainable Revenue Models

Early planning for diverse and context-appropriate revenue streams—such as subscription-based services, capitation, and pay-for-performance—can reduce overreliance on grants and attract long-term investment.

Policymakers and Government Stakeholders

1. Simplify and Harmonize Regulatory Frameworks

Regulatory clarity, especially on data privacy, digital health licensing, and partnerships with public institutions, is critical to reducing barriers for new and growing e-Health startups.

2. Facilitate Infrastructure and Digital Inclusion

Government investment in ICT infrastructure—especially in rural areas—will enhance access to digital health solutions and promote more equitable service delivery.

Investors and Development Partners

1. Support Startups with Blended Financing Models

Combine grants, equity, and low-interest loans to enable both early experimentation and long-term financial sustainability.

2. Offer Technical Assistance and Strategic Mentorship

In addition to funding, provide guidance in governance, scaling strategy, and technology deployment to strengthen startup capacity for impact.

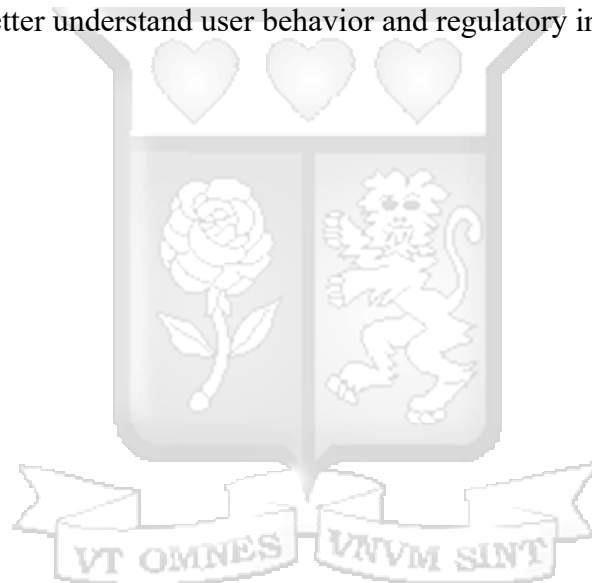
Future Researchers

1. Conduct Quantitative and Longitudinal Studies

Expanding the sample size and applying quantitative analysis will help validate and generalize findings across Kenya and similar LMIC settings.

2. Explore Complementary Theoretical Frameworks

Future research may integrate models such as the Technology Acceptance Model (TAM) or Institutional Theory to better understand user behavior and regulatory influence



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APPENDICES

Appendix A: Interview Guide

Success Factors for Growing e-Health Startups in Kenya

BIODATA

1.1 Name of the Healthcare Startup (Optional).....

1.2 Your Position/Role in the Healthcare Startup.....

1.3 Number of Years the Healthcare Startup has been in Operation.....

1.4 Contact Information (Optional, for follow-up or clarification purposes)

Section 1: Introduction and Background

1. Please introduce yourself and describe your role within the e-Health startup.
2. How long has your startup been operational, and what key healthcare challenges does it aim to address?
3. What is your background and experience in the healthcare or technology sector?

Section 2: Service Domain (Service Value and Customer Interaction)

4. What is the definition or description of the value your service offers to users in the Kenyan health context?
5. How do you identify and address the needs of your target audience?
6. Can you describe the strategies used to enhance customer engagement and satisfaction?
7. What feedback mechanisms are in place to gather user input, and how has this influenced your service development?
8. How do you communicate the value of your innovation to potential users and stakeholders?

9. What strategies have been effective in promoting the adoption of your e-Health solutions?

Section 3: Technology Domain (Technological Infrastructure)

10. What technological infrastructure is fundamental for your successful e-Health solution, and how have you chosen the technologies you deploy?
11. How do you ensure the scalability, security, and reliability of your technology and that can resist forthcoming pressure with time?
12. Have you encountered any kind of technological problems, and how did you overcome them?
13. How do you address barriers to adoption, such as cultural resistance or regulatory hurdles?
14. How do you manage the integration of new technologies within your existing systems?

Section 4: Organization Domain (Organizational Capacity and Resources)

15. What resources (financial, human, technical, strategy) have been most critical for the growth of your e-Health startup?
16. How would you describe the leadership style and organizational culture within your startup?
17. How do you attract, retain, and develop talent within your organization?
18. How do you ensure that your team is aligned with the startup's mission and goals?
19. What role do partnerships and collaborations play in your startup's growth strategy?
20. How does your organizational culture influence innovation and operational efficiency?
21. How does your startup manage the demands of scaling its operations?

Section 5: Finance Domain (Financial Sustainability and Revenue Models)

Funding Strategies

22. What sources of funding has your startup relied on (e.g., venture capital, grants, angel investors)? And how have they impacted your growth?
23. How do you ensure financial sustainability in the early stages of your startup's growth?

24. Have you faced any challenges in securing funding? If so, how have you addressed them?

Revenue Models

25. How is your revenue model structured, and what obstacles have you faced in finding it financially viable?

26. How do you ensure that your revenue model is sustainable and scalable?

27. Have you had to pivot your revenue model at any point? If so, what prompted the change?

Financial Management

28. How does your startup manage financial risks and uncertainties?

29. What strategies do you use to ensure efficient financial management and resource allocation?

30. How do you balance short-term financial needs with long-term growth objectives?

Section 6: General Challenges and Success Factors

31. What, in your opinion, are the most influential success factors that contribute to the growth of an e-Health startup in Kenya?

32. Kindly describe any major setbacks you have so far experienced in scaling your startup, and how you surmounted such situations.

18. What is next for your e-Health startup, and how do you envision its long-term sustainability?

Section 7: Conclusion

19. What advice would you give to other entrepreneurs looking to start or grow an e-Health venture in Kenya?

20. Is there anything else you would like to share about your experience, or insights into the success of e-Health startups in Kenya?

Appendix B: participant information & Informed consent form

PARTICIPANT INFORMATION SHEET AND CONSENT FORM

Title of Study: Unlocking Sustainable Innovations: Success Factors for Growing E-Health Startups in Kenya

Principal Investigator:

Salim Hussein Mwatamaa

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PARTICIPANT INFORMATION SHEET

1. Introduction

You are invited to participate in a research study conducted by Salim Hussein Mwatamaa, a student at Strathmore University pursuing a Master of Business Administration in Healthcare Management. This study seeks to investigate the success factors for growing e-Health startups in Kenya. Your participation is valuable in helping understand the key enablers and challenges faced by e-Health startups in the local context.

Before you agree to participate, please carefully read the following information. You are encouraged to ask any questions for clarification before signing this form.

2. Purpose of the Study

The purpose of this study is to explore and identify the factors contributing to the success of e-Health startups in Kenya. Insights gained from senior leaders, entrepreneurs, and managers in the sector will help propose actionable recommendations to support the growth of e-Health innovations.

3. Procedures

If you agree to participate, you will:

- Take part in an in-depth interview lasting approximately 45 to 60 minutes.
- Share your experiences, opinions, and insights regarding the success factors for growing e-Health startups in Kenya.
- Have the interview audio-recorded (with your permission) and transcribed for analysis. If you don't agree to be recorded at any particular moment of the interview you will be terminated without any consequences
- Be assured that your identity will remain confidential, with all identifying information anonymized.

4. Voluntary Participation

This study is **completely voluntary** and there will be **no payment** given to study participants. You have the right to refuse to participate or withdraw at any time, without any penalty or loss of benefits to which you are entitled. You may also skip any question you do not feel comfortable answering.

5. Risks and Benefits

Benefits:

- Your participation will contribute to a better understanding of the e-Health startup ecosystem in Kenya and will help inform policies or practices that support the growth of e-Health startups.

Risks:

- The risks associated with this study are minimal. However, if you experience discomfort discussing certain topics, you are free to skip questions or discontinue the interview at any time.

6. Confidentiality

- All information collected will be treated with strict confidentiality and used only for academic purposes.
- Your name or any identifying details will not appear in any reports or publications resulting from this study.
- Research records will be securely stored, and data will be anonymized.
- Data will be stored securely for five years and then destroyed per ethical standards.

7. Compensation and Access to Care

- No monetary compensation will be provided for participation in this study.

8. Dissemination of Study Findings

The study findings will be shared through Strathmore University's institutional repository and relevant academic publications. A summary of key results will also be provided to participants who express interest, acknowledging their valuable contribution

9. Ethical Approval

This study has been reviewed and approved by the Strathmore University Institutional Ethics Review Committee. Research clearance has also been obtained from the National Commission for Science, Technology, and Innovation (NACOSTI).

10. Contact Information

If you have any questions or concerns about this study, please contact:

Principal Investigator:

Salim Hussein Mwatamaa

Phone: 0741403741

Email: salim.mwatamaa@strathmore.edu

Supervisor:

Dr. Ben Ngoye

Phone: 0715395882

Email: bngoye@strathmore.edu

If you wish to ask someone independent about your rights as a research participant, please contact:

Strathmore University Ethics Office

The Secretary – Strathmore University Institutional Ethics Review Board

P.O. BOX 59857, 00200, Nairobi

Email: ethicsreview@strathmore.edu

Phone: +254 703 034418

PARTICIPANT CONSENT FORM

I, _____, have had the study explained to me. I have understood all the information provided and have had my questions answered satisfactorily. I understand that my participation is voluntary, and I can withdraw at any stage without any consequences.

Please indicate your decision by ticking the appropriate boxes:

Participation in the research study:

☐ I AGREE to take part in this research.

☐ I DO NOT AGREE to take part in this research.

Storage of recorded interview data for analysis:

☐ I AGREE to have my recorded interview stored for future data analysis.

☐ I DO NOT AGREE to have my recorded interview stored for future data analysis.

Participant's Signature: _____

Date: _____

Participant's Name (Print): _____

Investigator's Certification:

I, _____, certify that I have followed the study's ethical procedures and explained all necessary information to the participant named above. The participant has understood the study and consents to participate.

Investigator's Signature: _____

Date: _____

Investigator's Name _____

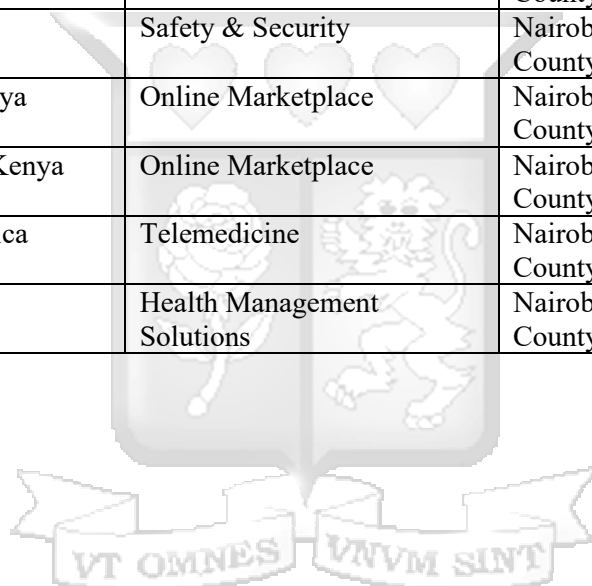
Thank you for your participation!



Appendix C :List of Ehealth Startup in Kenya

1	MyDawa	Online Marketplace	Nairobi County
2	Zuri Health	Telemedicine	Nairobi County
3	Maisha Meds	Health Management Solutions	KISUMU
4	Ilara Health	Health Management Solutions	Nairobi County
5	Damu-Sasa	Health Management Solutions	Nairobi County
6	Health-E-Net	Telemedicine	Nairobi County
7	Tibu Health	Health Services Search	Nairobi County
8	My 1Health	Health Services Search	Nairobi County
9	Malaica	Telemedicine	Nairobi County
10	Antara Health	Health Services Search	Nairobi County,
11	inSupply Health	Health Management Solutions	Nairobi County
36	PsychX	Telemedicine	Nairobi County
13	Penda Health	Telemedicine	Nairobi County
14	Baobab Circle	Patient Solutions	Nairobi County,
15	Ponea Health	Health Services Search	Nairobi County,
16	Nivi	Medical Education	Nairobi County,
17	Afya Rekod	Patient Solutions	Nairobi County
18	SASAdoctor	Telemedicine	Nairobi County
19	Negus Med	Online Marketplace	Nairobi County
20	TIBU	Health Services Search	Nairobi County
21	ONA KENYA	Health Management Solutions	Nairobi County,
22	Totohealth	Medical Education	Nairobi County
23	PharmilyKe	Online Marketplace	Nairobi County

24	Livia App	Health Management Solutions	Mombasa
25	The Pathology Network	Online Marketplace	Eastern Province
26	iZola	Telemedicine	Nairobi County
27	Thalia Psychotherapy	Health Services Search	Nairobi County
28	Doctors Explain FM	Health Services Search	Nairobi County
29	Nadia App	Telemedicine	Nairobi County
30	Jungopharm	Health Management Solutions	Nairobi County
31	Daktari Africa	Online Health Communities	Nairobi County
32	Uthabiti	Safety & Security	Nairobi County
33	EHealth Kenya	Online Marketplace	Nairobi County
34	Epharmacy Kenya	Online Marketplace	Nairobi County
35	HealthX Africa	Telemedicine	Nairobi County
36	Sahl Health	Health Management Solutions	Nairobi County



Appendix D; Study Budget

Study Budget for Research on Unlocking Sustainable Innovations: Success Factors for Growing E-Health Startups in Kenya

Budget Item	Details	Estimated Cost (KES)
Data Collection	Travel for interviews, internet for virtual interviews	10,000
Transcription & Coding	software-assisted transcription (NVivo)	5000
Analysis	NVivo software thematic analysis	10,000
Printing & Stationery	Consent forms, interview guides, notes	1000
Ethical Approval & Permits	NACOSTI research permit, university ethics review fee	1,000
Miscellaneous	Contingency for unexpected expenses	3000
Total Estimated Cost	All costs combined	30,000



Appendix E: study work plan.

Study Work Plan: Unlocking Sustainable Innovations - Success Factors for Growing E-Health Startups in Kenya

1. Study Timeline and Key Activities (6 Months) from Nov 2024 to May 2025.

Activity	Description	Timeline
1. Proposal Development & Ethical Approval	Refining research objectives, methodology, literature review, and obtaining ethical approval	Nov24-Feb 25
2. Research Preparation	Developing interview guide, recruiting participants, and setting up logistics	FEB (2 weeks)
3. Data Collection	Conducting in-depth interviews with key stakeholders in e-health startups	MAR (2 WEEKS)
4. Data Transcription and Cleaning	Transcribing audio recordings, anonymizing data, and organizing for analysis	MAR(2WEEK)
5. Data Analysis & Report Writing	Thematic coding and analysis using NVivo, drafting results, discussion, and conclusions	APRIL- MAY

4. Potential Challenges and Mitigation Strategies

Challenge	Mitigation Strategy
Delays in ethical approval	Submit early and follow up regularly
Low participant response rate	Use multiple recruitment channels and follow-ups
Data security concerns	Store data securely and ensure anonymization
Time constraints	Stick to the schedule and adjust if necessary

Appendix F: ethical clearance



22nd April 2025

Mr Mwatamaa Salim,
salim.mwatamaa@strathmore.edu

Dear Mr Mwatamaa,

RE: Unlocking Sustainable Innovations: Success Factors for Growing eHealth Startups in Kenya

This is to inform you that SU-ISERC has reviewed and **approved** your above **SU- Masters** proposal. Your application reference number is **SU-ISERC2799/25**. The approval period is from **22nd April 2025 to 21st April 2026**.

This approval is subject to compliance with the following requirements:

- i. Only approved documents including (informed consents, study instruments, MTA) will be used.
- ii. All changes including (amendments, deviations, and violations) are submitted for review and approval by SU-ISERC.
- iii. Death and life-threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to SU-ISERC within 72 hours of notification.
- iv. Any changes anticipated or otherwise that may increase the risks or affected safety or welfare of study participants and others or affect the integrity of the research must be reported to SU-ISERC within 72 hours.
- v. Clearance for the export of biological specimens must be obtained from relevant institutions.
- vi. Submission of a request for renewal of approval at least 60 days prior to the expiry of the approval period. Attach a comprehensive progress report to support the renewal.
- vii. Submission of an executive summary report within 90 days of completion of the study to SU-ISERC.

Before commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology, and Innovation (NACOSTI) <https://research-portal.nacosti.go.ke/> and obtain other clearances needed.

Yours sincerely,

A handwritten signature in black ink, appearing to read "Ambrose Rachier".

Mr Ambrose Rachier,
Chairperson; SU-ISERC

Ole Sangale Rd, Madaraka Estate. PO Box 59857-00200, Nairobi, Kenya. Tel +254 (0)703 034000
Email admissions@strathmore.edu www.strathmore.edu

Appendix G: NACOSTI Permit

 REPUBLIC OF KENYA	 NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION
Ref No: 691395	Date of Issue: 10/May/2025
RESEARCH LICENSE	
	
This is to Certify that Dr. Salim Hussein Mwatamaa of Strathmore University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Baringo, Bomet, Bungoma, Busia, Elgeyo-Marakwet, Embu, Garissa, Homa Bay, Isiolo, Kakamega, Kericho, Kiambu, Kilifi, Kirinyaga, Kisii, Kisumu, Kitui, Kwale, Laikipia, Lamu, Machakos, Makueni, Mandera, Marsabit, Meru, Migori, Mombasa, Muranga, Nairobi, Nakuru, Nandi, Narok, Nyamira, Nyandarua, Nyeri, Samburu, Siaya, Taita-Taveta, Tanariver, Tharaka-Nithi, Trans Nzoia, Turkana, Uasin Gishu, Vihiga, Wajir, Westpoko on the topic: UNLOCKING SUSTAINABLE INNOVATIONS: SUCCESS FACTORS FOR GROWING E-HEALTH STARTUP IN KENYA for the period ending : 10/May/2026.	
License No: NACOSTI/P/25/4173257	
691395	
Applicant Identification Number	Deputy Director NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION
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Appendix G: Turnitin Report

Turnitin Originality Report

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