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**FACTORS INFLUENCING THE SUCCESS OF TECH STARTUPS IN NAIROBI CITY  
COUNTY, KENYA.**

**LYDIA NJERI NDUTA**

**068570**

**A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS  
FOR THE MASTERS IN BUSINESS ADMINISTRATION DEGREE AT STRATHMORE  
UNIVERSITY**

**STRATHMORE BUSINESS SCHOOL**

**STRATHMORE UNIVERSITY**

**NAIROBI, KENYA**

**MAY 2024**

## DECLARATION

I declare that this dissertation has not been previously submitted and approved for the award of a degree by this or any other University. To the best of my knowledge and belief, the dissertation contains no material previously published or written by another person except where due reference is made in the research concept itself.

### Student Declaration

Lydia Njeri Nduta



25<sup>th</sup> May 2024

### Approval

This thesis of Lydia Njeri Nduta was reviewed and approved by the following:

Dr Irene Ngunjiri

Dr. Caesar Mwangi,

Dean, Strathmore Business School,

Strathmore University

Dr. Bernard Shibwabo,

Director of Graduate Studies,

Strathmore University



## ABSTRACT

The studies reviewed on success factors for tech startups necessitate further research to examine the knowledge gaps and conceptual, methodological, and contextual inconsistencies. A literature search revealed limited studies in Kenya on the factors influencing the success of tech startups. Therefore, this study examines the factors influencing the success of tech startups in Kenya's Nairobi City County. The study's specific objectives were to establish the influence of the regulatory environment, access to funding, technological infrastructure, and entrepreneurial ecosystem on the success of tech startups. The resource-based view (RBV) theory and social network theory grounded the study. This study used the positivism philosophy to achieve the study objectives. A descriptive research design has informed the study. The study used simple random sampling to select the tech startups for this research and purposive sampling to pick the respondents. Mixed methods have been used to collect data through questionnaires and key informants. The unit of observation includes the tech startups. Self-administered drop-and-pick questionnaires were used to collect data from 111 managers and owners of tech startups and 20 key informants. Descriptive statistics were used to analyze data quantitatively using percentages, means, and standard deviation. The results of this study showed the significant effects of regulatory environment, access to funding, technology infrastructure and entrepreneurial ecosystems on the success of tech startups. First, the results also showed that the regulatory environment had a significant positive effect on the success of tech startups, which were also supported by the findings from the key informant interviews. These results suggest that improving the regulatory environment can improve the success of tech startups. Secondly, the findings from this study also indicated that access to funding had a significant positive effect on the success of tech startups, which implies that the success of tech startups can be increased by enhancing access to funding. The findings from key informant interviews also demonstrated the substantial role played by access to funding in enhancing the success of tech startups. Thirdly, the findings show that the technological infrastructure had a significant positive effect on the success of tech startups. The implication of this result is that improving the technological infrastructure can help enhance the success of tech startups. Findings from interviews validated the findings from the quantitative survey. Lastly, the results of the current study indicated that entrepreneurial ecosystems have a significant positive effect on the success of startups, signifying that improving the entrepreneurial ecosystem can improve the success of tech startups. This research highlights key policy recommendations to improve the regulatory environment for tech startups in Kenya, demonstrating its positive impact on their success. To enhance this environment, it is crucial to simplify compliance processes by formulating unified regulations for startups, reducing compliance costs, and establishing a dedicated government agency to address startup-related issues. Additionally, the findings emphasize the need for increased government support and initiatives for tech startups, including enhanced support for incubators. Implementing these recommendations can significantly strengthen the regulatory environment and entrepreneurial ecosystem for tech startups in Kenya.

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## ABBREVIATIONS AND ACRONYMS

ASSEK	: Association of Startup and SME Enablers of Kenya
GDP	: Gross Domestic Product
IT	: Information Technology
MBO	: Management by Objectives
R&D	: Research and Development
RBV theory	: Resource-Based View Theory
SU-ISERC	: Strathmore University Institutional Scientific and Ethical Review Committee



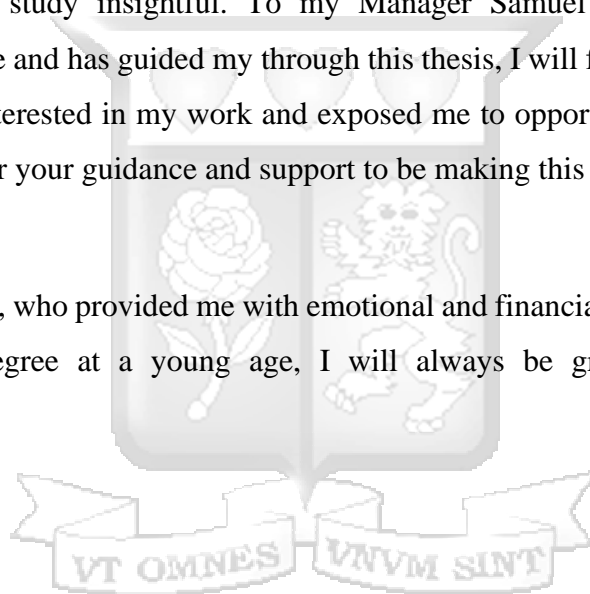
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## OPERATIONAL DEFINITION OF TERMS

- Access to Funding : The ability of tech startups to obtain financial resources and services, and is measured by the number of funding sources, the extent of funding impact, and the magnitude of the funding challenges (Singh & Mugila-Hillemane, 2023).
- Entrepreneurial Ecosystem : The social environment in which tech startups operate and characterized by access to networking opportunities, collaborations, and mentorship programs (Malhotra, 2022).
- Regulatory Environment : Refers to the collection of regulations and standards that tech startups abide by under the law because of compliance, challenges, and support from the county or national government (Santisteban & Mauricio, 2017).
- Startups : Refers to young tech-based firms and enterprises with unique business ideas, and have a significant impact on the technology sector (Singh & Mugila-Hillemane (2023).
- Success of Tech Startups : The likelihood of a young tech-based firm with unique business ideas to perform well and continue its lasting significant impact on the technology sector. The metrics for the success of tech startups are increased customer base, increased market share, increased revenue, and a high level of sustainability (Malhotra, 2022).

Technological  
Infrastructure

: Includes all the vital elements required for the management and operation of tech startups quantified in terms of access to advanced technology, digital connectivity, and technology adoption rate (Santisteban & Mauricio, 2017).



# CHAPTER ONE

## INTRODUCTION

### 1.1 Background to the Study

The concept of startup success has been conceptualized differently by authors. Some scholars define startup success in terms of the extent to which the goals and objectives have been achieved due to the effectiveness of the management (Sahaf & Tahoo, 2021). Other authors describe success in terms of financial performance, wherein success is characterized by profits and sales that are more than the industry average. Success has also been defined in terms of the number of jobs generated by the company (Díaz-Santamaría & Bulchand-Gidumal, 2021). Other scholars define startup success in terms of the years the company has sustainably existed (Zarrouk et al., 2021). In this study, the success of tech-based startups has been defined with respect to the ability of a startup to sustain its operations within at least 3-5 years (Muathe et al., 2022).

On the global stage, entrepreneurship and innovation have seen immense changes in the past few decades due to technological advancement and socioeconomic paradigm shifts. For example, tech startups effectively have become the primary forces behind economic growth and job creation in many regions across the globe (He & Yu, 2020). These startups work in sophisticatedly organized ecosystems influenced by several factors ranging from regulatory environments, availability of capital, and supporting entrepreneurial ecosystems. An example is Silicon Valley in the US, where, for a long time, it has been the cradle of innovation and tech startup growth. However, supporting mechanisms such as intellectual property laws and tax waivers combined with reliable capital sources provided by venture capitalists and angel investors have made possible the successes of a significant number of startups nationwide.

In response to the focus shifting to emerging markets in Africa, the story of technological innovation has left no opportunity untouched in the recent past. Startup activity has been booming in African countries. A study conducted to establish the success factors of tech firms in Sub-Saharan Africa revealed that regulations and access to funding are the key drivers to the growth of these firms (Legas, 2015). Sub-Saharan countries have a young population with a high level of technological advancement, an increase in the number of people connected to the Internet, and investor interest (Del Sarto et al., 2020).

In Kenya, the regulatory environment of tech startups is an area of concern. While the policy measures that governments adopt to cultivate the spirit of entrepreneurship involve the creation of incubation centers and the introduction of tax reliefs, bureaucratic obstacles coupled with inconsistencies in the implementation of regulations create serious problems for startups (Aithal et al., 2023). In addition, funding opens important constrain; startups often struggle to secure investments, stressing the lack of venture capital and the low-risk appetite of investors as the main barriers (Sharma & Mehta, 2023). The Nairobi entrepreneurial ecosystem is a crucial intermediary between these challenges to provide mentorship programs, networking, and collaborative spaces, thus fostering startup growth and success. Even though Kenya's Nairobi City County plays host to a lot of tech startups, it has become so vigorous as to attract high interest. Researchers have established that the emergence of tech startups is based on an effective maneuver of the stringent regulatory framework and raising adequate capital (Sharma & Mehta, 2023; Aithal et al., 2023). To this extent, the need for access to financial resources, a conducive regulatory environment, an entrepreneurial ecosystem, and technological resources cannot be overemphasized as success factors for startups.

The triad between regulatory environments, access to funding, and the entrepreneurial ecosystem emerges as a key aspect to appreciate, especially considering understanding the determinants of startup success in Nairobi City County. By looking at the hypothesized relationships between these variables, the study sought to provide useful insight into factors affecting the growth, sustainability, and innovation output of tech startups in Africa. This research intends to contribute to implementing effective targeted policies and interventions that lead to a conducive environment for startup growth and innovation in Nairobi city county as developed economies have achieved.

Several reasons justify the need for the proposed study in Nairobi City County, Kenya. First, Kenya is emerging as a hub for technological innovation, with the proposed city being the epicenter, indicating a possible dynamic tech-startup ecosystem. Understanding the factors that contribute to the success of startups in the technology sector is essential for enhancing sustained growth and optimizing the full potential of the local tech industry. Furthermore, the unique socioeconomic conditions and the regulatory space in the country present unique opportunities and challenges, providing a case for a focused study. Through this study, valuable insights would be gained aimed

at not only enhancing the potential of local firms but also promoting a wider understanding of the factors that influence the success of tech startup firms in emerging markets.

Considering the economic and social importance of startups, there is to bolster the chances of successes of these enterprises (Santisteban et al., 2021). Interestingly, the bulk of existing literature has focused on the failures of startups. The success of startups is increasingly gaining scholarly attention as evidenced by the increase on theoretical and empirical literature on the same. Numerous factors have been outlined in the literature that contribute to the success of startups. One of such factors is the vision of founders, which according to Aldianto et al. (2021) acts as the compass during tough times. Aldianto et al. (2021) further argues that startups need to envision how they will monetize their operations from early on. Another important critical success factor for startups is speed. Launching products on time and moving faster than competitors can give startups a competitive edge. Additionally, efficient management of finances and operations is critical in increasing the odds of success, which is especially pivotal since startups are resource-constrained. Apart from factors related to business management, the characteristics of founders have also been critical in influencing the success of startups. Attributes, such as discipline, social skills, determination, risk-taking, and time management are crucial in increasing the chances of success of startups. Networking is a key requirement for startup success, which underscores the importance of social skills. Founders who have networks to influential and powerful people are more likely to success due to linkages to partnerships and angel investors. Discipline and self-control contribute to startup success because of work ethic. Moreover, determination and belief of founders is essential since startups experience numerous challenges.

### **1.1.1 Success of Startups**

Numerous studies have examined the factors associated with the success of start-ups. In Peru, for instance, Santisteban et al. (2021) linked the success of technology-based startups to factors, such as knowledge absorptive capacity, entrepreneurial and innovative culture and the performance of their product/service. In South Korea, Kim et al. (2018) linked the success of technology-based startups to entrepreneurial factors including entrepreneurs' competence and goal characteristics. An econometric study by Díaz-Santamaría and Bulchand-Gidumal (2021) reported that the success of startups is influenced by its location, age, and the dedication of investor partners. Sahaf & Tahoo (2021) linked the success of startups to knowledge and experience of founders, partnerships and

fundraising. In Sub Saharan Africa, a review by Stevanovic and Ochieng (2023) showed that the growth of startups was influenced with institutional policies. Moreover, Karitu et al. (2022) reported that the conceptualization of startup is based on the Western concepts, which might be potentially flawed and not applicable to the Kenyan context in which startups need to be viewed as an innovative scalable businesses entity that has survived for up to 3-5 years. Karitu et al. (2022) concluded that relevant legislation is crucial in facilitating the success of startups. In existing literature, contextual and methodological gaps exist. In terms of contextual gaps, there has been inadequate scholarly attention on the factors and challenges associated with the successes of startups in Kenya. Additionally, most existing studies have employed quantitative methods to examine the critical success factors for startups, which leads to a lack of in-depth insights on the factors contributing to the success of these enterprises. This study sought to address these gaps in the literature.

For this study, the success of tech startups was defined as the likelihood of a young tech-based firm with unique business ideas to perform well and continue its lasting significant impact on the technology sector. The metrics for the success of tech startups are increased customer base, increased market share, increased revenue, and a high level of sustainability (Malhotra, 2022). The indicators that were used for the success of tech startups included increased customer base, increased market share, increased revenue and high level of sustainability.

### **1.1.2 Factors Affecting the Success of Tech Startups**

Numerous factors affect the success of tech startups. These factors include personality of the founder, access to funding, leadership of the chief executive officer, viability of the business model, effectiveness of marketing, timing of the launch, government initiatives and support, market conditions, and business incubation among others (Singh & Mugila-Hillemane, 2023). The success of startups is a multifaceted concept influenced by various factors (Skawińska & Zalewski, 2020). High-tech startups have difficulties and advantages that inform their success in terms of support for their expansion and long-term viability. It is critical to establish an innovative culture inside the startup team (Malhotra, 2022). Also, a comprehensive planning approach to innovate, experiment, and a readiness to take measured risks leads to ongoing development and adaptability of startups. Planning everything out in detail before starting a firm is crucial. This entails figuring out the target market, outlining the value proposition, and creating a solid operating plan. Another

success factor is the market size and growth potential. High-tech businesses should evaluate the target market's size and growth potential (Yang et al., 2019). A market that is big and growing offers greater chances for success. Recall that success variables can change depending on the setting, sector, and region. High-tech startups should modify their strategy to fit their needs and objectives (Malhotra, 2022).

Santisteban and Mauricio (2017) identified four stages of development that a startup goes through (seed, early, growth, and expansion) and 21 important success elements that fall into three categories: organizational, individual, and external. Furthermore, the researchers discovered that the early stage is influenced by the founding team's prior start-up experience and government support; the growth stage is influenced by the clustering, technological/business capabilities of the founding team and venture capital factors; the expansion stage is influenced by the clustering factor.

Santisteban et al. (2017) refined the success factors for tech startups to four. The first aspect required for the management and operation of tech startups is quantified in terms of access to advanced technology, digital connectivity, and technology adoption rate. Entrepreneurial climate, the second critical success factor for tech startups, refers to the environment in which tech startups operate in terms of access to networking opportunities, collaborations, and partnerships. The third success factor is the ability of tech startups to obtain financial resources and services. The number of funding sources, the extent of funding impact, and the magnitude of the funding challenges facilitate the startups to thrive. The fourth factor is the government rules and regulations around the establishment of tech firms. An enabling regulation expedites the success of firms compared to an intimidating working environment.

For this study, the factors that were examined were the regulatory environment, access to funding, technological infrastructure and the entrepreneurial ecosystem. The regulatory environment refers to the to the collection of regulations and standards that tech startups abide by under the law based on compliance, challenges, and support from the county or national government (Santisteban & Mauricio, 2017). Access to funding was defined as the ability of tech startups to obtain financial resources and services, and is measured by the number of funding sources, the extent of funding impact, and the magnitude of the funding challenges (Singh & Mugila-Hillemane, 2023). Technological infrastructure includes all the vital elements required for the management and

operation of tech startups quantified in terms of access to advanced technology, digital connectivity, and technology adoption rate (Santisteban & Mauricio, 2017). The entrepreneurial ecosystem refers to the social environment in which tech startups operate and characterized by access to networking opportunities, collaborations, and mentorship programs (Malhotra, 2022). These factors have also been examined in other studies on the success of startups (Skawińska & Zalewski, 2020).

### **1.1.3 The Startup Ecosystem in Kenya**

Data from the Registrar of Companies (2022) show that 203 tech startups are operating in diverse sectors of Fintech, FoodTech, AgriTech, Environment, and Energy. The business models deployed by Tech startups in Nairobi are diverse, incorporating offerings such as SaaS platforms, e-commerce ventures, mobile application development companies, and many others (Njanja, 2022). There is no regulatory agency dedicated to governing the operations of startups. While Kenya lead in terms of startup activity in the region, the rate of failure of startups in the country is high. In Kenya, the success of startups is estimated to be 30% (Nderitu, 2022). Startup in Kenya do not experience the challenge of fundraising. Kenyan startups have recording significant growth in fundraising (Njanja, 2022). However, failure rate is high. Therefore, this study sought to examine the factors that influence the success of tech startups.

### **1.2 Statement of the Problem**

The failure rate for startups is high. Globally, estimates indicate that 35 percent of startups fail (Koning et al., 2022). One of the factors contributing to the failure of these startups is human resource challenges, especially the high attrition rate of technical employees, who constitute a core human asset for these companies (Yang et al., 2019). A common denominator between the failing startup firms is their reliance on technology platforms to solve an issue, which indicates their dependence on tech personnel who quit after a short time. Other aspects of the unconducive entrepreneurial and regulatory environments and financial constraints (Skawińska & Zalewski, 2020; Johnson et al., 2020; Lemane, 2023; Cano-Kollmann & Mudambi, 2022). According to Zarrouk et al. (2021), obstacles related to money, regulations, and legal matters hinder the establishment and expansion of Tech startups in the United Arab Emirates leading to increased failure rates of tech startups at the early stages of their operations. There is no doubt that startups

need a thriving environment for accessing funding and conducive regulatory and entrepreneurial environments supported with tech infrastructure for higher success.

Compared to the global average failure rate of startups which stands at 35%, Kenya's failure rate is higher at 47% despite the substantial funds that startups raise (Muathe & Otieno, 2023). However, a literature search showed limited studies conducted in Kenya on the factors influencing the success of tech startups in Nairobi City County. Additionally, the literature reviewed in the background of the study indicates methodological, conceptual, contextual, and population gaps that justify further research on how the regulatory environment, technological infrastructure, access to funding, and entrepreneurial ecosystems influence the success of startups. The significant number of failing startups remains an issue that needs an urgent solution. Therefore, there is a need for the current study to examine the success factors for tech startups in Kenya and offer plausible recommendations to reduce the failure rate. Further, any problem affecting the tech sector in developing nations like Kenya needs to be understood and addressed. This study sought to answer the question: What factors influence the success of tech startups in Kenya's Nairobi City County?"

### **1.3 Research Objectives**

The general and specific objectives for this study are as follows:

#### **1.3.1 General Objective**

The main aim of this research is to determine factors influencing the success of start-up tech firms in Nairobi City County, Kenya

#### **1.3.2. Specific Objectives**

In line with the general objective, this research attempts to achieve the following specific objectives:

- I. To examine the influence of the regulatory environment on the success of tech startups in Nairobi City County, Kenya.
- II. To establish the influence of access to funding on the success of tech startups in Nairobi City County, Kenya.
- III. To determine the influence of technological infrastructure on the success of tech startups

in Nairobi City County, Kenya.

- IV. To examine the influence of entrepreneurial ecosystems on the success of tech startups in Nairobi City County, Kenya.

#### **1.4 Research Questions**

1. What is the influence of the regulatory environment on the success of tech startups in Nairobi City County, Kenya?
2. What is the influence of access to funding on the success of tech startups in Nairobi City County, Kenya?
3. What is the influence of technological infrastructure on the success of tech startups in Nairobi City County, Kenya?
4. What is the influence of entrepreneurial ecosystems on the success of tech startups in Nairobi City County, Kenya?

#### **1.5 Scope of the Research**

The focus of this study was on tech startups. Startups operating in all the sectors ranging from FoodTech, FinTech, and AgriTech to Energy and Environment industries have been explored. Non-startups are not within the scope of this research. Geographically, this research was limited to startups with operations in Nairobi County. The methodological scope of this study was mixed methods consisting of a descriptive and cross-sectional survey and key informant interviews. The research was conducted between March and May 2024.

#### **1.6 Significance of the Study**

The study will be of benefit to several stakeholders such as the Ministry of Trade, Investment, and Industry, the Association of Startup and SME Enablers of Kenya (ASSEK), Startup Founders and Entrepreneurs, and Investors and Venture Capitalists.

##### **1.6.1 Policymakers**

Government agencies such as the Ministry of Trade, Investment, and Industry and policymakers will find the study findings invaluable to government agencies and policymakers involved in economic development and entrepreneurship initiatives in Nairobi City County. By understanding

the specific challenges and opportunities faced by tech startups in the region, policymakers can tailor regulations, incentives, and support programs to create a more conducive environment for startup growth. This could include streamlining regulatory processes, enhancing access to funding opportunities, and investing in technological infrastructure. Ultimately, an informed Ministry of Trade, Investment, and Industry is likely to foster innovation, job creation, and economic growth in Kenya.

### **1.6.2 Practitioners**

The findings of this study may benefit investors and venture capitalists. Investors and venture capitalists play a crucial role in fueling the growth of tech startups by providing financial resources and strategic guidance. The insights generated from this study will enable investors to make more informed decisions about where to allocate their capital within the Nairobi tech ecosystem. By understanding the factors that contribute to startup success, investors can identify high-potential ventures and allocate resources more effectively. Additionally, the study findings may help investors identify gaps in the market and opportunities for strategic partnerships or investment diversification. The findings obtained from this research were also used to derive managerial implications. From the findings, managers and founders of startups in Kenya can develop strategies to enhance their success. Armed with this knowledge, startup founders can make more informed decisions about resource allocation, business development, and growth strategies. Additionally, the study may highlight opportunities for collaboration, mentorship, and networking within the entrepreneurial community, empowering founders to leverage their collective strengths and drive innovation in the region.

### **1.6.3 Scholars**

The findings obtained from this research may be useful in developing a theory or model to understand the factors that influence the retention of tech personnel in startups. The developed model can be empirically tested to advance research in this area.

## **1.7 Chapter Summary**

This chapter has introduced the factors influencing the success of tech startups in Kenya's Nairobi City County. It also highlighted the background research on the influence of the regulatory

environment, access to funding, technological infrastructure, and entrepreneurial ecosystem on the success of tech startups. This chapter has further identified the gaps that the current research proposes to fill. The objectives laid out in this chapter are a guide to the study to form a concrete conclusion that has informed further research. The next chapter consists of a review of the theoretical and empirical research that supports the current study.



## CHAPTER TWO

### LITERATURE REVIEW

#### 2.1 Introduction

This chapter presents a review of the factors influencing the success of tech startups in Nairobi City, Kenya. The factors for analysis are aligned with the research objectives and include the regulatory environment, access to funding, technological infrastructure, and entrepreneurial ecosystem. Further, this chapter covers the theoretical and empirical reviews that inform the study. The knowledge gaps are also highlighted with suggestions on how the proposed research would fill them.

#### 2.2 Theoretical Framework

This study discusses two theoretical underpinnings and their relevance to the research objectives. These theories are the Resource-Based View (RBV) theory and the theory of Social Network.

##### 2.2.1 Resource-Based View (RBV) Theory

The RBV theory is very relevant to the research under consideration. The Resource-Based View (RBV) theory was developed by Jay Barney, an American management scholar, in the 1980s and 1990s. Jay Barney is a renowned professor of strategic management and holds the Presidential Professor of Strategic Management and Pierre Lassonde Chair of Social Entrepreneurship at the University of Utah's David Eccles School of Business. It forms a conceptual foundation for determining the role of internal resources and capabilities in entrepreneurial tech startups and defending their competitive advantages and, ultimately, their success (Bertram & Bertram, 2016). RBV theory is highly relevant to the research on entrepreneurial tech startups in Nairobi City County. Regarding the tech-based ecosystem in Nairobi City County, RBV can facilitate analyzing how startups draw on and implement resource resources, including technological competencies, human capital, and financial assets, and navigate problems and use opportunities. Firms that possess valuable, scarce, and difficult-to-replicate resources are prone to attaining a sustained competitive advantage, as opined by Barney (1991). Using RBV, the study can focus on which internal resources are the most vital for startups' success, their acquisition process, and how this strategic deployment influences the performance of tech startups in Nairobi.

RBV posits that firms with valuable, rare, inimitable, and non-substitutable (VRIN) resources are more likely to achieve sustained competitive advantages (Barney, 1991). This theory is particularly pertinent for analyzing how tech startups in Nairobi leverage their internal resources to navigate challenges and capitalize on opportunities. These resources include technological competencies, human capital, and financial assets, all critical in the dynamic and competitive tech-based ecosystem of Nairobi.

In Nairobi, the tech ecosystem is burgeoning, with numerous startups emerging in sectors such as fintech, healthtech, and agritech. The application of RBV can shed light on the specific internal resources that are most crucial for these startups' success. For instance, technological competencies, such as proprietary software and innovative product designs, can provide significant competitive advantages. Similarly, the quality and expertise of human capital, including skilled developers and visionary leaders, are essential for driving innovation and growth.

Financial assets are another critical resource. Access to funding, whether through venture capital, angel investors, or grants, enables startups to scale their operations and invest in further innovation. The RBV framework helps in understanding how these financial resources are acquired and strategically deployed to enhance startup performance.

Using RBV, the study can focus on identifying which resources are most vital for tech startups in Nairobi, how these resources are acquired, and how their strategic deployment influences performance. This approach not only highlights the importance of internal capabilities but also provides insights into the processes and strategies that successful startups use to build and maintain their competitive advantages.

Moreover, RBV can help explain the differences in performance among startups within the same ecosystem. While all startups may have access to similar external opportunities, it is their unique internal resources and capabilities that often determine their success. For example, a startup with a unique technological innovation that is difficult to replicate by competitors can dominate its niche market, thereby achieving sustained success.

### 2.2.2 Social Network Theory

Social Network Theory, also known as Social Network Analysis, was developed primarily by Jacob L. Moreno in the early to mid-20th century, with his introduction of sociometry and sociograms. Moreno introduced the concepts of sociometry and sociograms, which laid the foundation for analyzing social structures through visual representations of social links (Moreno, 1934). The theory gained further prominence with Mark Granovetter's influential paper, "The Strength of Weak Ties" (1973), which highlighted the importance of weak social ties in facilitating the flow of information and innovation within networks (Granovetter, 1973). Mark Granovetter further contributed to its development with his influential paper "The Strength of Weak Ties" in 1973 (Vismara, 2016). The social network theory applies to the proposed study, especially when looking at the influences of entrepreneurial ecosystems, networking opportunities, and collaborative spaces that support startup growth in Nairobi City County. Social Network Theory is particularly relevant when examining the entrepreneurial ecosystems in regions such as Nairobi City County. The theory underscores the significance of social bonds, networks, and interactions in shaping individual and organizational behaviors. In the context of entrepreneurship, it provides a framework to analyze how entrepreneurs' social networks influence their access to resources, information, and support systems.

Entrepreneurial ecosystems, such as those in Nairobi, thrive on robust networking opportunities and collaborative spaces that support startup growth. According to Bandera and Thomas (2018), a strong network is crucial for successfully running a business. Social Network Theory helps elucidate how these networks function, how they are structured, and how they impact entrepreneurial success. In line with social network directives, a strong network is seen as a champion in successfully running a business (Bandera & Thomas, 2018). This theory emphasizes the role of social bonds, networks, and interactions on individual and organizational behavior (Granovetter, 1973). Granovetter's concept of the strength of weak ties is particularly applicable in understanding the dynamics within Nairobi's entrepreneurial ecosystem. Weak ties, often characterized by less frequent but more diverse interactions, can provide entrepreneurs with unique opportunities to access new information and resources that are not available within their immediate social circles (Granovetter, 1973). These weak ties can lead to securing funding, finding mentorship, and establishing partnerships both locally and globally.

In Nairobi, the entrepreneurial landscape is marked by a mix of strong and weak ties. Strong ties, which involve frequent and emotionally intense interactions, are crucial for trust-building and sustained collaboration. Weak ties, on the other hand, facilitate the spread of innovative ideas and opportunities across different networks. Social Network Theory helps in analyzing how these different types of ties coexist and complement each other in fostering entrepreneurial growth. In the scope of the study, Social Network Theory is appropriate to analyze how entrepreneurs' social networks within the ecosystem structure and makeup, including their access to resources, information, and support. A useful aspect of the theory relates to the study of social ties of entrepreneurs in Nairobi that, through the lens of the theory, can lead to understanding how entrepreneurs use social ties both locally and on the global level, securing funding, mentorship, and partnerships. Social Network Theory can also shed light on the influence of collaborative spaces like co-working spaces and innovation centers on building tight bonds between entrepreneurs. Collaborative spaces, such as co-working spaces and innovation centers, play a pivotal role in strengthening the social networks of entrepreneurs. These spaces provide physical venues where entrepreneurs can interact, share knowledge, and form connections that might not occur otherwise. Social Network Theory offers a lens through which to study the influence of these spaces on the formation and maintenance of social ties.

In Nairobi, co-working spaces like Nairobi Garage and innovation hubs such as iHub serve as central nodes in the entrepreneurial network. These spaces attract diverse groups of entrepreneurs, investors, and mentors, facilitating the creation of weak ties that can lead to significant opportunities. By fostering an environment of collaboration and knowledge exchange, these spaces help entrepreneurs build strong networks that are essential for their success.

The structure of social networks within Nairobi's entrepreneurial ecosystem significantly impacts the flow of resources and information. Entrepreneurs with extensive networks are better positioned to access crucial resources such as funding, market information, and technical expertise. Social Network Theory helps in mapping out these networks and understanding how different actors are connected and how information flows through these connections.

For instance, entrepreneurs who are well-connected to key players in the ecosystem, such as venture capitalists or experienced mentors, can leverage these connections to gain insights and support that are vital for their ventures. The theory also highlights the role of intermediaries or brokers who connect otherwise disconnected parts of the network, facilitating the flow of information and resources across the ecosystem.

Social Network Theory provides a comprehensive framework for analyzing the entrepreneurial ecosystems in Nairobi City County. By examining the social ties and networks of entrepreneurs, the theory sheds light on how these connections influence access to resources, information, and support systems. Collaborative spaces such as co-working spaces and innovation hubs play a crucial role in fostering these networks, enabling entrepreneurs to build the relationships necessary for their success. Through the lens of Social Network Theory, we can better understand the dynamics of Nairobi's entrepreneurial ecosystem and identify strategies to enhance its growth and sustainability.

### **2.2.3 Organization Life and Death Theory**

Samuel Yizak's Organization Life and Death Theory is a framework that can be applied to understand the life cycle of organizations, including their growth, challenges, and potential demise. Although there isn't a well-known theory explicitly named after Samuel Yizak in current literature, Core Principles are Birth and Formation: Organizations are born out of an idea, need, or opportunity. This stage involves the initial establishment, gathering of resources, and setting up the foundational structure. Growth and Development: Organizations grow by expanding their operations, increasing their market presence, and developing their internal processes and systems. Maturity and Stability: At this stage, organizations have established a stable market position and efficient operations. They focus on maintaining their status and optimizing performance. Decline and Challenges: Organizations may face challenges such as market saturation, increased competition, regulatory changes, or internal issues that lead to a decline in performance. Death or Transformation: Organizations may eventually cease operations (organizational death) or transform through innovation, restructuring, or mergers to survive and thrive.

The regulatory environment plays a critical role in the growth and development of startups. Favorable regulations can support growth by providing a conducive environment for operations, while stringent or unfavorable regulations can pose significant challenges, potentially leading to decline. Yizak's theory would analyze how the regulatory framework influences the various stages of organizational life, especially how it impacts startups' ability to grow and handle challenges.

Access to funding is crucial during the birth and growth stages of an organization. Sufficient funding enables startups to invest in necessary resources, hire talent, and scale operations. Yizak's theory would focus on how funding acts as a lifeline during these critical stages, determining whether a startup can successfully navigate its early phases and achieve sustainable growth.

Technological infrastructure is a vital component that supports the growth and stability of startups. Robust infrastructure facilitates efficient operations, innovation, and competitive advantage. Yizak's theory would examine how the quality and availability of technological infrastructure affect startups' ability to grow, stabilize, and avoid decline.

The entrepreneurial ecosystem, including mentorship, networking opportunities, and community support, significantly impacts startups throughout their lifecycle. A supportive ecosystem can enhance growth and stability by providing resources, knowledge, and connections. Yizak's theory would analyze how a vibrant ecosystem contributes to the health and longevity of startups, helping them navigate from birth through growth to maturity.

Samuel Yizak's Organization Life and Death Theory provides a framework to understand how various factors influence the lifecycle of organizations. By examining the regulatory environment, access to funding, technological infrastructure, and entrepreneurial ecosystems, we can identify critical elements that affect the success of tech startups in Nairobi City County, Kenya. This theory emphasizes the importance of these factors in the birth, growth, development, stability, and potential decline or transformation of startups, offering insights into how they can be managed to ensure organizational longevity and success.

## **2.3 Empirical Review**

This section reviews the previous studies based on the study's four objectives; regulatory environment, access to funding, technological infrastructure, and entrepreneurial ecosystems. It also gives a critique to indicate the research gaps.

### **2.3.1 Regulatory Environment and Success of Tech Startups**

The regulatory environment in which the tech startups operate may influence the success of these firms. Skawińska and Zalewski (2020) examined the essential elements for startup success in the EU. The researchers used startup data that was available for a subset of the EU states to apply the component analysis method. They found that five factors, which together accounted for over 70% of the variability in the data, were connected to both formal and informal economic institutions and human capital. The findings suggested that more developed nations provide startups with an institutional competitive edge. Additionally, institutional policies and human capital can be blamed for the differences in success determinants between highly developed and developing countries. There is a need to improve the formal and informal institutions through creative public policy to close this gap. The contextual inconsistencies from the EU may not give accurate findings for similar research in Kenya.

Goo and Heo (2020) conducted an empirical analysis of the effects of regulatory sandboxes on fintech venture funding in South Korea. The researchers performed an analysis utilizing the comparative research method at the national level. Nine leading nations that had already implemented regulatory sandboxes were involved in the study. A regression analysis and a comparison analysis were carried out for validation purposes. According to the findings, the implementation of regulatory sandboxes had a highly favorable impact on the expansion of fintech venture capital. The findings suggested that by reducing regulatory ambiguity, regulatory sandboxes might be extremely important in boosting the amount of venture capital entering the fintech venture ecosystem. The results of this study aid in giving policymakers empirical data to support their assessments of the benefits of regulatory sandboxes. There exists conceptual and contextual gaps in this study. Contextual because it was conducted in South Korea, a completely different scenario from Kenya's Nairobi City County. The conceptual gap is on the established venture capital firms as opposed to the tech startups which is the focus of the current study.

Regulatory policies that are significant do not only observe the nature of regulatory policies that shape the environment in which technology startups operate, either a wide-open atmosphere for innovation or an uphill battle (Skawińska & Zalewski, 2020). Facilitative regulatory policies have been associated with a growth rate in technology startups, namely the ones that create the best environment for entrepreneurship. However, as Skawińska and Zalewski (2020) note, regulations affect different players differently, and excessively complicated or ambiguous policies may curtail innovation, stifling startup ventures. The regulatory influence is rather complicated, and hence, determining such conditions for establishing and running tech startups in Nairobi requires understanding the interwoven network of the regulatory influence in greater depth.

Smith and Brown (2018) state that passing regulatory obstacles may be viable for startups since this helps develop a company's resistance while also teaching compliance and mitigating the risks for organizations. This view implies that regulatory struggles can turn formative and birth a manufactured into a more solid form of the startup. However, Zarrouk et al. (2021) argue that strict policy controls could adversely impact early-stage tech startups more than others, leading to a disadvantage in competing and innovating. The polarities of these views highlight the significance of a more complex differential analysis of the issue-specific regression of tech startups in Nairobi City County and their long-term implications for success.

Managing a healthy regulatory environment, which aims to promote innovation while minimizing and mitigating emerging risks, is an important feature coming out of the literature. Other works like Coeurderoy and Murray (2008) point out the role of regulatory clarity that gives startups a roadmap for compliance crucial to reducing uncertainties that may derail their progress. As pointed out by Callahan, however, this is striking a very important balance; if pushes are too far, unintended consequences can occur. However, Joshi and Satyanarayana (2014) caution that one can misguide as, nonetheless, inadvertently, some control metrics might compress the agility and innovativeness that is required; for a startup to grow. The Nairobi policymakers' task of striking the fine line between regulation and creating an ecosystem that breeds innovation is complex, yet a crucial one as the future of the local tech startup ecosystem depends on this balance directly.

### 2.3.2 Access to Funding and Success of Tech Startups

Funding availability is of the utmost value for a start-up tech firm since its ability to activate the revenue source in innovation and research and enter an entrepreneurial operation is a fundamental factor of success. A study was conducted by Singh and Mugila-Hillemane (2023) to determine the characteristics that influence a tech startup's choice of financing sources throughout its lifecycle. Their study used a straightforward random sampling technique to select 93 representative tech businesses from Bangalore, India. A semi-structured questionnaire and in-depth interviews with the founders or CEOs of the sampled startups under examination were used by the research to acquire primary data. The current study has also used a mixed approach to data collection to maintain the level of enrichment during the data collection. In addition, the researchers used binary logistic regression analysis to investigate the possibility that a tech startup will approach and use a specific funding source at some point in its existence. The results showed that depending on its financial needs and stage of the lifecycle, a tech startup chooses a different finance source. They discovered that, although a tech startup's options for funding are restricted to business angels in the early stages, as the company grows, it turns to institutional sources such as banks, venture capital firms, corporate venture capital, and private equity firms. Human capital (HC), social capital (SC), and research capital (RC) are the three main types of financial requirements. VCs are primarily responsible for funding HC and SC, while growth-stage and early-stage investors help acquire RC. Singh and Mugila-Hillemane's (2023) study highlights the necessity of comprehending the type and scope of funding that tech startups require, as this will impact the sources of funding they approach to fund their operations and expansion over their life cycle. However, the current study fills this conceptual gap by focusing on how access to funding influences the success of tech startups.

Finding finance is a consideration – and a subconscious phenomenon – that influences startup tech firm trajectory and sustainability in Nairobi. The research of Santisteban and Mauricio (2017) illustrates that these startups with adequate capital can spend on research, development, and specialized manpower and even expand the market base. Reversely, a shortage of funds may result in resource deficits that limit a firm's innovative capabilities and competitive advantage. External funding alone, of course, is insufficient; the internal management of finances is also vital. This is corroborated by studies such as Croce et al. (2018) who argue that, because of good financial

planning and the ability to control budgets, startup tech firms can maintain good utilization of funds and increase potential chances of success.

Tech startups in Nairobi, characterized by diverse types of investors and financiers, experience the costing challenges as the major disadvantages that cause them to owe soon after fund to raising funds. Yu (2020) argues that the existing stricter collateral requirements restrict the establishment of a few startup firms from traditional forms of financing, such as bank loans during a financial drought. Inside Outsourcing: From a focus on the motivation involved in changing technologies that deliver customer service directly to telecoms and those who serve them, we raised the issue of why cleanliness should even be a consideration. Those barriers block access to financial resources and create wide discrimination in the allocation of funds, increasing the effectiveness of startup growth and compromising its potential.

The multipronged solution to the problem of resource deficit in tech startups in Nairobi entails a complete system that draws stakeholders from the private and public sector sectors. Stimulating such limitations is the policy intervention of clarifying the application process, reducing requirements, and enhancing information and knowledge on the allocation of funding sources. It is possible to provide dedicated funds or support programs tailored to the needs of the tech startup by cooperation between financial institutions, government institutions, and the industry. Multiple studies done by Coeurderoy and Murray (2008) all point out that a comprehensive approach that involves policy change and the establishment of strategic business alliances is necessary to overcome difficulties associated with funding and ensure the sustainability of startup tech companies in Nairobi.

### **2.3.3 Technological Infrastructure and Success of Tech Startups**

The performance of tech startups is essentially dependent on technological infrastructure thus necessitating the need for durable IT solutions. Zarrouk et al. (2021) examined the economic and technological factors influencing the success of startups in the United Arab Emirates (UAE). Since policymakers started putting laws into place in 2017 to support the expansion of Fintech businesses, the UAE has developed into a regional hub that acts as an incubator for the FinTech ecosystem. The study investigated the fundamental elements affecting UAE-based FinTech businesses' success. The analysis considers several variables, accounting for the hedonics of

FinTech: the business model, the accessibility and availability of funding, and the structure of the business ecosystem. A semi-structured questionnaire was used to combine the data from 32 FinTech founders. An ordered logistic regression model was used for a qualitative study. The results showed that FinTechs' viability as micro businesses depend critically on the availability of technological infrastructure and financial resources, particularly venture capital and digital infrastructure. The contextual and population gaps in this study on UE-based FinTech firms need to be closed by examining all the tech startups in Kenya's capital city, Nairobi. However, the current study has maintained the mixed approach using questionnaires and key informant interviews with founders. In line with Zarrouk et al. (2021) study, technological infrastructure is evident from scientific research such as Kirchberger and Pohl (2016) which states that a strong technological infrastructure allows the holders to work fluently and innovate easily; this is a factor that brings about big startup performance. There is provision for continuous connection to high-speed internet which is vital in product development, communication, and marketing. There is a difference between this opinion and teaming; the study by Bliemel et al. (2019) shows that problems with the wrong technology framework can be very menacing, and there are shortcomings in the turn of startups' scalability and efficiency in outcome. The second standpoints offer more insight into the necessity of using a critical approach when studying the influence on the performance of startups due to the technology capital of Nairobi City County.

Also, decisions about technological infrastructure that need to be highlighted include the provision and consistency of power supply. It is to the reports of Bliemel et al. (2019) that an unreliable supply of power can hinder the business of tech startups which ultimately results in disruption of operations and causes them to incur more operating costs. However, some scholars, such as Johnson et al. (2020) believe that technological ecosystem improvement can be achieved by renewable energy solutions considering that modernization may help in addressing these challenges and establishing a more sustainable and resilient technological ecosystem. Persistent articulations of such discourse point to the processual character of links between technological infrastructure and startup performance in Nairobi, which matters for both policy interventions and strategic planning.

The availability and affordability of technology resources are imperatives along with technological power supply. Humanly speaking, Santisteban and Mauricio (2017) development point out that a

lack of affordable technology will limit the implementation of innovative solutions by startups. Access, Contrast, and Author-Date This antinomy highlights the importance of interrogating the technological issues encountered by startups in Nairobi and guiding policymakers and relevant industry players on addressing critical gaps.

In addition to this, the contribution of government initiatives and partnerships in advancing technological infrastructure cannot be underplayed. Kirchberger and Pohl's (2016) study shows that proactive government policies, including investment in digital infrastructure, and effective public-private collaboration, can drive the technological landscape to the startups. However, these policies could be complicated by governance and regulatory systems issues, as indicated by Santisteban and Mauricio (2017) who point out the importance of governance and regulatory frameworks. Such a dynamic dependency of factors points to the myriad nature of the relationship between technological infrastructure and startup performance in Nairobi, which requires detailed and multidimensional analysis.

#### **2.3.4 Entrepreneurial Ecosystems and Success of Tech Startups**

Research indicates that entrepreneurial ecosystems affect the growth and success of tech startups in multiple ways. Entrepreneurial ecosystem refers to a complex network of organizations, institutions, and resources that collectively promote entrepreneurship in a particular geographical area (Bandera & Thomas, 2018). The study conducted by Bala-Subrahmanya (2022) examined the competitiveness of high-tech start-ups and entrepreneurial ecosystems in India. The study used the literature review method to collect data. The findings indicated that while ecosystems have grown, the success of high-tech start-ups has not increased significantly over the past ten years. Therefore, even though there are countless high-tech start-ups, only a very tiny percentage of them manage to survive, and even fewer of those that do manage to scale up. Even if there were a lot more unicorns emerging from start-up hubs in 2021, they still make up a relatively small percentage of the high-tech start-ups that emerged from practically every start-up hub that was acknowledged worldwide. This highlighted the vital significance of "high-tech start-ups' competitiveness" and the necessity of investigating the variables that affect it within the framework of entrepreneurial ecosystems. Considering this, Bala-Subrahmanya solicited academic papers, empirical research, reviews, and viewpoints on the subject of "Competitiveness of High-tech Start-ups and Entrepreneurial Ecosystems." The Bala-Subrahmanya study included managerial and policy

recommendations, an overview of a few selected papers, editorial observations, and future research directions (for academicians). The methodological gap in this study needs to be closed since the literature review method was used. The current study has been enriched through a mixed approach to data collection using questionnaires and key informant interviews. The contextual gap in Bala-Subrahmanya research needs to be addressed to compare the study findings in Kenya. The current study explores the influence of the entrepreneurial ecosystem on the success of tech start-ups in Nairobi City County, Kenya.

Within Nairobi City County, Kenya, the entrepreneurial ecosystem has seen numerous changes, evident with the stakeholders, including government bodies, incubators, accelerators, and venture capitalists. Stam and Spigel (2016) and Isenberg (2011) note explicitly that it is not just access to funding but also other nonfinancial resources, such as mentorships and networking opportunities, that a supportive entrepreneurial ecosystem provides, and which are deemed fundamental to the existence and viability of small enterprises. Through mentorship, the Nairobi entrepreneurial ecosystem rises to shape as a fundamental component of the tech startup at this point of infancy. Mentorship benefits startups, as both Tiba et al. (2020) and Audretsch (2021) have shown through their research; especially experienced mentors, their contribution goes beyond strategic alignment and helps their understudies navigate early-stage Entrepreneurship challenges. However, as Berman et al. (2022) suggest, it is essential to realize potential challenges, such as the availability of mentors and the necessity of sufficiently effective matching mechanisms to provide compatibility between mentors and mentees concerning the context of Nairobi.

In terms of the entrepreneurial ecosystem, it is through networking opportunities that startup industry members procure resources, connect with other partners, and acquire clients. Such an environment characterized by collaborative spaces and networking events is important for nurturing knowledge sharing (Santisteban & Mauricio, 2017). Platforms allow best practices to be spread and encourage group work unity among entrepreneurs. However, critics like Maritz et al. 2016 reveal that elite networks may unintentionally create inequality, withholding chances for specific populations. The latter, therefore, despite the importance ascribed to networking, inclusivity and diversity must be considered as essential complements in furnishing an entrepreneurial society that is fully-proof and well-rounded, as in the case of Nairobi.

Governments, through initiatives geared towards development, always come up with policy frameworks that contribute to establishing a conducive environment for the entrepreneur. Nairobi's entrepreneurial system has benefited immensely from government-endorsed programs and regulations supporting startups. How or in what way might state actions, as indicated in Acs et al. (2018), including tax incentives and regulatory reforms, proactively impact the success of tech startups? However, limitations such as bureaucratic hindrances and inconsistency degree in policy implementation, as Mack and Mayer (2016) pointed out, emphasize the need for continuous examination and adaptation of support mechanisms.

## **2.4 Research Gaps**

The study under review seeks to address an evident gap in the literature on startup success factors in Nairobi City County's tech environment. Despite several studies on funding, such as regulatory environment to baseline infrastructure, there are limited insights into integrating these factors that influence tech startup success or failure in Nairobi's unique entrepreneurial ecosystem. If these difficulties were isolated operational concerns separate from the other things related to the entrepreneurial ecosystem, they could be further viewed in this way, but this was insufficient. This proposed gap has been bridged by introducing a multidimensional model of the integrated nature factors influencing the success of startups in Nairobi's tech industry. There are contextual, conceptual, population, and methodological inconsistencies summarized in Table 2.1 below that the current study seeks to fill.

Table 2.1 Summary of Research Gaps

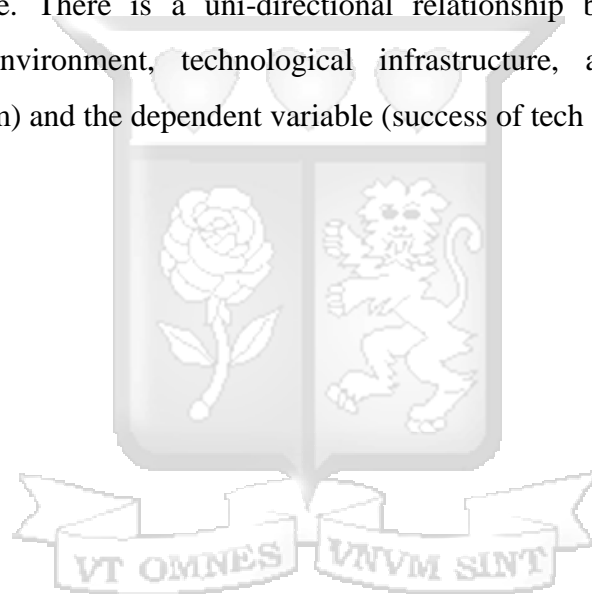
Study Objectives	Scholars	Findings	Research Gaps
To examine the influence of the regulatory environment on the success of tech startups in Nairobi City County, Kenya	Skawińska and Zalewski (2020)	More developed nations provided startups with an institutional competitive edge. Additionally, institutional policies and human capital can be blamed for the differences in success determinants between highly developed and developing countries.	Contextual gap- The contextual inconsistencies from the EU may not give accurate findings for similar research in Kenya.
	Goo and Heo (2020)	The implementation of regulatory sandboxes had a highly favorable impact on the expansion of fintech venture capital. The findings suggested that by reducing regulatory ambiguity, regulatory sandboxes might be extremely important in boosting the amount of venture capital entering the fintech venture ecosystem.	There exists conceptual and contextual gaps in this study. Contextual because it was conducted in South Korea, a completely different scenario from Kenya's Nairobi City County. The conceptual gap is on the established venture capital firms as opposed to the tech startups which is the focus of the current study.
To establish the influence of access to funding on the success of tech startups in Nairobi City County, Kenya	Singh and Mugila-Hillemane (2023)	The results showed that depending on its financial needs and stage of the lifecycle, a tech startup chooses a different finance source. They discovered that, although a tech startup's options for funding are restricted to business angels in the early stages, as the company grows, it turns to institutional sources such as banks, venture capital firms, corporate venture capital, and private equity firms.	Conceptual gap- The previous study highlights the necessity of comprehending the type and scope of funding that tech startups require, as this will impact the sources of funding they approach to fund their operations and expansion over their life cycle. However, the current study fills this conceptual gap by focusing on how access to funding influences the success of tech startups.

<p>To determine the influence of technological infrastructure on the success of tech startups in Nairobi City County, Kenya</p>	<p>Zarrouk et al. (2021)</p>	<p>The results showed that FinTechs' viability as micro businesses depends critically on the availability of technological infrastructure and financial resources, particularly venture capital and digital infrastructure.</p>	<p>The contextual and population gaps in this study on UE-based FinTech firms need to be closed by examining all the tech startups in Kenya's capital city, Nairobi</p>
<p>To examine the influence of entrepreneurial ecosystems on the success of tech startups in Nairobi City County, Kenya</p>	<p>Bala-Subrahmanya (2022)</p>	<p>The findings indicated that while ecosystems have grown, the success of high-tech start-ups has not increased significantly over the past ten years. Therefore, even though there are countless high-tech start-ups, only a very tiny percentage of them manage to survive, and even fewer of those that do manage to scale up.</p>	<p>Methodological gap – The literature review method was used. The current study has enriched the study through a mixed approach to data collection using questionnaires and key informant interviews.</p> <p>The contextual gap in Bala-Subrahmanya research needs to be addressed to compare the study findings in Kenya. The current study explores the influence of the entrepreneurial ecosystem on the success of tech startups in Nairobi City.</p>

Source: Researcher (2024)

## 2.5 Conceptual Framework

The conceptual framework guides this study on the success factors for tech startups in Nairobi City County that integrates four independent variables; the Regulatory Environment, Technological Infrastructure, Access to Funding, and Entrepreneurial Ecosystem. Each of these variables has three indicators. The regulatory environment has been measured in terms of regulatory compliance, regulatory challenges, and regulatory support. Access to funding covers the sources, challenges, and impact of funds on startup development. The entrepreneurial ecosystem assesses the networking opportunities, collaborative spaces, and mentorship programs. Lastly, access to advanced technology, digital connectivity, and technology adoption rate are indicators of technology infrastructure. There is a uni-directional relationship between the independent variables (regulatory environment, technological infrastructure, access to funding, and entrepreneurial ecosystem) and the dependent variable (success of tech startups).



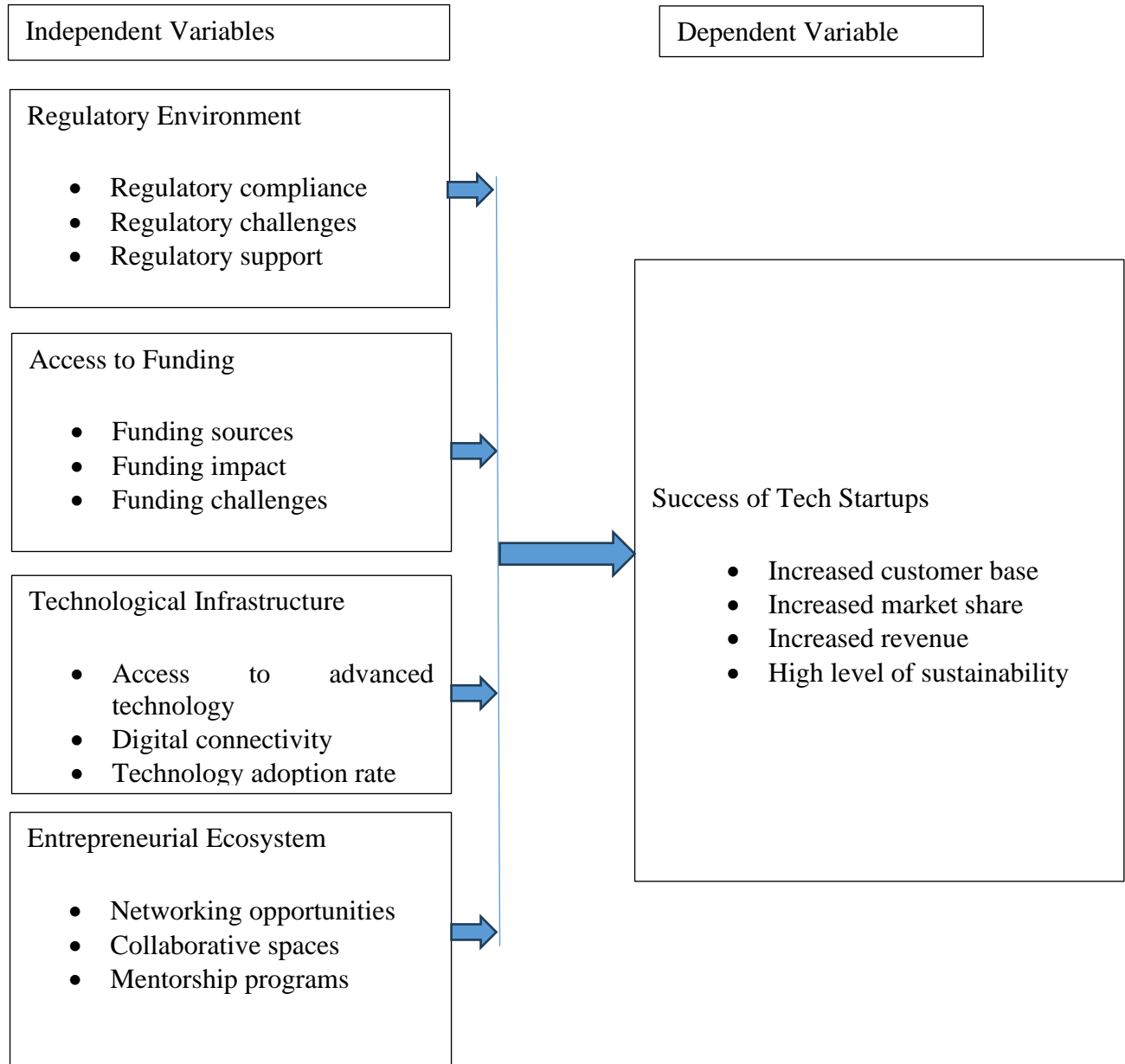


Figure 2.1: Conceptual Framework

Source: Researcher (2024)

## 2.6 Operationalization and Measurement of Variables

The table below operationalizes the dependent and independent variables for the study.

Table 2.2 Operationalization and Measurement of Variables

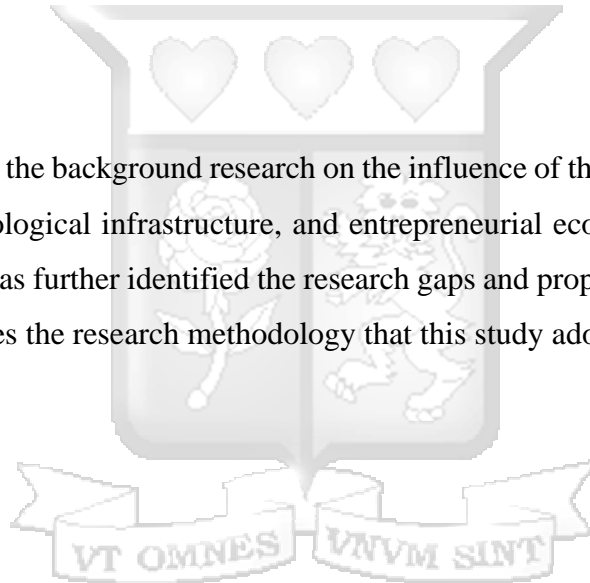
Variable	Construct	Measurement	Supporting Literature
Independent Variables	Regulatory Environment	<ul style="list-style-type: none"> <li>Regulatory compliance</li> <li>Regulatory challenges</li> <li>Regulatory support</li> </ul>	Skawińska and Zalewski (2020) Smith and Brown (2018) Zarrouk et al. (2021) Coeurderoy and Murray (2008) Joshi and Satyanarayana (2014)
	Access to Funding	<ul style="list-style-type: none"> <li>Funding sources</li> <li>Funding impact</li> <li>Funding challenges</li> </ul>	Singh, Mungila Hillemane (2023) Colombo and Grilli (2007) Santisteban and Mauricio (2017) Croce, Guerini and Ughetto (2018) Yu (2020) Coeurderoy and Murray (2008)
	Technological Infrastructure	<ul style="list-style-type: none"> <li>Access to advanced technology</li> <li>Digital connectivity</li> <li>Technology adoption rate</li> </ul>	Kirchberger and Pohl (2016) Bliemel et al. (2019) Johnson et al. (2020) Santisteban and Mauricio (2017) Kirchberger and Pohl (2016) Santisteban and Mauricio (2017)
	Entrepreneurial Ecosystem	<ul style="list-style-type: none"> <li>Networking opportunities</li> <li>Collaborative spaces</li> <li>Mentorship programs</li> </ul>	Bandera and Thomas (2018) Stam and Spigel (2016) Audretsch (2021) Cano-Kollmann and Mudambi (2022)

Dependent Variable	Success of Tech Startups	<ul style="list-style-type: none"> <li>• Increased customer base</li> <li>• Increased market share</li> <li>• Increased revenue</li> <li>• High level of sustainability</li> </ul>	<p>Stam and Spigel (2016)</p> <p>Cano-Kollmann and Mudambi (2022)</p> <p>Singh, Mungila Hillemane (2023)</p> <p>Colombo and Grilli (2007)</p> <p>Smith and Brown (2018)</p> <p>Zarrouk et al. (2021)</p>
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Source: Researcher (2024).

## 2.7 Chapter Summary

This chapter has captured the background research on the influence of the regulatory environment, access to funding, technological infrastructure, and entrepreneurial ecosystem on the success of tech startups. The study has further identified the research gaps and proposes ways of filling them. The next chapter examines the research methodology that this study adopts.



## CHAPTER THREE

### RESEARCH METHODOLOGY

#### 3.1 Introduction

In this chapter, the research methodology that was used for this research is demonstrated. This chapter has introduced the research philosophy, research design, population and sampling, data collection methods, data analysis approaches, research quality, and ethics.

#### 3.2 Research Philosophy

Pragmatism is a research philosophy that prioritizes practical outcomes and real-world applications. It is centered on the idea that the truth and meaning of concepts are determined by their practical effects and usefulness. In pragmatism, the focus is on the problem being studied and the research methods that are most effective in addressing that problem. This philosophy is flexible and often employs mixed methods, combining qualitative and quantitative approaches to gain comprehensive insights. Key principles of pragmatism include Practical Relevance: Emphasizing research that has practical applications and benefits, Pluralism: Utilizing multiple perspectives and methodologies to address complex problems. Action-Oriented: Focusing on actionable knowledge and solutions and Contextual Understanding: Acknowledging that context and environment influence the phenomena being studied.

The study on the success factors of tech startups in Nairobi City County can effectively employ a pragmatism research philosophy due to Pragmatism's emphasis on practical outcomes aligns with the study's goal of providing useful insights and recommendations for entrepreneurs, policymakers, and stakeholders in the tech ecosystem of Nairobi. Additionally, Pragmatism supports using a variety of methods to gain a holistic understanding of these diverse factors. For instance, it can incorporate surveys (quantitative) to gather broad data on startup success and interviews (qualitative) to gain deeper insights into specific challenges and opportunities faced by startups. Lastly, Pragmatism acknowledges the importance of context, ensuring that the study's findings and recommendations are tailored to the local environment and relevant to the specific needs and circumstances of tech startups in Nairobi.

By adopting a pragmatism research philosophy, the study on factors determining the success of tech startups in Nairobi City County can achieve a comprehensive and actionable understanding of the local startup ecosystem. Pragmatism's focus on practical relevance, methodological pluralism, action-oriented outcomes, and contextual understanding makes it an ideal approach for investigating and addressing the challenges and opportunities faced by tech startups in this region.

### **3.3 Research Design**

The research design proposed for this study was a mix of the descriptive and cross-sectional research design and exploratory design. This design is used to collect data by answering the what, when, where, and how questions of a research problem and not just the why. Kothari (2013) recommends the descriptive design as suitable when the study aims to explain factors and frequencies of the aspects being studied. Exploratory design makes use of unstructured data collection methods to facilitate discovery rather than test or confirm hypotheses. The exploratory design is recommended in situations where the problem is broadly defined; as a result, this design accords the flexibility needed to cover the broad nature of the research topic. Therefore, this study adopts both cross-sectional research and exploratory designs to describe the factors influencing the success of tech startups. Using a mixed methods approach in this study has allowed for a nuanced and comprehensive exploration of the success rate of tech startups. By integrating quantitative and qualitative data, the research offers valuable insights that can inform organizational policies and practices to support practitioners effectively. This research design leverages the strengths of both quantitative and qualitative methods to address the research questions comprehensively, providing a robust framework for understanding the factors that affect the success of startups.

### **3.4 Population of the Study**

The study population refers to the entire group of respondents the researcher intends to examine (Kothari, 2004). The tech startups registered in Nairobi City County served as the study's target population. Data from the Registrar of Companies (2022) show that 203 tech startups are operating in diverse sectors of Fintech, FoodTech, AgriTech, Environment, and Energy. The business models deployed by Tech startups in Nairobi are diverse, incorporating offerings such as SaaS

platforms, e-commerce ventures, mobile application development companies, and many others (Njanja, 2022).

### **3.5 Sampling Design and Sample Size**

Considering that it was not feasible to study all 203 tech startups, the study adopted purposive sampling to select respondents. For the quantitative survey, the sample size needed was calculated using Yamane's formula -  $n = N/(1 + N * e^2)$ , wherein N is the estimated size of the target population (203), and e is the sampling error (0.02). Therefore, the target sample size became  $n = 203/(1 + 203 \times 0.05^2) = 135$ . Therefore, at least 135 respondents were needed for the quantitative survey. The respondents consisted of managers and owners of tech startups in Nairobi City County.

Purposive sampling has also been employed, which involves selecting participants based on the researcher's judgment on how respondents can provide rich insights regarding the study. The specific purposive sampling that has been applied is criterion sampling in which participants are selected if they meet a specified criteria that can ensure that they offer rich insights (Lune & Berg, 2017). Criterion sampling is effective when seeking to obtain rich information from small samples. In this case, the criteria applied will include working in a Kenyan startup and being a tech worker. To recruit eligible participants, the author has used her networks in the startup industry to connect with suitable participants. Additionally, snowballing will be used to increase the sample size by requesting the initial pool of participants to refer individuals in their professional circles who meet the criteria and might be interested in the research.

In terms of sample size, there are no hard rules for determining the number of participants needed. An important consideration in sampling is the attainment of data saturation, which refers to the point in which no new insights are gained from the sample and further sampling is redundant. For phenomenological studies, Lune & Berg (2017) recommends sampling 5-25 participants, which is adequate for achieving data saturation. This recommendation has been followed in this research, wherein sampling will continue up to a point when saturation will be achieved.

### **3.6 Data Collection Methods**

Primary data were gathered using questionnaires and semi-structured interviews. Questionnaires provide a systematic means of data collection that elicits uniform responses from all respondents and allows for quantitative analysis. They have been featured both closed-ended and Likert-scale questions related to regulatory compliance, funding sources, technological infrastructure as well as perceptions of the entrepreneurial ecosystem. The rationale behind the use of questionnaires is that they can include large numbers and diverse participants allowing for the collection of a wide range of data within a short time (Lune & Berg, 2017). Besides, questionnaires ensure an anonymous character of respondents allowing them to give honest and unbiased answers that are critical for comprehension factors affecting startup success. The questionnaire used on this research consisted of three sections. Section A collected information on the demographic characteristics of respondents. Section B collected information on factors that influence the success of tech startups. Section C collected information on the success of tech startups. Questionnaires were distributed using a drop and pick strategy. Trained research assistants were used to improve the response rate.

Semi-structured interviews have been used to collect data, which involves asking open-ended questions that follow a preset thematic framework. Semi-structured interviews are beneficial for exploratory research since they facilitate a two-way conversation where the interview can ask probing and clarification questions to get more information (Bhattacharya, 2017). Moreover, since semi-structured interviews are conversational, the respondent becomes comfortable. In semi-structured interviews, questions are prepared beforehand, which can help in controlling and guiding the conversation to ensure that appropriate topics are covered.

### **3.7 Research Quality**

#### **3.7.1 Reliability**

Reliability refers to the internal consistency of the research instrument. The reliability of research instruments have been measured using the internal consistency method. The approach measures the degree of agreement between the responses given by the respondents in the pilot study. According to Rose and Johnson (2020), the approach involves using one or a selected set of data to measure the degree to which the responses are consistent. A high level of similarity in the pattern

of responses implies that the research instruments are sound, while a variation suggests the need to modify the sets of questions to foster common interpretation by the research participants. Additionally, the reliability has been measured using Cronbach's Alpha, a framework to establish the consistency and correlations of the findings from the pilot study. A research instrument must attain an alpha exceeding 0.7 to be considered. For this study, reliability was established using Cronbach's alpha. An internal consistency coefficient threshold of 0.7 was adopted. Table 3.1 shows the reliability statistics for the questionnaire.

### 3.7.2 Validity

The research instrument was subjected to a pilot study with 20 respondents who were excluded from the final study. The pilot survey did not show any need for revising the questionnaire. The questionnaire was also formulated with guidance of a supervisor at Strathmore University.

### 3.8 Data Analysis

The collected data ~~was~~ were sorted, organized, and coded before it is keyed into the computer for analysis. The study adopts both inferential and descriptive statistics. Descriptive statistics involved the calculation of means and standard deviation. Inferential statistics formed the basis for regression and correlation analyses. Particularly, the Pearson correlation was used to establish the relationship between the variables. Whereas the success of tech startups, the dependent variable, is represented by (Y), success factors, the independent variable, is represented by (X). Therefore, regulatory environment, access to funding, technological infrastructure, and entrepreneurial ecosystems are represented by  $X_1$ ,  $X_2$ ,  $X_3$ , and  $X_4$ , respectively. This regression model informed inferential statistics:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon; \text{ where;}$$

Y = success of tech startups

$X_1$  = regulatory environment

$X_2$  = access to funding

$X_3$  = technological infrastructure

$X_4$ = entrepreneurial ecosystems

$\beta_0$  = constant

$\beta_1, \beta_2, \beta_3, \beta_4$ = Beta Coefficients

$\varepsilon$  = the error term

Data collected from the interviews has been analyzed using thematic content analysis, which focuses on identifying patterns and themes in qualitative data. Thematic content analysis is useful for comparing and contrasting viewpoints of participants (Bhattacharya, 2017). The first step in thematic analysis is familiarization with the data by reading through the transcribed text followed by taking initial notes. The next step is coding, which involves highlighting sentences and phrases in the transcribed data and devising codes for describing the content of these phrases (Hennink et al., 2020). To ensure thoroughness, the transcript of every interview has been read, and interesting sentences and phrases highlighted. The third step is to generate themes by identifying patterns observed in the codes. Themes tend to be broader compared to codes and can be derived by combining codes. Vague codes can be discarded. The fourth step is to review the identified themes to make sure that they accurately represent the data. In this step, themes are compared against the data to determine if anything has been missed (Hennink et al., 2020). Themes can be split, combined or discarded. Next, themes are defined and named by describing what they mean (Hennink et al., 2020). The last step is to present the data. Extracts from interviews have been used to support the identified themes.

### **3.10 Ethical Considerations**

The ethical issues considered in this research were informed consent, anonymity, confidentiality of participants, and ethical clearance. First, the researcher has obtained approval from the Strathmore University Institutional Scientific and Ethical Review Committee (SU-ISERC) and NACOSTI permit. Secondly, informed consent is an important ethical principle that ensures voluntary participation. In this respect, prospective interviewees have been provided with comprehensive information for them to make an informed choice on whether to take part in the research (Bhattacharya, 2017). To guarantee the anonymity of respondents, no identifying information, like names or addresses, have been used when presenting the findings. Respondents

were de-identified using identifiers like "Key Informant 1" when presenting the findings, such that individual responses have not been linked to the identities of participants. To ensure participant confidentiality, the information collected from the research was stored securely in a password-protected file on a computer only accessible by this researcher. In addition, to update participants of the progress, a summary of the findings was sent to them. The summary was sent to participant's organizations for dissemination.

### **3.11 Chapter Summary**

This chapter has outlined the research methodology that was employed to collect and analyze data. Specifically, the research philosophy, research design, study population, sampling techniques, data collect procedures, data analysis, research quality and ethical issues have been discussed.



## CHAPTER FOUR

### RESULTS AND DISCUSSION

#### 4.1 Introduction

The findings of this study obtained from the survey and interviews are presented in this chapter, which is structured based on the objectives. The results of descriptive and inferential analysis from the quantitative arm of the research are presented alongside the findings from thematic content analysis for purposes of triangulation.

#### 4.2 Response Rate

The response rate is crucial in affirming the validity of a research. The general rule of thumb is that a higher response rate produces a more representative as well as a less biased sample while a lower response rate implies that the sample is likely to be unrepresentative, which can lead to skewed results. For this study, the target sample size for the quantitative survey and qualitative key informant interviews were 135 and 20 respectively. 20 key informants were decided based on the accessibility of tech start up founders from my network. For the survey, the researcher collected 111 questionnaires, translating to a response rate of 82.2%, which according to Lune and Berg, (2017), is sufficient for analysis. For the key informant interviews, 20 interviews were conducted, translating to a response rate of 100%. Table 4.1 outlines the response rate for this study.

Table 4.1: Response Rate

Category	Frequency	Percentage
Quantitative Survey		
Questionnaires Distributed	135	100%
Questionnaires Completed	111	82.2%
Questionnaires not returned	24	18.2%
Qualitative Interviews		
Informants Approached	20	100%
Informants who participated	20	100%

Source: Researcher (2024)

### 4.3 Respondents Demographic Information

The demographic information collected from participants included their age category, gender, and position in the startup. For the quantitative survey, the age category for most of the respondents was 36-45 years (45.9%). The sample for the quantitative survey was predominantly male (64%). In addition, most of the respondents in the survey were managers/directors (58.6%). For the key informant interviews, the age category for most of the respondents was 36-45 years. Most key informants were male (60%) and managers/directors (60%). Table 4.2 shows the demographic profile of respondents in both the quantitative survey and the qualitative interviews.

Table 4.2: Demographic Profile of Respondents

Quantitative Survey			
		Frequency	Percent
Age Category	18-25 years	7	6.3%
	26-35 years	13	11.7%
	36-45 years	51	45.9%
	46-55 years	28	25.2%
	56 years and above	12	10.8%
	Total	111	100.0%
Gender	Male	71	64.0%
	Female	40	36.0%
	Total	111	100.0%
Position	Owner	46	41.4%
	Manager/Director	65	58.6%
	Total	111	100.0%
Key Informants			
Age Category	18-25 years	3	15.0%
	26-35 years	2	10.0%
	36-45 years	12	60.0%
	46-55 years	3	15.0%
	56 years and above	0	0.0%
	Total	20	100.0%
Gender	Male	14	70.0%
	Female	6	30.0%
	Total	20	100.0%
Position	Manager/Director	12	60.0%
	Owner	8	40.0%
	Total	20	100.0%

Source: Researcher (2024)

## 4.4 Descriptive Statistics

Descriptive statistics from the quantitative survey are presented in this section.

### 4.4.1 Descriptive Statistics for Regulatory Environment

The first objective of this research was to determine the influence of the regulatory environment on the success of tech startups in Nairobi City County. The indicators used to measure regulatory environment were regulatory compliance, regulatory challenges and regulatory support. The findings show that most respondents agreed that their startups comply with local regulations set by the county government (49.5%) and that their startup complies with national regulations (36.9%). Most respondents also agreed that they face significant challenges adhering to regulations (36.9%) and that these challenges hinder the success of their startups (38.7%). Additionally, the majority were neutral that government policies have supported their startup (53.2%) and they have received significant support from the government (43.2%). Table 4.3 shows the frequencies for responses regarding the regulatory environment.

Table 4.3: Frequencies for Regulatory Environment

		Frequency	Percent
Our startup complies with local regulations by the County Government	Strongly Disagree	10	9.0%
	Disagree	11	9.9%
	Neutral	21	18.9%
	Agree	55	49.5%
	Strongly Agree	14	12.6%
	Total	111	100.0%
Our startup complies with national regulations by the Government	Strongly Disagree	6	5.4%
	Disagree	20	18.0%
	Neutral	33	29.7%
	Agree	41	36.9%
	Strongly Agree	11	9.9%
	Total	111	100.0%
We face significant challenges in adhering to regulations	Strongly Disagree	9	8.1%
	Disagree	10	9.0%
	Neutral	36	32.4%
	Agree	38	34.2%
	Strongly Agree	18	16.2%
	Total	111	100.0%
	Strongly Disagree	9	8.1%
	Disagree	11	9.9%

The challenges startups face lower their success	Neutral	37	33.3%
	Agree	43	38.7%
	Strongly Agree	11	9.9%
	Total	111	100.0%
Government policies have supported our startup.	Strongly Disagree	11	9.9%
	Disagree	9	8.1%
	Neutral	59	53.2%
	Agree	31	27.9%
	Strongly Agree	1	0.9%
	Total	111	100.0%
The support from government initiatives has been significant	Strongly Disagree	8	7.2%
	Disagree	19	17.1%
	Neutral	48	43.2%
	Agree	28	25.2%
	Strongly Agree	8	7.2%
	Total	111	100.0%

Source: Researcher (2024)

The means and standard deviations for the indicators of regulatory environment are shown in Table 4.4. The results suggest moderate compliance with local regulations set by the county government (Mean = 3.47, Standard Deviation = 1.119) and compliance with national regulations by the government (Mean = 3.28, Standard Deviation = 1.046). The findings also suggest moderate challenges in adhering to regulations (Mean = 3.41, Standard Deviation = 1.116) as well as moderate effect of these challenges in lowering the success of startups (Mean = 3.32, Standard Deviation = 1.055). Moreover, the results suggested moderate support for startups from government policies (mean = 3.02, Standard Deviation = 1.001) and support from government initiatives (Mean = 3.08, Standard Deviation = 1.001). The overall mean for the regulatory environment was 3.2643 (Standard Deviation = 0.8365). These findings are detailed in Table 4.4.

Table 4.4: Descriptive Statistics for Regulatory Environment

	N	Mean	Standard Deviation
Our startup complies with local regulations by the County Government	111	3.47	1.119
Our startup complies with national regulations by the Government	111	3.28	1.046
We face significant challenges in adhering to regulations	111	3.41	1.116
The challenges startups face lower their success	111	3.32	1.055

Government policies have supported our startup.	111	3.02	.894
The support from government initiatives has been significant	111	3.08	1.001
<b>Regulatory Environment</b>	<b>111</b>	<b>3.2643</b>	<b>.83650</b>

Source: Researcher (2024)

#### 4.4.2 Descriptive Statistics for Access to Funding

Secondly, this research sought to establish the influence of access to funding on the success of tech startups in Nairobi City County. The indicators that were employed to measure access to funding including funding sources, funding impact, and funding challenges. Most respondents agreed that their startups have access to funding sources (42%) and that it is easier to access funding sources the more successful the startup becomes (34.2%). In addition, most respondents agreed that securing funding for their startup is challenging (36%) and that these challenges lower the success of startups (44%). Most respondents were neutral the availability of funding options has contributed to the growth of startups (40.5%) and agreed that multiple funding sources influence the success of tech startups (35.1%). Table 4.5 shows the frequencies for responses regarding access to funding.

Table 4.5: Frequencies for Access to Funding

		Frequency	Percent
Our startup has access to various funding sources	Strongly Disagree	7	6.3%
	Disagree	14	12.6%
	Neutral	31	27.9%
	Agree	42	37.8%
	Strongly Agree	17	15.3%
	Total	111	100.0%
The easier it is to access funding sources the more successful the startup becomes	Strongly Disagree	6	5.4%
	Disagree	17	15.3%
	Neutral	36	32.4%
	Agree	38	34.2%
	Strongly Agree	14	12.6%
	Total	111	100.0%
Securing funding for our startup is challenging.	Strongly Disagree	6	5.4%
	Disagree	19	17.1%
	Neutral	34	30.6%
	Agree	40	36.0%
	Strongly Agree	12	10.8%
	Total	111	100.0%

Funding challenges lower the success of our tech startup	Strongly Disagree	6	5.4%
	Disagree	15	13.5%
	Neutral	28	25.2%
	Agree	44	39.6%
	Strongly Agree	18	16.2%
	Total	111	100.0%
The availability of funding options has contributed to our startup's growth.	Strongly Disagree	9	8.1%
	Disagree	10	9.0%
	Neutral	45	40.5%
	Agree	41	36.9%
	Strongly Agree	6	5.4%
	Total	111	100.0%
Multiple funding sources influence the success of tech startups	Strongly Disagree	4	3.6%
	Disagree	18	16.2%
	Neutral	38	34.2%
	Agree	39	35.1%
	Strongly Agree	12	10.8%
	Total	111	100.0%

Source: Researcher (2024)

The means and standard deviations for access to funding are provided in Table 4.6. The findings indicated moderate access to various funding sources by startups (Mean = 3.43, Standard Deviation = 1.092) and ease of accessing funding sources for the startup to become successful (Mean = 3.33, Standard Deviation = 1.056). The findings also indicated moderate challenge in securing funding (Mean = 3.3, Standard Deviation = 1.05) and the effect of funding challenges on lowering the success of startups (Mean = 3.48, Standard Deviation = 1.086). In addition, the availability of funding options was considered to moderately contribute to the success of tech startups (Mean = 3.23, Standard Deviation = 0.979). Also, multiple funding sources were reported to moderately influence the success of funding sources (Mean = 3.3498, Standard Deviation = 0.71172). The mean for access to funding was 3.3498 (Standard Deviation = 0.71172).

Table 4.6: Descriptive Statistics for Access to Funding

	N	Mean	Standard Deviation
Our startup has access to various funding sources	111	3.43	1.092

The easier it is to access funding sources the more successful the startup becomes	111	3.33	1.056
Securing funding for our startup is challenging.	111	3.30	1.050
Funding challenges lower the success of our tech startup	111	3.48	1.086
The availability of funding options has contributed to our startup's growth.	111	3.23	.979
Multiple funding sources influence the success of tech startups	111	3.33	.994
<b>Access to Funding</b>	<b>111</b>	<b>3.3498</b>	<b>.71172</b>

Source: Researcher (2024)

#### 4.4.3 Descriptive Statistics for Technological Infrastructure

This study also sought to investigate the influence of technological infrastructure on the success of tech startups in Nairobi City County. Technological infrastructure was measured using access to advanced technology, digital connectivity, and technology adoption rate. Most respondents agreed that their startups use advanced technology in its operations (38.7%) and were neutral regarding how access to advanced technology increases the survival rate of our startup (35.1%). In addition, most respondents were neutral that digital connectivity enhances the success of tech startups (36%), and that digital infrastructure increases the success of tech startups (36%). Most of the respondents were neutral their startup has a high technology adoption rate (43.2%) and that a higher technology adoption rate increases the likelihood of success of tech startup. Detailed responses regarding technological infrastructure are presented in Table 4.7.

Table 4.7: Frequencies for Technological Infrastructure

		Frequency	Percent
Our startup uses advanced technology in its operations	Strongly Disagree	10	9.0%
	Disagree	16	14.4%
	Neutral	25	22.5%
	Agree	43	38.7%
	Strongly Agree	17	15.3%
Access to advanced technology increases the survival rate of our startup	Strongly Disagree	6	5.4%
	Disagree	18	16.2%
	Neutral	39	35.1%
	Agree	32	28.8%
	Strongly Agree	16	14.4%
	Strongly Disagree	5	4.5%
	Disagree	12	10.8%

Digital connectivity enhances the success of tech startups	Neutral	40	36.0%
	Agree	37	33.3%
	Strongly Agree	17	15.3%
Digital infrastructure increases the success of tech startups	Strongly Disagree	5	4.5%
	Disagree	14	12.6%
	Neutral	40	36.0%
	Agree	38	34.2%
	Strongly Agree	14	12.6%
Our startup has a high technology adoption rate	Strongly Disagree	7	6.3%
	Disagree	13	11.7%
	Neutral	48	43.2%
	Agree	35	31.5%
	Strongly Agree	8	7.2%
The higher the technology adoption rate the more likely the tech startup will succeed	Strongly Disagree	5	4.5%
	Disagree	22	19.8%
	Neutral	37	33.3%
	Agree	34	30.6%
	Strongly Agree	13	11.7%

Source: Researcher (2024)

The descriptive statistics for technological infrastructure are presented in Table 4.7. The results suggest moderate use of advanced technology in startups' operations (Mean = 3.37, Standard Deviation = 1.175) and access to advanced technology to increase the survival rate of startups (Mean = 3.31, Standard Deviation = 1.077). The results also showed that digital connectivity moderately enhances the success of tech startups (Mean = 3.44, Standard Deviation = 1.024) and that digital infrastructure moderately increases the success of tech startups (Mean = 3.38, Standard Deviation = 1.010). The results also showed that startups have moderate technology adoption rate (Mean = 3.22, Standard Deviation = 0.967) and that technology adoption moderately increases the success of startups (Mean = 3.25, Standard Deviation = 1.049). The mean for technological infrastructure was 3.3273 (Standard Deviation = 0.70744). These findings are detailed in Table 4.8.

Table 4.8: Descriptive Statistics for Technological Infrastructure

	N	Mean	Standard Deviation
Our startup uses advanced technology in its operations	111	3.37	1.175

Access to advanced technology increases the survival rate of our startup	111	3.31	1.077
Digital connectivity enhances the success of tech startups	111	3.44	1.024
Digital infrastructure increases the success of tech startups	111	3.38	1.010
Our startup has a high technology adoption rate	111	3.22	.967
The higher the technology adoption rate the more likely the tech startup will succeed	111	3.25	1.049
<b>Technological Infrastructure</b>	<b>111</b>	<b>3.3273</b>	<b>.70744</b>

Source: Researcher (2024)

**4.4.4 Descriptive Statistics for Entrepreneurial Ecosystems**

Lastly, this research sought to examine the influence of entrepreneurial ecosystems on the success of startups in Nairobi City County. The indicators for entrepreneurial ecosystem used in this study included networking opportunities, collaborative spaces and mentorship programs. Most respondents agreed that mentorship programs have been beneficial for the growth of their startups (36%) and were neutral in terms of the role of mentorship programs in improving the success of tech startups. Additionally, most respondents remained neutral when asked about the participation of staff in networking events (42.3%) and the influence of networking on the success of tech startups (41.4%). Most respondents also remained neutral regarding the contribution of collaborative spaces to the success of startups (45%) and the role of effective collaborations in enhancing the success of startups (42.3%). These findings are presented in detail in Table 4.9.

Table 4.9: Frequencies for Entrepreneurial Ecosystems

		Frequency	Percent
Mentorship programs have been beneficial for our startup growth	Strongly Disagree	8	7.2%
	Disagree	18	16.2%
	Neutral	33	29.7%

	Agree	40	36.0%
	Strongly Agree	12	10.8%
	Total	111	100.0%
Mentorship programs improve the success of tech startups	Strongly Disagree	9	8.1%
	Disagree	17	15.3%
	Neutral	47	42.3%
	Agree	26	23.4%
	Strongly Agree	12	10.8%
	Total	111	100.0%
Staff participate in networking events to enhance startups	Strongly Disagree	7	6.3%
	Disagree	20	18.0%
	Neutral	45	40.5%
	Agree	31	27.9%
	Strongly Agree	8	7.2%
	Total	111	100.0%
Networking influences the success of tech startups	Strongly Disagree	6	5.4%
	Disagree	19	17.1%
	Neutral	46	41.4%
	Agree	33	29.7%
	Strongly Agree	7	6.3%
	Total	111	100.0%
Collaborative spaces contribute to our startup's success.	Strongly Disagree	8	7.2%
	Disagree	20	18.0%
	Neutral	50	45.0%
	Agree	29	26.1%
	Strongly Agree	4	3.6%
	Total	111	100.0%
Effective collaborations enhance the success of tech startups	Strongly Disagree	5	4.5%
	Disagree	12	10.8%
	Neutral	47	42.3%
	Agree	40	36.0%
	Strongly Agree	7	6.3%
	Total	111	100.0%

Source: Researcher (2024)

The descriptive statistics for entrepreneurial ecosystems are presented in Table 4.10. The results suggested that mentorship programs are moderately beneficial for growth of startups (Mean = 3.27, Standard Deviation = 1.087) and moderately improve the success of tech startups (Mean = 3.14, Standard Deviation = 1.066). The findings also suggested that staff moderately participate in networking events to enhance startups (Mean = 3.12, Standard Deviation = 0.998) and that networking moderately influences the success of tech startups (Mean = 3.14, Standard Deviation

= 0.962). Furthermore, the results indicated that collaborative spaces moderately contribute the success of startups (Mean = 3.01, Standard Deviation = 0.939). Findings also indicated that effective collaborations moderately enhance the success of tech startups (Mean = 3.29, Standard Deviation = 0.908). The mean for entrepreneurial ecosystem was 3.1607 (Standard Deviation = 0.908).

Table 4.10: Descriptive Statistics for Entrepreneurial Ecosystems

	N	Mean	Standard Deviation
Mentorship programs have been beneficial for our startup growth	111	3.27	1.087
Mentorship programs improve the success of tech startups	111	3.14	1.066
Staff participate in networking events to enhance startups	111	3.12	.998
Networking influences the success of tech startups	111	3.14	.962
Collaborative spaces contribute to our startup's success.	111	3.01	.939
Effective collaborations enhance the success of tech startups	111	3.29	.908
<b>Entrepreneurial Ecosystem</b>	<b>111</b>	<b>3.1607</b>	<b>.64664</b>

Source: Researcher (2024)

#### 4.4.5 Success of Startups

The success of startups was the dependent variable, which was measured using increased customer base, increased market share, increased revenue and a high level of sustainability. Most respondents agreed that there has been an increasing number of customers since the start of their firm (43.2%) and a higher customer base increases the success of startups (34.2%). Most respondents also agreed that the increase in their startup's market share is associated with the success of their firm (34.2%) and that there has been an increasing revenue since the start of the firm (40.5%). The findings also showed that most respondents were neutral in terms of the link between increasing revenue and the success of their firm (42.3%), and that sustainability has increased since the firm's start (36.9%). These findings are detailed in Table 4.11.

Table 4.11: Frequencies for Success of Startups

	Frequency	Percent

There has been an increasing number of customers since the start of our tech firm.	Strongly Disagree	10	9.0%
	Disagree	10	9.0%
	Neutral	23	20.7%
	Agree	48	43.2%
	Strongly Agree	20	18.0%
	Total	111	100.0%
The more the customer base the higher the success of tech startups	Strongly Disagree	7	6.3%
	Disagree	14	12.6%
	Neutral	36	32.4%
	Agree	38	34.2%
	Strongly Agree	16	14.4%
	Total	111	100.0%
The increase in our startup's market share is associated with the success of the tech firm.	Strongly Disagree	6	5.4%
	Disagree	15	13.5%
	Neutral	37	33.3%
	Agree	38	34.2%
	Strongly Agree	15	13.5%
	Total	111	100.0%
There has been an increasing revenue since the start of our tech firm.	Strongly Disagree	5	4.5%
	Disagree	15	13.5%
	Neutral	33	29.7%
	Agree	45	40.5%
	Strongly Agree	13	11.7%
	Total	111	100.0%
Increased revenue is associated with a higher success for tech startups	Strongly Disagree	8	7.2%
	Disagree	16	14.4%
	Neutral	47	42.3%
	Agree	35	31.5%
	Strongly Agree	5	4.5%
	Total	111	100.0%
There have been increased levels of sustainability since the start of the tech firm.	Strongly Disagree	5	4.5%
	Disagree	20	18.0%
	Neutral	41	36.9%
	Agree	36	32.4%
	Strongly Agree	9	8.1%
	Total	111	100.0%

Source: Researcher (2024)

The descriptive statistics for the success of startups is presented in Table 4.12. On average, the findings indicated a moderate increase in the number of customers since the start of tech firms (Mean = 3.52, Standard Deviation = 1.159) and a moderate effect of the customer base on the success of startups (Mean = 3.38, Standard Deviation = 1.079). The results also indicated that there

has been a moderate increase in startups’ market share due to the success of tech firms (Mean = 3.37, Standard Deviation = 1.053) coupled with a moderate increase in revenue since the start of tech firms (Mean = 3.41, Standard Deviation = 1.013). The findings also suggested a moderate increase in revenue associated with a higher success (Mean = 3.12, Standard Deviation = 0.96) and a moderate increase in the levels of sustainability (Mean = 3.3363, Standard Deviation = 0.76804). The mean for success of startups was 3.336 (Standard Deviation = 0.985).

Table 4.12: Descriptive Statistics for Success of Startups

	N	Mean	Standard Deviation
There has been an increasing number of customers since the start of our tech firm.	111	3.52	1.159
The more the customer base the higher the success of tech startups	111	3.38	1.079
The increase in our startup’s market share is associated with the success of the tech firm.	111	3.37	1.053
There has been an increasing revenue since the start of our tech firm.	111	3.41	1.013
Increased revenue is associated with a higher success for tech startups	111	3.12	.960
There have been increased levels of sustainability since the start of the tech firm.	111	3.22	.985
Success of Startups	111	3.336	.76804

Source: Researcher (2024)

## 4.5 Inferential Statistics

The following subsection presents the findings of inferential statistics that were used to analyze the findings, multiple linear regression.

### 4.5.1 Correlations

Correlation analysis was used to assess the strength of linear association between variables. The results showed significant positive correlations between regulatory environment and the success of startups ( $r = 0.962$ ,  $p < 0.05$ ). A strong significant positive association also existed between access to funding and the success of startups ( $r = 0.935$ ,  $p < 0.05$ ). Technological infrastructure was strongly correlated to the success of startups ( $r = 0.963$ ,  $p < 0.05$ ). additionally, there was a strong

positive correlation between entrepreneurial ecosystems and the success of startups ( $r = 0.939$ ,  $p < 0.05$ ). These findings are shown in Table 4.13.

Table 4.13: Correlations

		RE	AF	TI	EE	SR
Regulatory Environment (RE)	r	1				
	p					
Access to Funding (AF)	r	.401	1			
	p	.000				
Technological Infrastructure (TI)	r	.125	.312	1		
	p	.000	.000			
Entrepreneurial Ecosystem (EE)	r	.214	.524	.254	1	
	p	.000	.000	.000		
Success of Startups (SR)	r	.962	.935	.963	.939	1
	p	.000	.000	.000	.000	

Source: Researcher (2024)

#### 4.5.2 Multiple Linear Regression

A multiple regression analysis was performed to develop a model for predicting the success of startups using regulatory environment, access to funding, technological infrastructure, and entrepreneurial ecosystems. The regression summary showed an R-square of 0.974, suggesting that the independent variables explained 97.4% of the variation in the success of tech startups. The R-Square value of 0.974 indicates a good fit of the model. The findings of the regression summary are presented in Table 4.14.

Table 4.14: Multiple Regression Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.987 <sup>a</sup>	.974	.973	.12642

a. Predictors: (Constant), Entrepreneurial Ecosystem, Access to Funding, Regulatory Environment, Technological Infrastructure

Source: Researcher (2024)

The analysis of variance (ANOVA) results for the regression shows an F-statistic value of 988.488 with a p-value of 0.00,  $F(4, 106) = 988.488$ ,  $p < 0.05$ , indicating that the model was significant in predicting the success of tech startups using the regulatory environment, access to funding, entrepreneurial ecosystem, and technological infrastructure as the predictors. Table 4.15 shows the ANOVA results for the regression. In addition, collinearity diagnostics on the model showed that multi-collinearity is not an issue as indicated by VIF values that range between 1 and 5. VIF values that exceed 5 indicate severe correlation between the variables leading to multicollinearity problems. The regression model obtained from the data collected in the current study showed that VIF values range between 1 and 5 as shown in Table 4.16; hence, there was no multicollinearity problem in the model.

Table 4.15: ANOVA Results for the Regression

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	63.194	4	15.798	988.488	.000 <sup>b</sup>
	Residual	1.694	106	.016		
	Total	64.888	110			
a. Dependent Variable: Success of Startups						
b. Predictors: (Constant), Entrepreneurial Ecosystem, Access to Funding, Regulatory Environment, Technological Infrastructure						

Source: Researcher (2024)

Table 4.16: Regression Coefficients

		Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	C	-.179	.066		-2.694	.008		
	RE	.308	.044	.336	7.060	.000	.109	9.174
	AF	.169	.045	.156	3.724	.000	.140	7.144
	TI	.344	.053	.317	6.440	.000	.102	9.813
	EE	.253	.049	.213	5.222	.000	.148	6.776
Legend: C – Constant; RE – Regulatory Environment; AF – Access to Funding; TI – Technological Infrastructure; EE – Entrepreneurial Ecosystem								

Source: Researcher (2024)

The results in Table 4.16 indicate that the model had a constant value of -0.179, which was statistically significant; thus, was included in the model. The results also showed that the

regulatory environment had a significant positive effect on the success of tech startups ( $\beta = 0.308$ ,  $p < 0.05$ ). Therefore, for every unit change in the regulatory environment, there was an expected unit increase in the success of tech startups by 0.308. This result suggests that improving the regulatory environment can improve the success of tech startups.

The findings from this study also indicated that access to funding had a significant positive effect on the success of tech startups ( $\beta = 0.169$ ,  $p < 0.05$ ). This suggests that every unit increase or decrease in access to funding yields an expected unit increase or decrease respectively in the success of tech startups by 0.169. This result implies that the success of tech startups can be increased by enhancing access to funding.

In addition, the findings in the model show that the technological infrastructure had a significant positive effect on the success of tech startups ( $\beta = 0.344$ ,  $p < 0.05$ ). This means that every unit change in technological infrastructure yields a unit change in the success of tech startups by 0.344. The implication of this result is that improving the technological infrastructure can help enhance the success of tech startups.

Lastly, the results of the regression analysis indicated that entrepreneurial ecosystems have a significant positive effect on the success of startups ( $\beta = 0.253$ ,  $p < 0.05$ ). This result suggests that a unit change in entrepreneurial systems yield a unit change in the success of startups by 0.253. Taken together, improving the entrepreneurial ecosystem can improve the success of tech startups. From the regression analysis, the new regression model becomes:

$$SR = -0.179 + 0.308(RE) + 0.169 (AF) + 0.344 (TI) + 0.253 (EE)$$

Where SR = The success of tech startups; RE = Regulatory Environment; AF = Access to Funding; TI = Technological Infrastructure; and EE = Entrepreneurial Ecosystems.

#### **4.6 Findings from Key Informant Interviews**

In addition to the survey, in-depth interviews were conducted with key informants consisting of managers and owners of tech startups to better understand the factors affecting their success to triangulate the findings of the quantitative survey. The interviews were conducted separately, and

data collected using short journal notes then transferred to Microsoft Excel for thematic analysis. The findings from thematic analysis are presented in the following sub-sections based on the objectives of this research.

#### **4.6.1 Regulatory Environment and the Success of Tech Startups**

Several themes emerged from the key informant interviews regarding the link between the regulatory environment and the success of tech startups. These themes included regulatory compliance, barriers to compliance, and the punitive taxation regime.

Most key informants emphasized the importance of regulatory compliance in ensuring the success of their startups. The following excerpts from key informants illustrate the key role played by regulatory compliance in ensuring the success of tech startups:

Complying with regulations is a big deal for us. Besides demonstrating due diligence, our customers, suppliers and lenders require we show proof of compliance. I believe compliance has helped to improve our trustworthiness and credibility in our suppliers, partners and customers (Key Informant 1).

I would say compliance is an important aspect of a firm's reputation. Our investors and customers have confidence in us because we are compliant with the relevant laws and regulations (Key Informant 13)

In the tech environment, I consider regulatory compliance a component of risk management. We must safeguard the sensitive information of our customers and mitigate breaches. What this means is that we must comply with existing laws, policies and regulations on data security. There is no other way – compliance is a must (Key Informant 20).

The second theme was barriers to compliance. In this respect, key informants revealed numerous challenges that their tech startups experience to remain compliant. Sub-themes in this theme included compliance costs, lack of access to information and lack of government support. Key Informant 5 reported, “compliance is costly, and we are resource constrained... The money spent on compliance with some regulations could be better spent on expansion.” Regarding lack of information, one key informant noted, “I understand that tech startups, or even startups as a whole, have no regulatory agency ... there is no government body that we can go to for information and

update on what is going on” (Key Informant 6). Additionally, Key Informant 8 noted, “most existing support from the government is biased towards large corporations.”

Another recurring theme that was mentioned by key informants was related to punitive taxation. One Key informant described the taxation regime in the country as “stifling the potential of startups and contributing to their shutdown,” (Key Informant 3). Key Informant also supported the same sentiments by stating that, “the tax regime in Kenya does not consider the delicate balance between the growth and sustainability of business and generating revenue for the government. According to Key Informant 12, “the tax burden that the government imposes on businesses, particularly startups, is unfairly high, and we are considering relocating to another country that has fair taxes. Overall, an emerging view from the interviews was that unfair taxation hinders the growth of startups and creates an environment where these startups cannot thrive.

Taken together, the findings from the key informant interviews underscore the important role played by the regulatory environment in promoting the success of startups. This finding is consistent with the findings from the quantitative survey that demonstrated the significant effect of the regulatory environment on the success of startups.

#### **4.6.2 Access to Funding and the Success of Tech Startups**

Two themes emerged regarding access to funding in tech startups – importance and challenges. Regarding importance, most key informants described the benefits of having access to capital, which included pursuing growth opportunities, flexibility, improved cash flow and investor confidence. As Key Informant 5 noted, “We are lucky we do not have issues with accessing funding; as a result, we have been able to pursue growth opportunities, expand operations into new markets and invested in marketing and hiring top talent.” Key Informant 15 said, “We have experienced our fair share of challenges when it comes to accessing capital – this means the firm has not been flexible enough to respond to changes in the market and take advantage of opportunities.” The theme of improved cash flow was emphasized by Key Informant 13, who indicated that, “I can say we have access to adequate funding, which means that we have enough cash flow that we do not have to depend on our own resources or slow-moving financing options like loans ... we have been able to pump cash into projects more quickly.” In terms of investor

confidence, findings from the interviews indicated that access to funding tends to increase the confidence and trust that investors have in startups. Key Informant 19 opined, “From my experience, I have seen that startups that have access to capital are more trusted by investors and viewed as credible and stable ... those who have shall be added more... it works the same way, I think.” From these subthemes, it can be concluded that access to funding contributes substantially to the success of startups.

The second theme that emerged related to the challenges of accessing funding, which included limited funding opportunities, unproven business models, lack of collateral, and stringent funding requirements. In terms of limited funding opportunities, informants raised concerns regarding intense competition for startups to raise funding. Additionally, startups face challenges accessing funding since their business models is yet to be proven and have no track record of success. Moreover, most of enterprises lack financial and physical assets that they can use as collateral when seeking funding. Another issue raised by informants was the stringent requirements set by funders. The following excerpts illustrate these sub-themes:

Startups are being formed every day and we are competing for the little funds available. When several startups pitch, it becomes difficult to get the attention of investors (Key Informant 14)

It is difficult to convince potential investors that the startup will be profitable in future and in most cases, there is no evidence to back up the claims, just speculations (Key Informant 16)

Investors are usually reluctant to invest in companies that have no proven history of success. As an early-start-up, we struggled convincing potential investors to support our idea (Key Informant 10)

Startups, most of them, do not have assets that they can use to secure loans. What this means is that investors and lenders view us as being high-risk, which only worsens the situation (Key Informant 2)

Most lenders have strict eligibility criteria that startups must meet before they become eligible for funding (Key Informant 20)

Overall, these themes highlight the important role played by access to funding in facilitating the success of tech startups.

### **4.6.3 Technological Infrastructure and the Success of Tech Startups**

The themes that emerged regarding technical infrastructure included technology needs, digital connectivity, security, and scalability. Most informants emphasized the importance of startups having a clear understanding of their technology needs to make sure that they have the right systems and tools to support their business operations. In this respect, Key Informant 3 stated, “in the current digital era, technology is essential in the success of all businesses, especially the tech-oriented ones.” Key informant 5 also agreed by stating, “evaluating technology needs helps startups to position themselves for success and growth in the long-term.”

Regarding digital connectivity, there was general agreement among informants on the importance of networking and connectivity in ensuring the success of startups. Key Informant 14 stated, “Today’s world is increasingly becoming interconnected, and startups depend on networking and connectivity in almost every aspect of their operations.” From the interviews, security also emerged as an important sub-theme in technological infrastructure. Informants agreed that cybersecurity poses a significant risk for tech startups that can hinder their success. As Key Informant 3 stated, “tech startups need to put various security measures, such as encryption, access control and employee training and awareness. The last important sub-theme was the scalability of the technological infrastructure, which was considered important for the success of tech startups. According to Key Informant 7, “our firm constantly evaluates if the present technology solutions are capable of serving us when we expand and grow.” Key Informant 11 stated, “we are making investments in scalable cloud infrastructure that we can scale depending on the customer volume.” Overall, the findings from the Key Informant interviews are consistent with the results from the quantitative survey that support the significant influence of technology infrastructure in enhancing the success of tech startups.

### **4.6.4 Entrepreneurial Ecosystems and the Success of Tech Startups**

The primary recurring theme that emerged relating to entrepreneurial ecosystems was the role of business incubation, which was supported by various sub-themes including providing mentorship, management training, collaborative spaces, and networking opportunities. The following excerpts from the interviews illustrate how business incubation provide mentorship, management training, collaborative spaces and networking opportunities for startups.

When starting up, the firm operated under an incubator that mentored our managers, provided training on how to pitch, manage human resources and even market our products (Key Informant 10)

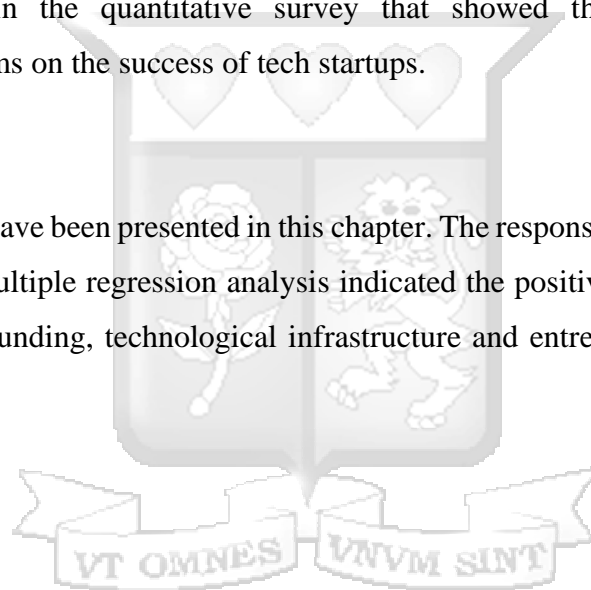
There is this incubator that really helped us when we were beginning by connecting us to partners, suppliers and customers (Key Informant 12)

At a time when we cash strapped, we could use co-shared spaces at iHub, and this really helped us save on the resources (Key Informant 14)

Overall, these findings from key informants provided evidence showing the significant influence of the entrepreneurial ecosystems on the success of tech startups. These results are aligned with the findings reported in the quantitative survey that showed the positive influence of entrepreneurial ecosystems on the success of tech startups.

#### **4.7 Chapter Summary**

The results of this study have been presented in this chapter. The response rate attained was 82.2%. The findings from the multiple regression analysis indicated the positive effect of the regulatory environment, access to funding, technological infrastructure and entrepreneurial ecosystems on the success of startups.



## CHAPTER FIVE

### DISCUSSION, CONCLUSION AND RECOMMENDATIONS

#### 5.1 Introduction

This chapter discusses the findings of the current study as well as the recommendations for policy, managers and theory. Furthermore, the study's limitations are outlined and recommendations for further research described.

#### 5.2 Discussion of Findings

In this section, the results of the study are discussed based on the research objectives.

##### 5.2.1 Regulatory Environment and the Success of Tech Startups

The first objective of this research was to determine the influence of the regulatory environment on the success of tech startups in Nairobi City County. The indicators used to measure regulatory environment were regulatory compliance, regulatory challenges and regulatory support. The results also showed that the regulatory environment had a significant positive effect on the success of tech startups, which were also supported by the findings from the key informant interviews. These results suggest that improving the regulatory environment can improve the success of tech startups.

The findings from the current study showing the positive effect of the regulatory environment are consistent with the findings reported in similar past studies. Like the current study, Skawińska and Zalewski (2020) demonstrated the positive effect of the regulatory environment on the success of startups. Skawińska and Zalewski (2020) argued that the regulatory environment explains the differences in the success of startups between developed and developing countries. The current study also showed how regulatory challenges hinder the growth and success of startups, which has also been affirmed in a past study by Goo and Heo (2020) that showed that regulatory ambiguity and complexities hinder growth. Similarly, Smith and Brown (2018) documented the regulatory obstacles that hinder the success of startups. Taken together, the findings of the present and past studies underscore the need to improve the regulatory environment by making compliance easy and increase government support and initiatives targeting tech startups.

### 5.2.2 Access to Funding and the Success of Tech Startups

This research also sought to establish the influence of access to funding on the success of tech startups in Nairobi City County. The indicators that were employed to measure access to funding including funding sources, funding impact, and funding challenges. The findings from this study also indicated that access to funding had a significant positive effect on the success of tech startups, which implies that the success of tech startups can be increased by enhancing access to funding. The findings from key informant interviews also demonstrated the substantial role played by access to funding in enhancing the success of tech startups. These findings are aligned with the propositions of the RBV theory, which posits that Firms that possess valuable, scarce, and difficult-to-replicate resources are prone to attaining a sustained competitive advantage (Skawińska & Zalewski, 2020). In the same vein, access to funding can be a valuable and scarce resource for tech startups considering that they are competing for the little funding opportunities. Funding availability is of the utmost value for a start-up tech firm since its ability to activate the revenue source in innovation and research and enter an entrepreneurial operation is a fundamental factor of success (Skawińska & Zalewski, 2020). Additionally, quantitative data revealed that access to funding has a significant positive effect on the success of tech startups. This supports the theory that adequate resources are essential for the growth and sustainability of organizations, particularly in the early stages of their life cycle. Finally, Qualitative insights from key informant interviews indicated that funding challenges can lead to stagnation or decline, highlighting the critical role of financial resources in preventing organizational 'death'.

The positive effect of access to funding on the success of tech startups is consistent with findings in previous studies. Singh and Mugila-Hillemane's (2023) highlighted the necessity of comprehending the type and scope of funding that tech startups require, as this will impact the sources of funding, they approach to fund their operations and expansion over their life cycle. The current study highlighted benefits of having access to capital, which included pursuing growth opportunities, flexibility, improved cash flow and investor confidence, as reported by the key informants. Similarly, a study by Santisteban and Mauricio (2017) illustrated that startups with adequate capital can spend on research, development, and specialized manpower and even expand the market base. Therefore, findings from the current study and past studies affirm the important role played by access to funding in enhancing the success of tech startups.

### **5.2.3 Technological Infrastructure and the Success of Tech Startups**

This study also sought to investigate the influence of technological infrastructure on the success of tech startups in Nairobi City County. Technological infrastructure was measured using access to advanced technology, digital connectivity, and technology adoption rate. The findings in the model show that the technological infrastructure had a significant positive effect on the success of tech startups. The implication of this result is that improving the technological infrastructure can help enhance the success of tech startups. Findings from interviews validated the findings from the quantitative survey. The themes that emerged regarding technical infrastructure included technology needs, digital connectivity, security, and scalability. Most informants emphasized the importance of startups having a clear understanding of their technology needs to make sure that they have the right systems and tools to support their business operations. These results validate the propositions of the RBV theory by inferring the technological infrastructure of a startup can be a valuable resource that can contribute to their success (Skawińska & Zalewski, 2020).

The positive effect of technological infrastructure on the success of tech startups reported in the current study is consistent with the findings reported in other past similar studies. Kirchberger and Pohl (2016) stated that a strong technological infrastructure allows the holders to work fluently and innovate easily; this is a factor that brings about big startup performance. In the same vein, Bliemel et al. (2019) showed that problems with the wrong technology framework can be very menacing, and there are shortcomings in the turn of startups' scalability and efficiency in outcome. Overall, the current study adds to the existing literature that demonstrates the importance of the technological infrastructure in improving the success of tech startups.

### **5.2.4 Entrepreneurial Ecosystems and the Success of Tech Startups**

Lastly, this research sought to examine the influence of entrepreneurial ecosystems on the success of startups in Nairobi City County. The indicators for entrepreneurial ecosystem used in this study included networking opportunities, collaborative spaces and mentorship programs. The results of the current study indicated that entrepreneurial ecosystems have a significant positive effect on the success of startups, suggesting that improving the entrepreneurial ecosystem can improve the success of tech startups. These results validate the social network theory in terms of highlighting the importance of an entrepreneurs' social networks within the ecosystem structure and makeup,

including their access to resources, information, and support. The entrepreneurial ecosystem can be considered the social network for startups that serve as the sources of resources and information.

The positive influence of entrepreneurial systems has also been reported in similar past studies. Stam and Spigel (2016) and Isenberg (2011) noted that entrepreneurial ecosystems do not only facilitate access to funding but also other nonfinancial resources, such as mentorships and networking opportunities, that a supportive entrepreneurial ecosystem provides, and which are deemed fundamental to the existence and viability of small enterprises. This is through networking opportunities that startup industry members procure resources, connect with other partners, and acquire clients. Such an environment characterized by collaborative spaces and networking events is important for nurturing knowledge sharing (Santisteban & Mauricio, 2017). Therefore, the findings of the current study augment existing literature showing the beneficial effect of entrepreneurial ecosystems for tech startups.

### **5.3 Conclusions**

The results of this study showed the significant effects of regulatory environment, access to funding, technology infrastructure and entrepreneurial ecosystems on the success of tech startups. First, the results also showed that the regulatory environment had a significant positive effect on the success of tech startups, which were also supported by the findings from the key informant interviews. These results suggest that improving the regulatory environment can improve the success of tech startups. This is in accordance with Yizak's theory explains that the regulatory environment plays a crucial role during the Growth and Development stage. A favorable regulatory framework acts as a nurturing factor, facilitating the smooth growth and operation of startups, whereas an unfavorable environment can lead to challenges or decline. Enhancing regulatory conditions helps ensure that startups thrive rather than face premature decline. Secondly, the findings from this study also indicated that access to funding had a significant positive effect on the success of tech startups, which implies that the success of tech startups can be increased by enhancing access to funding. The findings from key informant interviews also demonstrated the substantial role played by access to funding in enhancing the success of tech startups. Thirdly, the findings show that the technological infrastructure had a significant positive effect on the success of tech startups. The implication of this result is that improving the technological infrastructure

can help enhance the success of tech startups. Findings from interviews validated the findings from the quantitative survey. Lastly, the results of the current study indicated that entrepreneurial ecosystems have a significant positive effect on the success of startups, signifying that improving the entrepreneurial ecosystem can improve the success of tech startups. This is in accordance with Yizak's theory, a robust entrepreneurial ecosystem supports startups across all stages—Birth and Formation, Growth and Development, and Maturity and Stability. Such ecosystems provide mentorship, networking opportunities, and community support, creating a favorable environment for startups to thrive, thereby reducing the risk of decline and enhancing overall organizational longevity.

## **5.4 Recommendations**

### **5.4.1 Policy Recommendations**

A key recommendation from this research regarding policy is that the regulatory environment for tech startups in Kenya should be improved. The findings show the positive effect of the regulatory environment on the success of tech startups. The regulatory environment for startups can be improved by making it easy for startups to comply by formulating a unifying regulation for startups, reducing compliance costs, and creating a government agency to handle issues affecting startups. Another policy recommendation from the findings is the need to increase government support and initiatives for tech startups in the country. Government support for incubators is also needed. These recommendations can enhance the regulatory environment and entrepreneurial ecosystem for tech startups.

### **5.4.3 Managerial Recommendations**

The first recommendation for owners and managers of tech startups is strengthen their access to funding. This study has shown the positive effect access to funding on the success of tech startups. Some challenges that startups experience when accessing funding are unproven business models and lack of collateral. By developing solid business plans with proof of concept, startups can increase their chances of accessing funding. The second recommendation for startups is to enhance their technological infrastructure by adopting advanced technologies, digital connectivity and

scalable digital technologies. Thirdly, startups need to take advantage of opportunities in the entrepreneurial ecosystem, including mentorship, collaboration spaces and networking.

#### **5.4.4 Theoretical Recommendations**

In terms of theory, the findings from the current study have validated the propositions RBV theory as well as the social network theory. The study shows that access to funding and technological infrastructure can be a valuable resource for tech startups. The study has also shown that startups can leverage the social networks found in the entrepreneurial ecosystem to increase their chances of success. The findings of the current study also add to the extant body of knowledge on the success of tech startups by highlight four variables that have a significant influence on the success of these enterprises. These variables are the regulatory environment, access to funding, technological infrastructure, and entrepreneurial ecosystems.

#### **5.5 Study Limitations**

The primary limitation of this study emanates from its methodology – cross-sectional descriptive design. This design is not ideal for examining cause and effect relationships. Moreover, the use of the survey design leads to response bias in the form of socially desirable answers from respondents.

#### **5.6 Suggestions for Further Research**

Considering these methodological limitations, future research can adopt other methodological approaches, such as panel data, to compare successful startups and those that are struggling to better understand what contributes to the success or failure of startups. In addition, further research is needed in startups in other sectors, including health, agriculture, and manufacturing, among others.

#### **5.7 Chapter Summary**

This chapter has outlined the discussion and recommendations from the findings of the study. Policy, managerial and theoretical recommendations have been discussed. Additionally, the study's limitations and recommendations for future studies have been outlined.

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## APPENDICES

### Appendix I: Letter of Introduction

LYDIA NJERI

P.O. BOX 890-00100,

NAIROBI.

6<sup>th</sup> February 2024.

Dear Respondent,

RE: REQUEST FOR PARTICIPATION IN DATA COLLECTION

I write to request your participation in my research. I am pursuing a Master of Business Administration at Strathmore University. The research topic is Factors Influencing the Success of Tech Startups in Nairobi City County, Kenya. I am humbly requesting you be part of this study because your participation and responses will inform the success of this research. If you have any questions regarding the research, contact the researcher, Lydia Njeri at 0720316012 or send an email to [lydia.nduta@strathmore.edu](mailto:lydia.nduta@strathmore.edu). You can also reach my supervisor, at the Strathmore Business School, Nairobi by calling 0703 034200 or emailing [sbsinfo@strathmore.edu](mailto:sbsinfo@strathmore.edu) if you want to ask someone independent about this research, please contact the Secretary – Strathmore University Institutional Ethics Review Board, P.O BOX 59857, 00200, Nairobi, email [ethicsreview@strathmore.edu](mailto:ethicsreview@strathmore.edu), Tel Number: +254 703 034 375. The information you provide shall be treated in strict confidence and privacy. Thank you for your participation.

Sincerely,

*L Njeri*

**Lydia Njeri**

Cell Phone: 0720316012

Email: [lydia.nduta@strathmore.edu](mailto:lydia.nduta@strathmore.edu)



**Appendix II: Ethical Approval and NACOSTI Research License**





24<sup>th</sup> April 2024

Ms Nduta Lydia,  
lydia.nduta@strathmore.edu

Dear Ms Nduta,

**RE: Factors Influencing the Success Rate of Tech Startups in Nairobi City County, Kenya**

This is to inform you that SU-ISERC has reviewed and **approved** your above **SU-masters** research proposal. Your application reference number is **SU-ISERC2116/24**. The approval period is from **24<sup>th</sup> April 2024 to 23<sup>rd</sup> April 2025**.

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,

**Mr Ambrose Rachier,**  
**Chairperson; SU-ISERC**





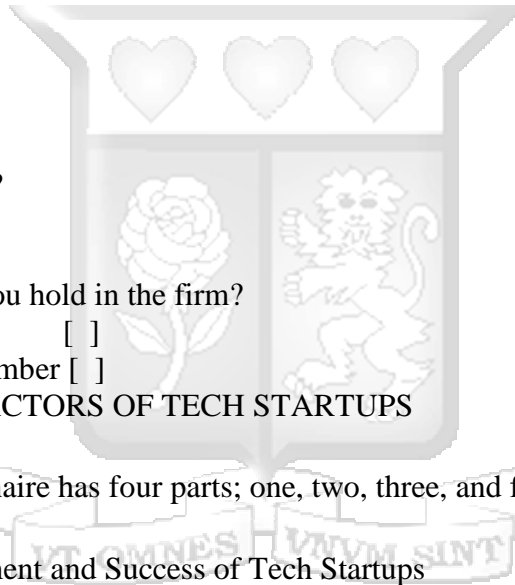
### Appendix III: Research Questionnaire

**Research Topic:** FACTORS INFLUENCING THE SUCCESS OF TECH STARTUPS IN NAIROBI CITY COUNTY, KENYA.

Kindly respond to every question on this questionnaire by indicating a tick (✓) appropriately in the spaces provided. There is no need to write your name or that of your company on this questionnaire.

#### SECTION A: DEMOGRAPHIC PROFILE OF THE RESPONDENTS

1. What is your age?
  - 18-25 years [ ]
  - 26-35 years [ ]
  - 36-45 years [ ]
  - 46-55 years [ ]
  - 56+ years [ ]
2. What is your gender?
  - Male [ ]
  - Female [ ]
3. Which position do you hold in the firm?
  - Tech Manager [ ]
  - Tech team member [ ]



#### SECTION B: SUCCESS FACTORS OF TECH STARTUPS

This section of the questionnaire has four parts; one, two, three, and four.

##### Part 1: Regulatory Environment and Success of Tech Startups

4. Based on your understanding of the regulatory environment, tick based on the degree to which you agree or disagree with the following statements

Statement	1 = Strongly Disagree	2 = Disagree	3 = Neutral	4 = Agree	5 = Strongly Agree
Our startup complies with local regulations by the County Government					
Our startup complies with national regulations by the Government.					
We face significant challenges in adhering to regulations.					

The challenges startups face lower their success					
Government policies have supported our startup.					
The support from government initiatives has been significant					

Part 2: Access to Funding and Success of Tech Startups

5. Based on your understanding of access to funding for startups, tick based on the degree to which you agree or disagree with the following statements

Statement	1 = Strongly Disagree	2 = Disagree	3 = Neutral	4 = Agree	5 = Strongly Agree
Our startup has access to various funding sources.					
The easier it is to access funding sources the more successful the startup becomes					
Securing funding for our startup is challenging.					
Funding challenges lower the success of our tech startup					
The availability of funding options has contributed to our startup's growth.					
Multiple funding sources influence the success of tech startups					

Part 3: Technological Infrastructure and Success of Tech Startups

6. Based on your understanding of the entrepreneurial ecosystem, tick based on the degree to which you agree or disagree with the following statements

Statement	1 = Strongly Disagree	2 = Disagree	3 = Neutral	4 = Agree	5 = Strongly Agree

Our startup uses advanced technology in its operations					
Access to advanced technology increases the survival rate of our startup					
Digital connectivity enhances the success of tech startups					
Digital infrastructure increases the success of tech startups					
Our startup has a high technology adoption rate					
The higher the technology adoption rate the more likely the tech startup will succeed					

#### Part 4: Entrepreneurial Ecosystems and Success of Tech Startups

7. Based on your understanding of access to funding for startups, tick based on the degree to which you agree or disagree with the following statements.

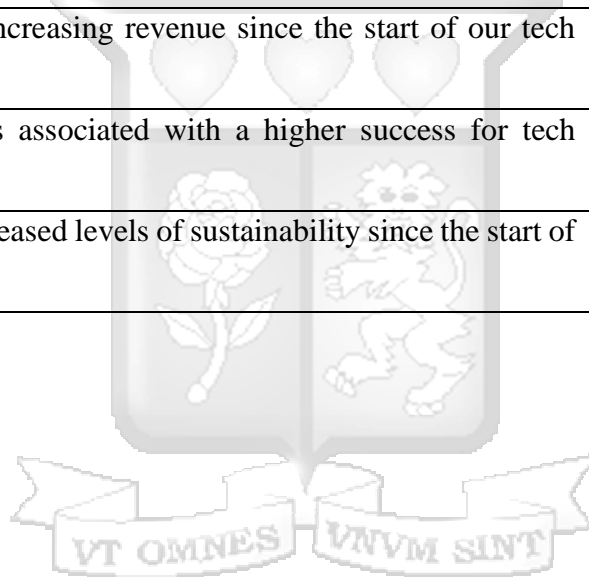
Statement	1 = Strongly Disagree	2 = Disagree	3 = Neutral	4 = Agree	5 = Strongly Agree
Mentorship programs have been beneficial for our startup growth.					
Mentorship programs improve the success of tech startups					
Staff participate in networking events to enhance startups					
Networking influences the success of tech startups					
Collaborative spaces contribute to our startup's success.					
Effective collaborations enhance the success of tech startups					

**SECTION C: SUCCESS RATE OF TECH STARTUPS**

8. On a scale of 1-5, kindly rate how you agree or disagree with the following statements regarding the success of tech startups in Nairobi City County.  
 (Key: 5= strongly agree, 4= agree, 3= neutral, 2= disagree 1= strongly disagree)

Statement	1	2	3	4	5
There has been an increasing number of customers since the start of our tech firm.					
The more the customer base the higher the success of tech startups					
The increase in our startup’s market share is associated with the success of the tech firm.					
There has been an increasing revenue since the start of our tech firm.					
Increased revenue is associated with a higher success for tech startups					
There have been increased levels of sustainability since the start of the tech firm.					

Thank You!



**Appendix IV: Key Informant Interview Guide for Tech Startup Founders**

This interview guide asks probing questions to Tech Startup Founders. The questions are drawn from the research topic: “Factors influencing the Success of Tech Startups in Nairobi City County, Kenya.” The overarching goal is to seek clarification on your responses. Your feedback will be

used for academic purposes only. As such, you are encouraged to give honest responses to the best of your knowledge.

1. How do you rate the success of your Tech Startup based on the following metrics;

- Customer Base.....
- .....
- Market Share .....
- .....
- Revenue Streams .....
- .....
- Level of Sustainability .....
- .....

2. In your opinion, how do the following factors influence the success of your startup?

a. Regulatory Environment .....

b. Access to Funding .....

c. Technological Infrastructure .....

d. Entrepreneurial Ecosystem.....

3. In your appraisal of the success factors for your startup, what key performance indicators do you monitor that relate to its success? .....

4. Apart from the regulatory environment, access to funding, technological infrastructure, and entrepreneurial ecosystem, what other factors do you consider important for tech startups to succeed? .....

Thank you for participating in this interview!

**Appendix III: List of Tech Startups in Nairobi City County**

1	WapiPay	39	Cloud Solutions	Productivity	77	Gikei Business Solutions
2	Armitruck	40	Codesmith Systems		78	Gildee Itech Solutions
3	MarketForce Tech	41	Com Twenty-One Limited		79	Gliterz Solutions Ltd

4	Sokowatch	42	Compass Press Limited	80	Global Training Institute
5	Pezesha Tech	43	Conquest Capital	81	Gold Point Solution Limited
6	Kibanda Topup	44	Creative Renaissance	82	Grandvine Web Solutions
7	Admark Enterprises Limited	45	Crystal Technologies Limited	83	Green Shamrock Ltd
8	Admoran Tech	46	Cyfenna Company Limited	84	H & S Reliance Group Ltd.
9	Algee Technologies Limited	47	Cyfred systems	85	Harwell Aventures Limited
10	Alimas Traders	48	Debbjoe Supplies	86	Heartbit Computer Solutions
11	Apex Business Pages	49	Deezall Infrasol Limited	87	Herufi Africa Limited.
12	Apexio Tech Firm	50	Delco Technologies Ltd	88	Hitech Data Group
13	Atlancis Technologies Limited	51	Desibnhub Limited	89	IBM Kenya
14	Atsushi IT solutions	52	Digital Noble Hub	90	ICT Africa
15	Attain Enterprise Solutions Limited	53	Dime Hub	91	ICT Consultants Limited
16	Azad Tech Limited	54	Dimension Data Solutions Ltd.	92	iDeveloper Technologies
17	Babs Security Services Ltd	55	Diva Engineering Limited	93	iDeveloper Technologies.
18	Bana Ventures	56	East Africa High Tech Solutions	94	Ilani Concepts
19	Baykal Limited	57	Eastridge Enterprises	95	Inceptor Kenya
20	Bekobrand Marketing Agency	58	Eddie Tenk Ventures	96	Innovate Technologies Africa Ltd
21	Bennie Solutions	59	Elite Interactive Ltd, Nairobi	97	Inspired Resource Centre
22	Benq System and Supplies Limited	60	Empire Microsystems Ltd.	98	Interactive Technology Limited
23	Berwaki Africa Limited	61	Emrydan Enterprises	99	Ionic Group Kenya

24	Beutsal International Investments	62	Epitome Supply Limited	100	Isaacwells Limited
25	Bigisell Supplies and Services	63	Eurocom Sytems Ltd	101	ISCS IT Consulting
26	Bintabara Investments	64	Faben IT Solutions	102	Isolutions Associates
27	Blueweb Technologies	65	Fanan Limited	103	Jantec Technologies Limited
28	Bonivic Logistics	66	Fbrand Web Hosting	104	Jayanca Business Solution Ltd
29	Borasoft Limited	67	Federal Agencies	105	Jayvane Investment
30	Bostech ICT Solutions Limited	68	Femtech Enterprise Limited	106	Jedee Investments Limited
31	Brataprom Consultant Ltd	69	Fiditech Solutions Limited	107	Jedfa Company Limited
32	Breeze Technologies	70	Finamu ICT solutions	108	Jekasa Ventures and Supplies
33	Brooklyn Micro-Tech Systems.	71	Fine Fair Solutions	109	Jester Rehoboth Enterprises
34	Burst Digital Kenya	72	Flotech Enterprises	110	JKUAT Enterprises Ltd
35	Cables & Accessories Limited	73	Fresco Limited	111	Josan IT Supplies
36	Cidi General Suppliers	74	Future Vigor Enterprises Ltd.	112	Josatronic Data Systems Ltd.
37	Circuit Power Limited	75	Galen Empire	113	Josim Instantaneous Co. Ltd.
38	Clayhouse Enterprise	76	Geeks Republiq Limited	114	Kahiga IT Supplies

115	Karatu General Supplies Limited	153	Pepam Holding Limited	191	Tifa Research Ltd
116	Kenroti Company Limited	154	Pieces Collection Limited	192	Tivella Technologies Limited

117	Ken-Syl Holdings Limited	155	Pillar Audio Visual Services Ltd.	193	Tridel Investment Limited
118	Kernj Enterprises Limited	156	Plutocrat Ventures Limited	194	Tulips Business Solutions
119	Kistar Enterprises	157	Podii consultants	195	TymesTech
120	Kittotech Suppliers	158	Ponsian Enterprises	196	VAS Consultants Ltd
121	Laplace Agencies Ltd	159	Prime MAYDAY Solutions Ltd.	197	Vindel Limited
122	Lavington Security Ltd	160	Print-Rite Media Limited	198	Virtual Office Point
123	Lean Ventures Limited	161	Proactive Networks Limited	199	Vision Hope Agencies
124	Limah E.A Limited	162	Procoolers IT Solutions Ltd	200	Web Marketing Wits
125	Lisamu Ventures	163	Prostan Technologies	201	Webwise Consulting Group
126	Litex Agencies Limited	164	Racnold Enterprises	202	WezaCode
127	Lofty Minds Marketing Agency	165	Rapidtech Digital Solutions.	203	XXR Technologies Limited
128	Logo Shop Kenya	166	Refrigeration Technic (ES) Ltd		
129	Lotus Consulting Limited	167	Retam Enterprises		
130	Mambo Microsystems Limited	168	Risivonne investments		
131	Manage IT, Africa	169	Ruesay Enterprises		

132	Marwal Enterprises	170	Saava Engineering Ltd
133	May House Consult Limited	171	Sanderling Enterprises
134	Mediavest Solutions Limited	172	Simplify IT Inc
135	Melikebu Enterprises	173	Snow Desert (EA) Ltd
136	Michizanne Enterprise	174	Solucom Agecies
137	Midas Africa	175	Sonata Enterprise Limited
138	Milka Trading Limited	176	SovTech
139	Movetech Group	177	Spinel Dyanics Group Limited
140	Mutesi Enterprises	178	Stimal Office Supplies Limited
141	Mwanzoh Kwanzah Enterprise	179	Superbridge Technologies.
142	Ndesny General Supplies Limited	180	Supreme Networks
143	Nescom Kenya.	181	Surestep Tech Systems
144	Netlit Digital Marketing Kenya	182	Symphony Technologies Ltd.
145	Next Technologies Limited	183	Synergies Company Limited
146	Nifty Web Solutions	184	Systems Integrated Ltd
147	Niko Creative Kenya	185	Tabala Digital Solutions

148	Octopus ICT Solutions Ltd	186	Talex Supplies Limited
149	Ongadi Studios	187	Tandie ICT Enterprise Limited
150	Panamer Company Limited	188	Techload Limited
151	Parakelo Enterprises	189	Techno Brain (Kenya) Ltd
152	Peak and Dale Solutions Ltd	190	Technology Today

