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Effect of accelerator programs on business success among technology startups in Kenya

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EFFECT OF ACCELERATOR PROGRAMS ON BUSINESS SUCCESS AMONG TECHNOLOGY STARTUPS IN KENYA

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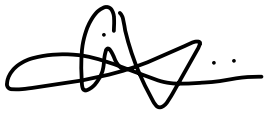
DECLARATION

Student Declaration:

This thesis is my original work and has not been presented for a degree in any other university.



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Supervisor's Approval:

This thesis has been submitted for examination with my approval as the Student's University Supervisor.

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DEDICATION

This thesis is dedicated to my family who have supported me throughout my education.

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This study has been completed through the sustenance and encouragement from various individuals to whom I'm appreciative. First, I will thank God for His grace and mercies that He saw me through my studies in good health and right mind. I give all glory and honour to Him.

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LIST OF ABBREVIATIONS AND ACRONYMS

GSMA	Global System for Mobile Communications Associations
RBV	Resource Based View
ROA	Return on Assets
ROI	Return on Investment
SME	Small and Medium Enterprise
VC	Venture Capitalists
VECM	Vector Error Correction Model

ABSTRACT

Accelerator programs in the developed world have had tremendous success in nurturing startups to the point where these organizations have gone on to be large global organizations operating in multiple jurisdictions, hiring thousands of employees, increasing their valuations and enriching employees and investors alike. However, despite the high number of accelerators/incubators/hubs in Africa (>500), the continent is yet to witness this level of growth for startups operating in this region. So far, only one startup on the continent, Jumia Group, has achieved unicorn status. Many startups going through accelerator programs are closing shop on a frequent basis and continue to struggle to raise additional funding necessary to help them get to their next level of growth. The main aim of this research study was to establish how accelerator programs influence start-ups' business success among tech start-ups in Kenya. Specifically, the study sought to; determine the relation between accelerator seed funding on Start-ups' business success, analyse the relationship between technical guidance offered by accelerators on start-ups' business success and to establish the relationship between strategic guidance offered by accelerators on start-ups' business success. The research adopted the resource-based view theory and the diffusion of innovation theory. This research used a cross sectional descriptive survey research design. The study population was 42 employees in the accelerators, six from each of the 7 accelerators located in Kenya. Data was from 36 of the 42 giving a response rate of 85.71%. The study used primary data obtained from the original sources using questionnaires. The questionnaires were administered online via Google forms. Data obtained using questionnaires was converted from simple responsive into a quantitative form to be useful in the analysis that was done using statistical package for social sciences (SPSS). This process generated descriptive statistics which included frequencies and percentages and inferential statistics. A multiple linear regression model was used to show the relationship between the dependent and independent variables. The study findings reveal that seed funding influenced tech start-up business success positively. Results also demonstrate that technical guidance influenced tech start-up business success positively. Further, results illustrate that strategic guidance influenced tech start-up business success positively. The regression and correlation results support the results as there existed a positive and significant relationship between seed funding, technical guidance, strategic guidance and tech start-up business success. The study recommends the need for having more accelerator programs offering seed funding, technical and strategic guidance as this will boost tech start-ups business success. The findings of this study will help managers to focus on critical success factors for success within their organizations hence improving the performance of their businesses. The finding that accelerator programs contribute more to success implies that managers will need to focus more on these strategies if they are to improve their business success. The main limitation of the study was that it covered only three aspects of accelerator programs and so there are other areas that require research.

CHAPTER ONE
INTRODUCTION

1.1 Background of the Study

New business ventures are more likely to fail than to succeed given the multiple challenges that come into play along the entrepreneur's journey (Venkateswarlu & Ravindra, 2012). In addition to this, new business ventures may fail to realize the initial projections set out in the business plan due to a variety of factors such as limited capital, lack of leadership within the organization, poor product quality, lack of market awareness, lack of a strong team to carry forward the vision of the organization among others. New business ventures in the technology sector are particularly more inclined to fail given the novelty associated with these business models (GSMA Intelligence, 2018).

Oftentimes, technology startups have devised innovative products and services never before seen in the market, and which will require some element of educating the market, which has historically had varied degrees of success. Technology startups involve inordinate amounts of research and development relative to other business ventures because of the fact these ventures involve an element of disruption to existing business models (Medlin, 2016). The McKinsey Global Institute (2013) concluded that access to finance, lack of mentorship, inadequate knowledge and skills and corrupt governance are the main hindrances to the success of startups' in Africa. Therefore, there is need to consider startups as not necessarily being enforced or circumstantial in nature, rather, as entrepreneurial firms that require sound structures, policies to boost them for better performance and contribution to economic development, hence the need for mentorship and empowerment.

The concept of accelerators is said to have emerged in 2005 when Paul Graham founded Y Combinator in Cambridge Massachusetts, before relocating the program to Silicon Valley. Techstars was established in 2007 by David Cohen and Brad Feld with the key objective of transforming the startup ecosystem in Colorado. The number of accelerators operating globally has grown exponentially since the early days of Y Combinator and Techstars. Today, the number of accelerators globally ranges from 300+ to over 2000. TechStars and its affiliates have operations in 11 cities, and the Global Accelerator Network, which is an international parent organization for accelerator programs following the TechStars model, has 50 accelerators spread out in 63 cities on 6 continents among its members (Cohen & Hochberg,

2014). Africa has not been left behind with this growing phenomenon with approximately 442 accelerators and incubators operating on the continent (GSMA Intelligence, 2018).

It has been argued in some cases that the existence of accelerator programs has been effective in catalysing a spirit of entrepreneurship in the markets/environments in which they exist (Peters, Rice, & Sundararajan, 2004). Business support programs (incubators, accelerators, maker spaces) provide a wide range of support to new ventures including infrastructure, shared administrative services and equipment, business coaching and mentorship, capital, office space, access to networks and advisors, among other benefits, thereby resulting in local job creation, economic development and technology transfer (Peters, Rice, & Sundararajan, 2004). However, the distinction of role of business support programs as facilitators of the entrepreneurial process through the reduction of business transaction costs or simply as an environment through which shared meaning and learning among entrepreneurs occurs is yet to be clearly achieved (Miller & Stacey, 2014).

1.1.1 Accelerator Programs

Accelerator programs are defined as initiatives established to nurture startups and create an enabling environment to test their business models and receive mentorship, strategic guidance and even financial support needed to grow their businesses (Kelley & Hoffman, 2012). Accelerator program is not a new concept in the business world; the tenets of accelerator support may be considered to have emerged from the concept of apprenticeship, where more experienced workers coached and trained younger professionals on the art of the trade and enabled them to go off and establish their own enterprises. These practices date back thousands of years and have become more formalized over time and customized to suit the needs of businesses at various stages, markets and industries. Today, the role of business support is played by various types of organizations, from accelerators to incubators and other key stakeholders in the startup ecosystem (Miller & Stacey, 2014).

Accelerator programs may be viewed as business support initiatives targeted at nascent business models that have significant growth potential. Accelerator programs typically run for a fixed duration of time, typically 3 – 12 months during which period startups are guided through various business processes including defining their target market, developing a prototype, establishing the go-to-market strategy and reiterating various business models until

product-market fit is established (GSMA Intelligence, 2018). Accelerators can have varied business models depending on the source of funding for the program. Accelerators were initially supported by venture capital funds who were trying to develop deal flow for investment down the line. However, various other sources of funding have emerged over time, including corporate organizations who are exploring new ideas for strategic reasons or as a means of corporate social responsibility. Similarly, high net worth individuals, particularly those who have had a successful run in establishing businesses which they have subsequently profitably exited from, are also a key source of funding for these accelerators (Bone, Allen & Halley, 2017).

Startups are typically selected in cohorts to join the accelerator programs, and this is commonly done through a competitive process (GSMA Intelligence, 2018). Companies selected receive technical and strategic guidance to grow their businesses, in addition to seed funding required at the onset of the business. In exchange, accelerators will typically acquire a small equity portion of the business. Thus, the key objective of the accelerator is to grow and scale the business fast enough in order to realize a return, or to encourage companies to fail fast in order to minimize wastage of resources on non-viable business ideas (Bone, Allen, & Haley, 2017). For purposes of this study therefore accelerator programs were measured by level of seed capital received and the strategic and technical guidance received. Seed capital is the financial assistance that supports the start-up enabling survival while going through an accelerator program (MacManus, 2010). In terms of technical and strategic guidance, accelerator programs offer office real estate, technical, managerial support, access to financiers, mentorship, mentoring, and access to a network of entrepreneurs (Katz & Green, 2009).

1.1.2 Business Success

The concept of business success has been described as value creation in a firm that may produce a positive change in the financial situation of a company depending on the financial results that an improved Return on Investment (ROI) will bring. Improved ROI is the result of better utilization of raw material, labour, capital and proper resource management (Richard, Yip, Johnson & Devinne, 2009). Given the importance a company's performance plays in investment decision making, it is important that investors can utilize appropriate criteria for the concept of a firm to succeed. Richard et al. (2009) acknowledge failure to have consensus on firm success definition. This is indicated by the contrary definition by Valmohammadi and

Servati (2011) who described business success as relating to the efficiency in performing a task. March and Sutton (2014) however defines business success as both behaviour and results which are the fundamental interest of every business manager that are undertaken in any firm.

Business success is an important measure which helps determine the productivity, organizational efficiency and competence of a company. It can be viewed as a measure of the efficiency and effectiveness by which resources have been used to produce the output of products of the kind that are needed by consumers and society in the long run (Bain, 2016). Firm success helps show the profitability of the firm which is measured with income and expense. Promoting firm success is a vital task for business managers because a profitable business can survive (Chakravarthy, 2016).

There is thus no single index to explain firm success. This has led to the reluctance in the application of both non-financial and financial measures of success of a business entity (Chakravarthy, 2016). Bain (2016) equates firm success in an industry to having above-average profitability. Schmalensee (2019) refers to firm success as Return on Asset (ROA). Qualitative and quantitative criteria have so far been provided to evaluate the successes of firms. Accounting measures also that are vital can be used in evaluating firm success. These measures include net profit and return on assets (Mustafa & Yaakub, 2018). The current study measured success using the method developed by Cohen and Hochberg (2014) that operationalized firm success in terms of profitability, scaling up, minimization of waste and innovations.

Profitability refers to ability of a firm to earn revenues that exceeds its total operating expenses. It is the return on equity invested ((Abernathy & Utterback, 2015). Scaling up regarding business success refers to increasing the level of output which can be either products or services (Bain, 2016). Minimization of waste is all about efficiency of operations where output is produced using the minimum possible cost (Cohen & Hochberg, 2014). Pisano and Teece (2011) define innovation as an act of introducing more effective and efficient ways of doing. Innovation practices involve use of improved ways to address changing customer needs.

1.1.3 Technology Startups in Kenya

The term ‘startup’ is typically used to describe a new business venture that involves either a new form of technology that is not commonly adopted or an innovative business model that is disrupting the manner in which businesses in the same sector have been operating in the past (Anholt, 2016). Thus, a startup is not just a newly established business, but a venture that is

pioneering a new way of doing things, which is distinct from other types of new businesses (Bone, Allen, & Haley, 2017). Startups are differentiated from small and medium enterprises (SMEs) which are also new businesses but are not necessarily innovating traditional business models. SMEs typically come up to tap into a growing market segment, launch traditional business models in new markets or compete with dominant players that are unable to meet the demand of the entire market.

Kenya is one of the biggest tech hubs in Sub-Sahara Africa and the country had 27 tech hubs spread across the country as of 2016 (Drover et al., 2017). The country is home to some of the most innovative and diverse startups ranging from payments, logistics, e-commerce, health to blockchain apps. Just like California's Silicon Valley, much of Kenya's homegrown innovations take place within small tech communities and social groups. The high interest that this section generates has motivated local entrepreneurs, students at university level and government agencies in forming innovation hubs nationwide, with the most common being the i-Hub, m-Lab, FabLab and Nailab facilities. Most of the innovation spaces, incubation centres, accelerators, and maker labs are concentrated in Kenya's capital but in recent years startups have started moving out of the city to other cities such as Mombasa, Nakuru, Kisumu and Eldoret (Economic Survey of Kenya, 2018).

Some of the tech startups in Kenya include Carepay which is a Nairobi-headquartered fintech, an e-health entity which strives to promote healthcare inclusion in Africa. To improve the M-TIBA platform, the company seeks to implement a blockchain, AI and Machine Learning technologies. It was launched in 2015. The main challenge them has been raising funds and through accelerator programs they have been able to raise $45M with PharmAccess Group and ELMA Investments as key investors. Twiga Foods is a mobile-based firm engaging in food delivery which connects farmers and vendors to fair, trusted, modern markets. Since being founded in 2014 by Grant Brooke, the firm presently works with 17,000 farmers daily with a goal of expanding both within and outside Kenya (Digest Africa, 2019).

Powerhive is a tech startup company in Kenya that specializes in offering energy solutions. Since its formation in 2011 by Chris Hornor, the firm has provided millions of households with clean energy. M-Kopa a clean-energy startup using its PAYG platform has provided low-income homes with affordable asset financing for connected solar technology and other

innovative products and services. For approximately 9 years since the company was founded, M-Kopa has provided close to a quarter a billion dollars in form of micro-loans for low-income consumers in East Africa (Digest Africa, 2019).

Africa's Talking is another tech start up in Kenya. Co-founders Sam Gikandi and Eston Kimani founded the firm in 2010, which is now the preferred platform providing access to telco infrastructure that enables developers to use their SMS, USSD, Voice, Airtime and Payments API's to bring their ideas to life. Despite the potential of tech startups in Kenya, they have faced myriad of challenges ranging from access to finance, lack of technical skills and knowledge needed to learn a successful venture, lack of strategic guidance among others. Accelerator programs are developed to ensure that tech start-ups overcome these typical challenges and become successful ventures that can transform societies (Bone et al., 2017).

1.2 Statement of the Problem

Accelerator programs in the developed world have had tremendous success in nurturing startups to the point where these organizations have gone on to be large global organizations operating in multiple jurisdictions, hiring thousands of employees, increasing their valuations and enriching employees and investors alike (Fowle & Jussila, 2016). Many startups going through these accelerator programs have gone on to achieve unicorn status that is, hitting the US$1 billion valuation mark (Bone, Allen, & Haley, 2017). Examples of global organizations that have achieved this level of success and have gone through an accelerator program include: AirBnB, Dropbox, Reddit, Udemy among others. However, despite the high number of accelerators/incubators/hubs in Africa (>500), the Continent is yet to witness this level of growth for startups operating in this region. So far, only one startup on the continent, Jumia Group, has achieved unicorn status. Many startups going through accelerator programs are closing shop on a frequent basis and continue to struggle to raise additional funding necessary to help them get to their next level of growth (GSMA Intelligence, 2018).

It thus appears that these accelerators have various structural and core inefficiencies that are preventing them from providing the kind of support required by these startups. There is a limited amount of research around the value and efficacy of accelerator programs in nurturing tech startups and facilitating their growth and scale across the continent and globally. In addition, within the Kenyan environment, little is known regarding the differentiation between

various types of business support organizations such as accelerators, incubators, co-working spaces, angel investors, among others (Cohen & Hochberg, 2014).

Most of the existing research on the accelerator programs has been carried out in developed countries and there is inadequate literature on the influence of accelerator program on business success. There exist conceptual, contextual and methodological gaps. Conceptually, the study by Drover et al. (2017) does not address the effect of seed funding on success of start ups' but only lays out the capital structure of start ups' undertaking the accelerator programs. This therefore presents a knowledge gap. Studies by Miller and Bound (2011) and Cohen and Hochberg (2014) focused on accelerator activities instead of the start-ups, thus this also presents a conceptual gap.

Contextually, Davidson's (2011) study focused on TechStars top-ranked accelerator in the United States. An exploratory case study approach was used to examine the leading accelerator companies. Arrington (2007) focused on incubation and funding of Tech start-ups in Colorado, United States by utilizing the critical theoretical literature review methodology. Radojevich-Kelley and Hoffman (2012) analysed the accelerator companies in the United States by conducting an exploratory case study of their programs, processes, and early results through use of descriptive statistics. All these studies were conducted in different contexts and therefore their results cannot be generalized to reflect tech startups in Kenya.

Methodologically, Keller and Hoffman (2012) conducted an exploratory case study on five of the leading accelerators in the US and concluded that programs that offer mentorship services increase the overall rates of success of tech startups by giving founders with access to angel investors and venture capitalists thereby increasing their probability of chance to be successful. This study was exploratory in nature while the current study was descriptive. Bluestein and Barrett (2010) focused on how incubators accelerate the start-up process analysing initiatives like the Y Combinator in San Francisco and TechStars in Boulder, Colorado, both located in the United States. The study was a theoretical literature review while the current study was an empirical study. Fehder and Hochberg (2014) study on the effects of accelerators on the availability and provision of seed and early stage venture capital funding in the local regions of the United States was also a theoretical literature review and therefore it provides a methodological gap.

In view of these, though studies on accelerator programs have been done, there is limited literature on studies carried on or related to the influence of the accelerator programs on the business success of startups' and especially in Sub-Saharan Africa. Further, the studies few studies conducted globally presents conceptual, contextual and methodological research gaps. This study therefore aimed to bridge this existing gap in the literature by establishing the effect of accelerator programs on business success among tech startups in Kenya.

1.3 Objectives of the Study

This section provides the objectives of the current study, that is, both the general and specific objectives.

1.3.1 Broad Objective

The study's general objective was to determine the effect of accelerator programs on startups' business success among tech startups in Kenya.

1.3.2 Specific Objectives

The specific objectives were to:

i. Determine how accelerator seed funding impacts start-ups' business success among tech startups in Kenya.
ii. Determine how technical guidance offered by accelerators influence start-ups' business success among tech startups in Kenya.
iii. Establish how strategic guidance offered by accelerators impacts start-ups' business success among tech startups in Kenya.

1.4 Research Questions

The study addressed the following questions:

i. What is the effect of accelerator seed funding on start-ups' business success among tech startups in Kenya?
ii. What is the effect of technical guidance offered by accelerators on start-ups' business success among tech startups in Kenya?
iii. What is the effect of strategic guidance offered by accelerators on start-ups' business success among tech startups in Kenya?

1.5 Scope of the Study

The study was limited in scope to cover only Kenya, despite having accelerator programs in other African Countries as well as globally. These other countries have been excluded owing constraints and minimal foothold. The study methodology covered a quantitative approach only utilizing a descriptive cross-sectional research design. It was limited to two theories only namely; resource-based view and diffusion of innovation theory. The time scope was from February 2020 to May 2020.

1.6 Significance of the Study

The study will provide insights to regulators and policy makers on the accelerator programs enhancing the startups business success and functioning, which will help in regulation and policy formulation. The study found that seed funding, technical guidance and strategic guidance significantly influence success of tech startups in Kenya and therefore policy makers should come up with policies that encourage creation of more accelerator programmes offering these services. Such policies might include provision of tax incentives to accelerator programs.

The study findings will be used by other scholars, students and researchers in future as a platform for executing further studies in the same field. The study has found that provision of seed capital, technical and strategic guidance influences success of tech startups. Future researchers can use this as a foundation to investigate other relationship between accelerator programs and business success. The findings will also be used by researchers and scholars in to identify further identify research areas on the related topics addressing the same matter through conducting a review of the existing literature to identify the research gaps.

For management practice, this study is expected to enhance the understanding on how to improve business that can lead to superior performance. The findings of this study will help managers to focus on critical success factors for growth within their organizations hence improving the performance of their businesses. By establishing that accelerator programs contribute more to success, managers will need to focus more on these strategies if they are to improve their business success.

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CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This chapter discusses a review of relevant literature. It highlights both empirical and theoretical literature. Theoretical literature examines the association of accelerator programs and start ups' business success. Similarly, empirical literature analyses the results of empirical studies on accelerator programs and start-ups' business success. The chapter ends with a summary of knowledge gaps and conceptualization of study variables.

2.2 Theoretical Foundation

A theory is created to identify, elaborate, and comprehend certain phenomenon and in other instances, to challenge the present knowledge on this within the brackets of present bounding assumptions. A theory entails many concepts brought together and existing approaches used for a study (Nutall, Shankar, Beverland & Hooper, 2011; Tracy, 2010). This research was anchored on two theories; the Resource Based View (RBV) Theory and Diffusion of Innovation Theory.

2.2.1 Resource Based View Theory

Penrose (1959) proposed the RBV theory, which gives the description of firms as sources of, capabilities, resources and, competencies. If such competencies are unique, it becomes difficult for them to be imitated which gives them a distinctive competitive edge (Penrose, 2003). This theory further stated that the resources of affirm should be considered together with the focus of firms on services and products (Wernerfelt, 1984). Subsequently, different researchers stated if it has resources that are less likely to be imitated or substituted (Barney, 1991; Eisenhardt & Martin, 2000; Ravenswood, 2011).

The RBV theory positioned two approaches: the structural and the process approach. The structural approach focuses on the uniqueness of resources (Barney, 1991; Wernerfelt, 1984). The second approach focuses on the internal processes that create efficiencies and include intangible human capital or the organization's capital (Fiol, 1991; Hart, 1995; Miller & Ross, 2003). Researchers such as De Toni & Tonchia (2003) and Hart (1995) criticized the theory because it under-emphasized the role played by the external environment factors to the firm and its industry.

The RBV theory links to the current study because the study sought to determine if accelerator programs lead to success of start-ups; accelerator programs are resources at the startups' disposal. If the reason for the success of start-ups would be the added resources that accelerators provide, the results of the study would then support the resource-based view. The findings would support the notion that resources provided by accelerators are relevant since they create added value to the new entities. If found to be helpful, then the study would examine if the structural or process components of the RBV theory were utilized and whether the criticisms made by De Toni and Tonchia's (2003) would be applicable to the results. Contrarily, if the accelerators are not responsible for enhancing the start-up success, then the resources that they provide cease to be relevant to start-us.

2.2.2 Diffusion of Innovation Theory

The theory was introduced by Everett Rogers in 1962. In his paper, he explains that diffusion is the process where an innovative idea, process or product is communicated to members in a community (Rogers, 1962). This theory brings in different disciplines and varies severally. Getting a new idea to be adopted and accepted can be such a difficult task and that is the grounds for the interest in the diffusion of innovations theory this is because it takes a long time. Most institutions face the problem of trying to accelerate this rate of adoption where the rate of adoption is the rate at which an innovation is well taken up by members of a community. The rate of adoption is calculated based on the persons absorbing the idea or innovation within a frame of time. This is denoted by an arithmetical curve representing innovation (Rogers, 1995).

Diffusion of Innovations, however, takes a drastically diverse outlook as compared to other theories of change. It not only focuses on changing people's habits but rather sees change as being largely about the progression or reinvention of products and character so that they fit better to what the individual want or need. In this theory, the assumption is that people do not change but innovations should conform to needs of people (Robinson, 2009). Robinson (2009) further explains that coming up with new ideologies is key in the theory diffusion of innovations. If innovation evolves well enough to meet the needs of the risk adverse individuals, then it is assumed to be successful. This can be achieved by involving these individuals slowly in the developmental process as the innovation is being re-invented

(Robinson, 2009). Rogers (1995) describes diffusion as the method that involves the process in which an innovation is conveyed thorough specific mediums of communication over a specific period among the individuals of a community. From this definition innovation, channels of communication, time, and community are the four crucial components in the diffusion of innovation process (Sahin, 2006).

An innovation is an idea that is seen as fresh by people or by other elements of acceptance. If individual perceives a project or practice as being new even if it was formulated a while back, then it is considered an innovative idea and will be called an innovation. Rogers (1995) further claimed there was not enough research on diffusion the technological arena. He further explained that technology cluster had more distinct features of technology that are believed as being thoroughly interconnected. Uncertainty is a crucial impediment in the adoption of innovations. Innovation will always cause level of consequences. These reservations or consequences are what differences can be spotted on an individual or a community after resolving to adopt the change or otherwise not adopting the innovation. For this reason, individuals and communities should be educated on the benefits and drawbacks of adoption or refusal to adopt innovation, that is, the consequences (Rogers, 2003). A look at the other element of the diffusion of innovation theory, communication is the process where individuals continuously share information with the aim of reaching a common understanding. Rogers (2003) clearly states that there is need for interpersonal relationships since diffusion involves a social process. According to Robinson (2009), the one element that has been ignored is the time aspect, which is a crucial element in measuring the strength of innovation in the diffusion process. Rogers (2003) states that a community is a unified unit that strives to solve problems jointly for the purpose of reaching a unified goal. The community's social structure determines how innovation will be adopted since it occurs in a specific setting.

This theory sought to give details on why, how, and at what rate new thoughts and technology are absorbed. Accelerator programs being a new and recent ideology will be well discussed in the theory. The diffusion of innovation theory links to the current study because it sought to determine if accelerator programs lead to success of start-ups, accelerator programs are bases of transmitting innovation to start-ups'. If the innovations, provided by the accelerators enhance the start-ups success, then the study's results would support the diffusion of innovation theory. The results would support the notion that accelerator infusion of innovation is relevant

since it creates additional value for new entities. Thus, if the diffusion of innovation is found beneficial, then the research would examine if the structural or process components of this theory were utilized and whether Rogers (1995) and Robinson (2009) criticism is applicable to these findings. In contrast, if accelerators fail to enhance the success of start-ups, then the innovations they provide would cease to be relevant to start-ups.

2.3 Empirical Literature Review

This section discusses relevant empirical literature on the effect of accelerator programs on start-ups' business success. The elements of accelerator programs covered in this section are; seed funding, technical guidance and strategic guidance.

2.3.1 Seed Funding and Business Success

Bluestein and Barrett (2010) focussed on how incubators accelerate the start-up process analysing initiatives such as Y Combinator in San Francisco and TechStars in Boulder, Colorado, both located in the United States. They conducted a theoretical literature review. The study established that incubators provide more than just funding, they give value to their participants through early stage financing. They also stated that while the average start-up requires early stage financing, they do not require a lot of capital, the funding given to the start-up is enough to keep them afloat while they attend an accelerator program. The study did not analyse all the aspects of accelerator programs and it did not also conduct inferential statistics to seek the cause and effect relationship of accelerator programs and start ups' success. The current study addresses this by analysing the influence of all the accelerator programs on start ups' success and by also conducting inferential statistics to seek the cause and effect relationship of accelerator programs and start ups' success

Drover et al. (2017) conducted a study on the attributes of angel and crowd funded investments as determinants of Venture Capitalists' (VCs) screening decisions by utilizing a theoretical literature review. They opined that while in the early stages, ventures tend to rely on a mixture of own, debt and equity financing – also depending on the geographical location of the start-up, in later stages and particularly high-growth-potential start-ups focus on outside equity finance sources such as VC, Corporate Venture Capital (CVC), angel investment, crowd funding and/or accelerators. The study did not analyse all the aspects of accelerator programs and it did not also conduct inferential statistics to seek the cause and effect relationship of

accelerator programs and start ups' success. In the current study, the influence of the accelerator programs on start ups' success was analysed and it also conducted inferential statistics to seek the cause and effect relationship of accelerator programs and start ups' success.

Fehder and Hochberg (2014) focussed on the effects of accelerators on the availability and provision of seed and early stage venture capital funding in the local regions of the United States by utilizing a theoretical literature review. They stated that accelerators have the goal of making profits and are seen to be on one end of the venture capital spectrum. The authors compared them to angel investors and incubators, and discovered that, areas which have established accelerators have higher entrepreneurial financing prospects both within the accelerator which stimulates the entrepreneurial eco-system thereby satisfying both the local government and the accelerator's founders. The study did not analyse the influence of the accelerator programs on start ups' success and it did not also conduct inferential statistics to seek the cause and effect relationship of accelerator programs and start ups' success. In the current study, the influence of the accelerator programs on start ups' success was analysed and it also conducted inferential statistics to seek the cause and effect relationship of accelerator programs and start ups' success

Cohen and Hochberg (2014) studied the seed accelerator phenomenon in the United States by utilizing a theoretical literature review. The study found that accelerators often derive their business models from equity provided to the start-ups, this means that their main goal is to grow, typically they aim to produce companies that will grow rapidly or fail quickly, thereby resulting to minimal resource wastage. The study further established that there is an exception to this model particularly with most corporate accelerators, where several entities may choose to finance or subsidise such programmes for strategic reasons such as internal innovation, cultural change, marketing, Corporate Social Responsibility (CSR) or public relations. The study did not analyse the influence of the accelerator programs on start ups' success and it did not also conduct inferential statistics to seek the cause and effect relationship of accelerator programs and start ups' success. The current study addresses this by analysing the influence of the accelerator programs on start ups' success and by also conducting inferential statistics to seek the cause and effect relationship of accelerator programs and start ups' success

The study by Bluestein and Barrett (2010) opined that incubators provide more than just funding, they give their participants added value through early stage financing and also stated even though the average start-up requires early stage financing, they do not require a lot of capital, the funding gives them enough support to ensure survival while they attend an accelerator program. However, Drover et al. (2017) opined that while in the early stages, ventures tend to rely on a mixture of own, debt and equity financing – also depending on the geographical location of the start-up, in later stages and particularly high-growth-potential start-ups focus on outside equity finance sources such as VC, Corporate Venture Capital (CVC), angel investment, crowd funding and/or accelerators. This implies that funding is essential for start-ups success. Additionally, Fehder and Hochberg (2014) stated that the main goal of accelerators is to make a profit and are one end of the venture capital spectrum. The authors compared them to angel investors and incubators, and found out that, regions that have established accelerators benefit from higher entrepreneurial financing activity within the accelerator which stimulates the entrepreneurial eco-system and benefits both the local government and the accelerator's founders. Cohen and Hochberg (2014) established that accelerators derive their business model on the equity from the start-ups.

2.3.2 Technical Guidance and Business Success

Katz and Green (2009) focused on the distinctive nature of small businesses of start-ups versus high growth firms, they conducted a theoretical literature review. They stated that accelerator programs provide office space, technical, managerial support, and access to investors. The study did not analyse all the aspects of accelerator programs and it did not also conduct inferential statistics to seek the cause and effect relationship of accelerator programs and start ups' success. The current study addresses this by analysing the influence of the accelerator programs on start ups' success and by also conducting inferential statistics to seek the cause and effect relationship of accelerator programs and start ups' success

Davidson's (2011) study focused on TechStars top-ranked accelerator in the United States. An exploratory case study was used to examine the leading accelerator companies and it employed descriptive statistics. The study established that programs which are mentorship driven increase the success rate of start-ups by giving them access to angel investors and venture capitalists which increases their chances of being successful. The study did not analyse all the aspects of accelerator programs and it did not also conduct inferential statistics to seek the cause and

effect relationship of accelerator programs and start ups' success. In the current study, the influence of the accelerator programs on start ups' success was analysed and it also conducted inferential statistics to seek the cause and effect relationship of accelerator programs and start ups' success

MacManus (2010) focused on TechStars historical results data in the United States. The study utilized an exploratory case study approach to examine the leading accelerator companies and it employed descriptive statistics. The study established that accelerators provide office space, access to successful entrepreneurs, mentors, and other technology experts, a place that they can socialize with other venture founders, and an environment that is safe enough to share ideas or methods and provide encouragement, assistance, and assistance with technical issues. The study did not analyse all the aspects of accelerator programs and it did not also conduct inferential statistics to seek the cause and effect relationship of accelerator programs and start ups' success. The current study addresses this by analysing the influence of the accelerator programs on start ups' success and by also conducting inferential statistics to seek the cause and effect relationship of accelerator programs and start ups' success

Anholt (2016) conducted a survey to construct a Brand Index. The study utilized an exploratory case study approach to examine the leading accelerator companies and it employed descriptive statistics. The study suggested that a successful accelerator must either tap a local entrepreneurship resource or draw founders to it and that it is not surprising that the top "city brands" overlap closely with the world's most successful accelerators, whether ranked for "buzz" and "assets" or for Presence, Place, Prerequisites, People, Pulse and Potential. The study did not analyse all the aspects of accelerator programs and it did not also conduct inferential statistics to seek the cause and effect relationship of accelerator programs and start ups' success. In the current study, the influence of the accelerator programs on start ups' success was analysed and it also conducted inferential statistics to seek the cause and effect relationship of accelerator programs and start ups' success.

Fowle and Jussila (2016) conducted a study on the critical success factors for business accelerators, they conducted a theoretical literature review. The study opined that in practice, the quality of office space seems to matter less than the location. The study did not analyse all the aspects of accelerator programs and it did not also conduct inferential statistics to seek the

cause and effect relationship of accelerator programs and start ups' success. The current study addresses this by analysing the influence of the accelerator programs on start ups' success and by also conducting inferential statistics to seek the cause and effect relationship of accelerator programs and start ups' success.

Feld (2012) focused on building an entrepreneurial ecosystem in cities by conducting a theoretical literature review. Feld (2012) emphasised that culture and expectation are key and claim and that "the moderating effects of community require physical interaction and a geographical centre". The study did not analyse all the aspects of accelerator programs and it did not also conduct inferential statistics to seek the cause and effect relationship of accelerator programs and start ups' success. In the current study, the influence of the accelerator programs on start ups' success was analysed and it also conducted inferential statistics to seek the cause and effect relationship of accelerator programs and start ups' success.

van Huijgevoort (2012) conducted a study that focussed on the difference between accelerator programs and business incubation by conducting a theoretical literature review. The study stated the major difference is that most accelerators do offer a working environment. The study did not analyse the influence of the accelerator programs on start ups' success and it did not also conduct inferential statistics to seek the cause and effect relationship of accelerator programs and start ups' success. The current study addresses this by analysing the influence of the accelerator programs on start ups' success and by also conducting inferential statistics to seek the cause and effect relationship of accelerator programs and start ups' success.

Miller and Bound (2011) study focused on the rise of accelerator programmes to support new technology ventures by conducting a theoretical literature review. The study findings were that catchment area for accelerators is nearly global and that the demand for accelerator programmes exceeds the supply considerably which will limit their growth in terms of; the number of high quality mentors, acquisition opportunities provided by large companies or stock market flotation and competition for start-up talent with other careers. The study did not analyse all the aspects of accelerator programs and it did not also conduct inferential statistics to seek the cause and effect relationship of accelerator programs and start ups' success. In the current study, the influence of the accelerator programs on start ups' success was analysed and

it also conducted inferential statistics to seek the cause and effect relationship of accelerator programs and start ups' success.

Cohen (2013) conducted a study analysing the roles of accelerators by gaining insights from Incubators and Angels by using the critical theoretical literature review methodology. The study established that most accelerator programmes include office space, although several online programmes are beginning to appear. The study did not analyse the influence of the accelerator programs on start ups' success and it did not also conduct inferential statistics to seek the cause and effect relationship of accelerator programs and start ups' success. The current study addresses this by analysing the influence of the accelerator programs on start ups' success and by also conducting inferential statistics to seek the cause and effect relationship of accelerator programs and start ups' success.

Studies conducted by Katz and Green (2009), Davidson's (2011), MacManus (2010), Anholt (2016), Miller and Bound (2011) expressed that technical guidance plays a role in start-ups' success. However, the study by van Huijgevoort (2012) believed technical guidance does not play a significant role in start-ups' success.

2.3.3 Strategic Guidance and Business Success

Arrington (2007) focused on incubation and funding of Tech start-ups in Colorado, United States by utilizing the critical theoretical literature review methodology. Arrington (2007) stated that accelerator programs provide a detailed in-house mentorship programme and access several entrepreneurs who assist others to improve their business concepts, and opportunities to pitch their ideas to VCs and angel investors and provide timely support to the start-up founders adjust their prototype. The study further established that the selected founders and participants take time off work and from their families to interact, receive encouragement, added knowledge, and greatly support from others. The study did not analyse the influence of the accelerator programs on start ups' success and it did not also conduct inferential statistics to seek the cause and effect relationship of accelerator programs and start ups' success. In the current study, the influence of the accelerator programs on start ups' success was analysed and it also conducted inferential statistics to seek the cause and effect relationship of accelerator programs and start ups' success.

Avery (2007) focused on start-ups evolving from the incubation stage in Colorado, United States by utilizing the critical theoretical literature review methodology. Avery (2007) found out that the founders of accelerators accredit the success of start-ups to the availability of high-quality mentorship stating that the success rates of their small business clients, was due to the availability of high-quality mentorship. It was noted that of the many accelerator companies studied operate similarly, they engage in the provision of boot camps which provide extensive mentoring and due to the hands-on approach, they take, they are extremely selective when choosing participants. Finally, the study established that each company's idea is carefully considered, along with the availability of mentorship to assist the firm in achieving the goal of accelerators which is to foster the entrepreneurial ecosystem, generate opportunities, and assist in sustainability. The study did not analyse the influence of the accelerator programs on start ups' success and it did not also conduct inferential statistics to seek the cause and effect relationship of accelerator programs and start ups' success. The current study addresses this by analysing the influence of the accelerator programs on start ups' success and by also conducting inferential statistics to seek the cause and effect relationship of accelerator programs and start ups' success.

Radojevich-Kelley and Hoffman (2012) analysed the accelerator companies in the United States by conducting an exploratory case study of their programs, processes, and early findings through use of descriptive statistics. Their study found out that quality mentorship inclusion in an Accelerator, is the critical success ingredient for their success and good mentorship increases opportunities for investment, especially from VCs and angel investors. The study did not analyse all the aspects of accelerator programs and it did not also conduct inferential statistics to seek the cause and effect relationship of accelerator programs and start ups' success. In the current study, the influence of the accelerator programs on start ups' success was analysed and it also conducted inferential statistics to seek the cause and effect relationship of accelerator programs and start ups' success.

Arrington (2007) focused on incubation and funding of Tech start-ups in Colorado, United States by utilizing the critical theoretical literature review methodology. Arrington (2007) stated that accelerator programs provide an intense in-house mentorship program, and access to entrepreneurs who assist them in adjusting and improving their business concepts, and opportunities to pitch their ideas to VCs and angel investors and also provide timely support

for the founders to adjust their prototype. This implies that strategic guidance is key ingredient for startups' success. This was collaborated by Avery (2007) and Radojevich-Kelley and Hoffman's (2012) studies. No study reviewed in this section was in dissention.

2.4 Summary of Knowledge Gaps

There is a knowledge gap in all the studies covered the current research because they do not address the effect of the accelerator programs, seed funding, technical, and strategic guidance on start ups' success. The study by Drover et al. (2017) did not address the effect of seed funding on success of start ups' but only lays out the capital structure of start ups' undertaking the accelerator programs. This therefore presented a knowledge gap. Studies by Miller and Bound (2011) and Cohen and Hochberg (2014) focused on accelerator programs instead of the start-ups, thus this also presented a knowledge gap.

There was a contextual gap because all the studies covered in the current research were not conducted in the African context, very few studies have been conducted in Africa concerning accelerator programs and their effect on start-up success. There was a methodological gap in the studies conducted by; Katz and Green (2009), Bluestein and Barrett (2010), Cohen (2013), and Fehder and Hochberg (2014), because they have mainly conducted a literature review while the current study intended to utilize inferential statistics to determine the effect of accelerator programs on start ups' success.

Table 2.1 gives a summary of previous studies whose variables are related with those under the current study. An insight into the methodologies adopted and findings allows the researcher to generate the knowledge gaps in terms of conceptual, contextual, or methodological dimensions.

Table 2.1: Summary of Knowledge Gaps

Author	Study Focus	Methodology	Findings and Conclusions	Gaps	How current study addressed the gaps
Bluestein and Barrett (2010)	How incubators accelerate the start-up process through the analysis of initiatives like Y Combinator in San Francisco and TechStars in Boulder, Colorado, both located in the United States.	Critical theoretical literature review	Incubators provide more than just funding; they give their participants value by availing early stage financing. While early stage financing is needed by start-ups the financing required is not massive, the financing given is enough to meet the start-up needs while attending an accelerator program.	The study did not address the effect of the accelerator programs: seed funding, technical, and strategic guidance on start ups' success thus presenting a knowledge gap. The context of the study was not in Kenya, thus presenting a contextual gap. The study was mainly a literature review that laid out the research methodology and potential focus areas for further studies, thus this presents a methodological gap.	The current study analysed the effect of the accelerator programs: seed funding, technical, and strategic guidance on start ups' success both jointly in isolation. This study was done in Kenya. The current study employed inferential statistics to determine a cause-effect relationship between accelerator programs and start ups' success.
Drover et al. (2017)	The characteristics of angel and crowd funded investments being the determinants of the screening decisions of VCs	Critical theoretical literature review	While in the early stages, ventures tend to rely on a mix of own, debt and equity financing – also depending on the geographical location of the start-up, in later stages and particularly high-growth-potential start-ups focus on outside equity finance	The study did not address the effect of seed funding on success of start ups' but only lays out the capital structure of start ups' undertaking the accelerator programs, thus presenting a knowledge gap. The study was mainly a literature review that	The current study analysed the effect of the accelerator programs: seed funding, technical, and strategic guidance on start ups' success both jointly in isolation. The current study employed inferential statistics to determine a cause-effect

			sources such as VC, Corporate Venture Capital (CVC), angel investment, crowd funding and/or accelerators.	laid out the research methodology and potential focus areas for further studies, thus this presents a methodological gap.	relationship between accelerator programs and start ups' success.
Fehder and Hochberg (2014)	The effects of accelerators on the availability and provision of seed and early stage venture capital funding in the local regions of the United States	Critical theoretical literature review	Accelerators are usually motivated by a direct profit goal and are one end of the venture capital spectrum. A comparison was made between accelerators, angel investors and incubators and it was found that, areas with established accelerators receive higher levels of entrepreneurial financing both within the Accelerator outside and this stimulates the eco-system which would likely meet the demands of the local government and the owners.	The study mainly focused on the effects of accelerators on the availability and provision of seed and early stage venture capital funding and did not address the effect of seed funding on success of start ups' thus presenting a knowledge gap. The study was not done in the Kenyan context, thus giving a contextual gap. The study was mainly a literature review that laid out the research methodology and potential focus areas for further studies, thus this presents a methodological gap.	The current study analysed the effect of the accelerator programs: seed funding, technical, and strategic guidance on start ups' success both jointly in isolation. The current study was conducted in Kenya. The current study employed inferential statistics to determine a cause-effect relationship between accelerator programs and start ups' success.
Cohen and Hochberg (2014)	The seed accelerator phenomenon in the United States.	Critical theoretical literature review	Accelerators often base their business model on equity from the start-ups, they usually aim for growth intending to	The study concentrated on the seed capital accelerator program and did not address the effect of seed funding	The current study analysed the effect of the accelerator programs: seed funding, technical, and strategic

			produce companies that will experience rapid growth or fail fast, thereby resulting to minimal resource wastage. An exception to this model exists particularly with corporate accelerators, whereby firms choose to sponsor or subsidise such programmes with a strategic goal that includes internal innovation, cultural change, marketing, Corporate Social Responsibility (CSR) or public relations	on success of start ups' thus presenting a knowledge gap. The study was not done in the Kenyan context, thus presenting a contextual gap. The study was mainly a literature review that laid out the research methodology and potential focus areas for further studies, thus this presents a methodological gap.	guidance on start ups' success both jointly in isolation. The current study was conducted in Kenya. The current study employed inferential statistics to determine a cause-effect relationship between accelerator programs and start ups' success.
Katz and Green (2009)	The distinctive nature of small businesses of startups versus high growth firms	Critical theoretical literature review	Accelerator programs offer office space, technical, managerial support, and access to investors.	The study did not address the effect of the accelerator programs: seed funding, technical, and strategic guidance on start ups' success thus presenting a knowledge gap. The study was mainly a literature review that laid out the research methodology and potential focus areas for further studies, thus this presents a methodological gap.	The current study analysed the effect of the accelerator programs: seed funding, technical, and strategic guidance on start ups' success both jointly in isolation. The current study employed inferential statistics to determine a cause-effect relationship between accelerator programs and start ups' success.

Davidson's (2011)	TechStars top-ranked accelerator in the United States.	Exploratory case study approach employing descriptive statistics.	Mentorship driven programs raise the success rates of start-ups since they provide entrepreneurs with access to angel investors and venture capitalists which increases their rates of success.	The study did not address the effect of the accelerator programs: seed funding, technical, and strategic guidance on start ups' success thus presenting a knowledge gap. The study was not conducted in the Kenyan context, thus presenting a contextual gap. The study was mainly a literature review that laid out the research methodology and potential focus areas for further studies, thus this presents a methodological gap.	The current study analysed the effect of the accelerator programs: seed funding, technical, and strategic guidance on start ups' success both jointly in isolation. The current study was conducted in Kenya. The current study employed inferential statistics to determine a cause-effect relationship between accelerator programs and start ups' success.
MacManus (2010)	TechStars historical results data in the United States.	Exploratory case study approach employing descriptive statistics.	Accelerators provide office space, access to successful entrepreneurs, mentors, and other technology experts, a setting in which they can socialize with other new venture founders, and a conducive setting which will allow for the sharing of ideas or methods and that will encourage, assist, and	The study did not address the effect of the accelerator programs: seed funding, technical, and strategic guidance on start ups' success thus presenting a knowledge gap. The study was not conducted in the Kenyan context, thus presenting a contextual gap.	The current study analysed the effect of the accelerator programs: seed funding, technical, and strategic guidance on start ups' success both jointly in isolation. The current study was conducted in Kenya. The current study employed inferential statistics to determine a cause-effect

			help out with technical issues.	The study was mainly a literature review that laid out the research methodology and potential focus areas for further studies, thus this presents a methodological gap.	relationship between accelerator programs and start ups' success.
Anholt (2016)	Construction of a Brand Index	Exploratory case study approach employing descriptive statistics.	A successful accelerator must either tap a local entrepreneurship resource or draw founders to it and that it is not surprising that the top "city brands" overlap closely with the world's most successful accelerators, whether ranked for "buzz" and "assets" or for Presence, Place, Prerequisites, People, Pulse and Potential.	The study did not address the effect of the accelerator programs: seed funding, technical, and strategic guidance on start ups' success thus presenting a knowledge gap. The study was mainly a literature review that laid out the research methodology and potential focus areas for further studies, thus this presents a methodological gap.	The current study analysed the effect of the accelerator programs: seed funding, technical, and strategic guidance on start ups' success both jointly in isolation. The current study employed inferential statistics to determine a cause-effect relationship between accelerator programs and start ups' success.
Fowle and Jussila (2016)	The critical success factors for business accelerators	Critical theoretical literature review	The quality of office space seems to matter less than the location.	The study did not address the effect of the accelerator programs: seed funding, technical, and strategic guidance on start ups' success thus presenting a knowledge gap.	The current study analysed the effect of the accelerator programs: seed funding, technical, and strategic guidance on start ups' success both jointly in isolation.

				The study was mainly a literature review that laid out the research methodology and potential focus areas for further studies, thus this presents a methodological gap.	The current study employed inferential statistics to determine a cause-effect relationship between accelerator programs and start ups' success.
Feld (2012)	Building an entrepreneurial ecosystem in cities	Critical theoretical literature review	Culture and expectation are key and "the moderating effects of community require physical interaction and a geographical centre".	The study did not address the effect of the accelerator programs: seed funding, technical, and strategic guidance on start ups' success thus presenting a knowledge gap. The study was mainly a literature review that laid out the research methodology and potential focus areas for further studies, thus this presents a methodological gap.	The current study analysed the effect of the accelerator programs: seed funding, technical, and strategic guidance on start ups' success both jointly in isolation. The current study employed inferential statistics to determine a cause-effect relationship between accelerator programs and start ups' success.
van Huijgevoort (2012)	The difference between accelerator programs and business incubation	Critical theoretical literature review	The major difference is that most accelerators do offer a working environment.	The study concentrated on the difference between accelerator programs and business incubation and did not address the effect of seed funding on success of start ups' thus presenting a knowledge gap.	The current study analysed the effect of the accelerator programs: seed funding, technical, and strategic guidance on start ups' success both jointly in isolation. The current study employed inferential

				The study was mainly a literature review that laid out the research methodology and potential focus areas for further studies, thus this presents a methodological gap.	statistics to determine a cause-effect relationship between accelerator programs and start ups' success.
Miller & Bound (2011)	The rise of accelerator programmes to support new technology ventures	Critical theoretical literature review	Catchment area for accelerators is global, the demand for such programmes exceed their supply which is a limitation to their growth in terms of; the pool of high-quality mentors, acquisition opportunities by large companies or stock market flotation and competition for startup talent with other careers.	The study did not address the effect of the accelerator programs: seed funding, technical, and strategic guidance on start ups' success thus presenting a knowledge gap. The study was mainly a literature review that laid out the research methodology and potential focus areas for further studies, thus this presents a methodological gap.	The current study analysed the effect of the accelerator programs: seed funding, technical, and strategic guidance on start ups' success both jointly in isolation. The current study employed inferential statistics to determine a cause-effect relationship between accelerator programs and start ups' success.
Cohen (2013)	The roles of accelerators by gaining insights from Incubators and Angels	Critical theoretical literature review	Most accelerator programmes include office space, although several online programmes are beginning to appear.	The study concentrated on the roles of accelerators and did not address the effect of seed funding on success of start ups' thus presenting a knowledge gap. The study was mainly a literature review that laid out the research	The current study analysed the effect of the accelerator programs: seed funding, technical, and strategic guidance on start ups' success both jointly in isolation. The current study employed inferential statistics to determine a

				methodology and potential focus areas for further studies, thus this presents a methodological gap.	cause-effect relationship between accelerator programs and start ups' success.
Arrington (2007)	Incubation and funding of Tech start-ups in Colorado, United States	Critical theoretical literature review	Accelerator programs provide a thorough in-house mentorship programme, mentoring, and access to a network of entrepreneurs who will assist them in adjusting their business concepts, and opportunities to pitch their ideas to VCs, they also assist angel investors start-up founders in adjusting their prototype. Selected founders/participants take time off from their jobs and families to interact, receive encouragement, added knowledge, and required assistance.	The study did not address the effect of the accelerator programs: seed funding, technical, and strategic guidance on start ups' success thus presenting a knowledge gap. The study was not conducted in the Kenyan context, thus presenting a contextual gap. The study was mainly a literature review that laid out the research methodology and potential focus areas for further studies, thus this presents a methodological gap.	The current study analysed the effect of the accelerator programs: seed funding, technical, and strategic guidance on start ups' success both jointly in isolation. The current study was conducted in Kenya. The current study employed inferential statistics to determine a cause-effect relationship between accelerator programs and start ups' success.
Avery (2007)	Start-ups evolving from the incubation stage in Colorado, United States	Critical theoretical literature review	The crucial element in a successful start-up is timely and quality mentorship and the success rates for small business clients, increase with	The study did not address the effect of the accelerator programs: seed funding, technical, and strategic guidance on start ups' success	The current study analysed the effect of the accelerator programs: seed funding, technical, and strategic guidance on start ups'

			mentorship opportunities. The operations of many accelerator companies are similar, they provide boot camps that offer extensive mentoring and therefore their services use a more hands-on approach, these companies are extremely selective in obtaining their boot camp participants. Each company's idea is carefully considered, together with the availability of mentorship to assist the firm in achieving its goals which is to foster the entrepreneurial ecosystem, generate opportunities, and assist in sustainability.	thus presenting a knowledge gap. The study was not conducted in the Kenyan context, thus presenting a contextual gap. The study was mainly a literature review that laid out the research methodology and potential focus areas for further studies, thus this presents a methodological gap.	success both jointly in isolation. The current study was conducted in Kenya. The current study employed inferential statistics to determine a cause-effect relationship between accelerator programs and start ups' success.
Radojevich-Kelley and Hoffman (2012)	Accelerator companies in the United States: their programs, processes, and early results.	Exploratory case study approach employing descriptive statistics.	Mentorship, its inclusion and quality in an Accelerator, is a critical factor responsible for its success and increases the chances of finding future investment from	The study did not address the effect of the accelerator programs: seed funding, technical, and strategic guidance on start ups' success thus presenting a knowledge gap.	The current study analysed the effect of the accelerator programs: seed funding, technical, and strategic guidance on start ups' success both jointly in isolation.

			VCs and angel investors.	The study was not conducted in the Kenyan context, thus presenting a contextual gap. The study was mainly a literature review that laid out the research methodology and potential focus areas for further studies, thus this presents a methodological gap.	The current study was conducted in Kenya. The current study employed inferential statistics to determine a cause-effect relationship between accelerator programs and start ups' success.

Source: Researcher (2020)

2.5 Conceptual Framework

From the above review of literature, Bluestein and Barrett (2010) concluded that funding was not critical for start-ups success. However, Drover et al. (2017), Fehder and Hochberg (2014), and Cohen and Hochberg (2014) concluded that funding is essential for start-ups success. Studies conducted by Katz and Green (2009), Davidson's (2011), MacManus (2010), Anholt (2016), Miller and Bound (2011) expressed that technical guidance plays a role in start-ups' success. However, the study by van Huijgevoort (2012) believed technical guidance does not play a significant role in startups' success. Arrington (2007) established that strategic guidance is key ingredient for start-ups success. This was collaborated by Avery (2007) and Radojevich-Kelley and Hoffman's (2012) studies. This study conceptualizes if the accelerator programs are employed, then they will affect the business start-ups. The conceptual diagram in Figure 2.1 captures this conceptualization.

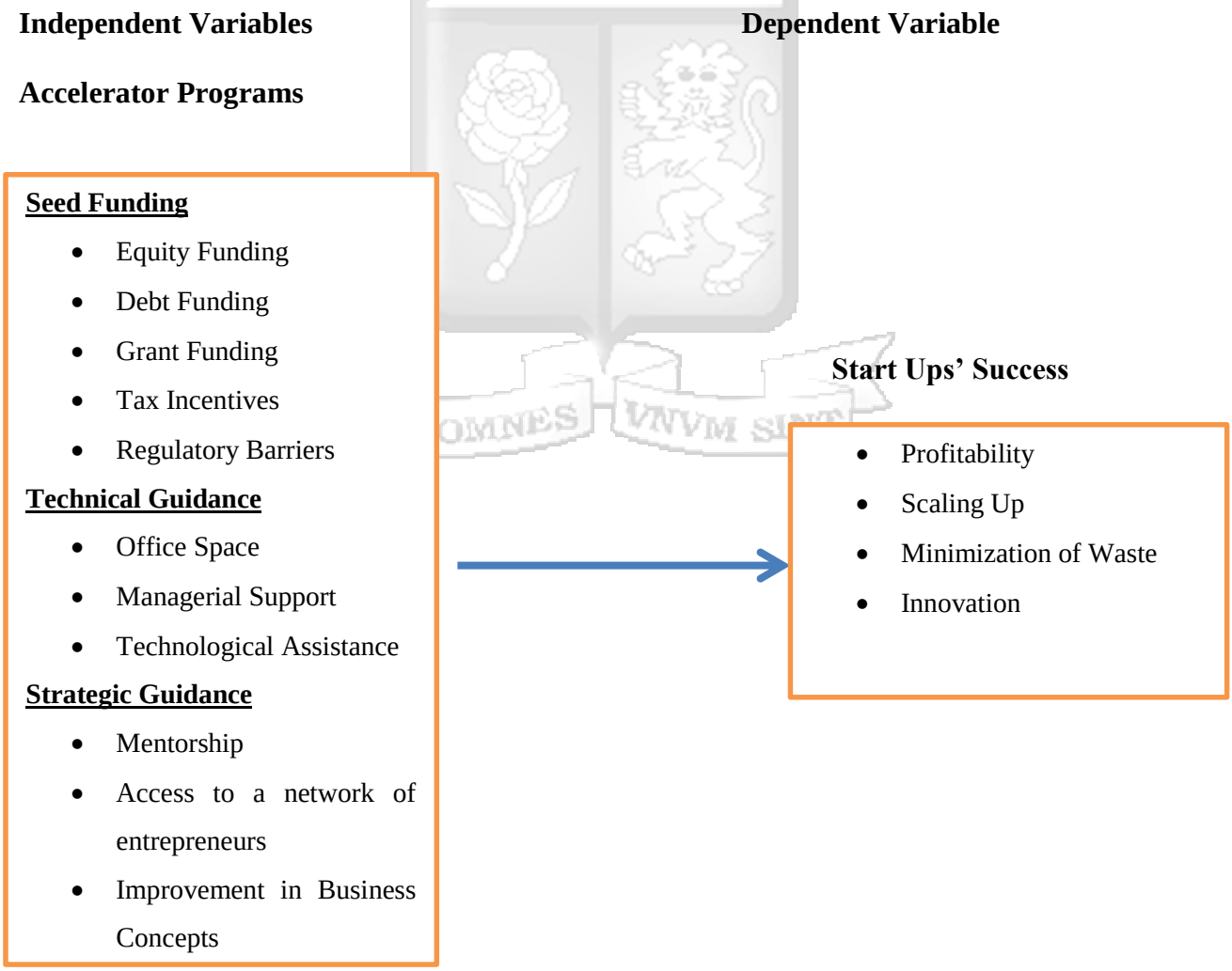

Figure 2.1: Conceptual Framework
Source: Researcher (2020)

2.6 Operationalization of Study Variables

This section discusses how the study variables were operationalized. The dependent variable was success of business start-ups. The independent variables were; seed funding, technical guidance, and strategic guidance as indicated in Table 2.2.

Table 2.2: Operationalization of Study Variables

Variable	Nature of Variable	Operational indicators	Measurement scale	Measurement and analysis	Supporting Literature
Business Start-Ups' Success	Dependent Variable	Profitability, Scaling Up, Minimization of Waste, and Innovation.	Likert-type scale (Ordinal Scale)	Descriptive, inferential analysis	(Richard, Yip, Johnson & Devinne, 2009; Valmohammadi & Servati (2011)
Seed Funding	Independent Variables	Equity Funding, Debt Funding, Grant Funding, Tax Incentives, and Regulatory and Administrative Barriers.	Likert-type scale (Ordinal Scale)	Descriptive, inferential analysis	(Bluestein & Barrett, 2010; Drover et al., 2017)
Technical Guidance	Independent Variables	Office Space, Managerial Support, and Technological Assistance	Likert-type scale (Ordinal Scale)	Descriptive, Inferential analysis	(Katz & Green, 2009; Davidson, 2011)
Strategic Guidance	Independent Variables	Mentorship, Access to a network of entrepreneurs, and Improvement in Business Concepts	Likert-type scale (Ordinal Scale)	Descriptive, Inferential analysis	(Arrington, 2007; Avery, 2007)

Source: Researcher (2020)

2.7 Chapter Summary

This chapter highlights a theoretical and empirical review of the subject matter, that is, accelerator programs and success of start-ups. It provided an analysis of the topics' key concepts and highlighted the nature of relationships between the two variables. Research gaps were identified forming the basis for this research work and how this study will add value to the

existing research studies carried out relevant to the subject matter. The chapter ended with a conceptual framework, which shows how the relationship between accelerator programs and start ups' success variables.

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

The focus of this chapter was on the design, study area, study population, sample size sampling and its technique, data source, data collection tools, its analysis and presentation.

3.2 Research Design

As defined by Cooper and Schindler (2003), it is the format in which an investigation will take place to answer the research questions posed. A descriptive cross-sectional research design was in this case appropriate, which Cooper and Schindler (2003), state that it involves surveying several units of analysis over the same time frame and analysing their responses. A descriptive cross-sectional study design can be considered a "snapshot" of the frequency and characteristics of the conditions of a population at a point in time. The research design incorporated quantitative research approach to better understand how the variables in the research problem relate. The scope of the study was a survey, the environment was a field setting, and the unit of analysis was sectoral. The study was a formal study because it employed relevant theories and literature to guide it. It was also an ex post facto study because the variables were not manipulated but simply measured.

3.3 Target Population

There is a total of seven accelerators in Kenya and this forms the population of the study. The list of the accelerators present in Kenya is provided in Appendix III which was derived from a study conducted by Ngige (2020). The target respondents were the employees at these accelerators.

3.4 Sampling Design

The number and information of the target respondents, the employees of the accelerators, is not known. Thus, this study's sample size was be computed using the formula for unknown populations as suggested by Cochran (1977). The Cochran formula is:

$$n_0 = \frac{Z^2 pq}{e^2}$$

Where;

Z = z-value in a Z table

e = The required precision level (margin of error)

p = The (estimated) population percentage with the attribute in question

q = 1 – p

The Z value obtained was 1.96, The population percentage which has the required attribute (p) was 50% and the desired precision level was 5%. Thus, the study sample obtained was 42. This was distributed equally among the 7 accelerators, bringing the total number of respondents per accelerator to 6.

3.5 Data Collection

Primary data was obtained for the study. Primary data is original and has not been published. It is fresh data collected directly from the field. This was obtained using structured self-administered questionnaires. According to Kothari and Garg (2004), a questionnaire that is self-administered is a systematic approach of eliciting values, beliefs, attitudes and opinion of the people. To collect data, the researcher formulated questionnaires utilizing likert scale. The type of data collected was primary quantitative data.

A questionnaire is a research tool that consists of a series of questions and other prompts used to gather information from respondents (Foddy, 1994). A questionnaire, included in Appendix II, was utilized since it can collect information from many people in a short time frame and cost effectively. This tool allows respondents to have the freedom to express their views that will capture crucial themes of the study on the impact of accelerator programs on business success. The tool was used to obtain data from the accelerators' management, to get the accelerator programs and start ups' success; a questionnaire was formulated using the research objectives. The questionnaire consisted of three sections; the first section detailed questions on the background information of the respondents. The second section detailed questions about accelerator programmes while the third section entailed questions about start ups' performance.

Close-ended questions were used to collect structured responses to allow for more tangible recommendations. The various attributes were rated using close-ended questions which reduces the number of similar responses allowing for more varied responses. The respondents were

reached using the telephone or physical addresses stated in the database compiled of the respondents chosen for the study. Trained research assistants were hired to issue the questionnaires to the respondents to increase the response rate. Furthermore, the respondents were issued with an introductory letter from the University for assurance that the study is not meant to bring any malice.

3.6 Data analysis

The data obtained from the field was subjected to manual processing with the process involving the editing, classification, coding, data entry, and tabulation. In this analysis, descriptive analyses were employed for describing the data in terms of frequency distribution of occurrence. The descriptive statistics employed in this study were means and standard deviations. Inferential statistics were also utilized to provide the magnitude and strength of the relations between variables and to test whether the relationships are statistically significant. Thus, inferential statistics entailing correlation and multiple linear regression analyses were used to determine the effect of accelerator programs on start ups' success in Kenya. The analysis aimed at determining how accelerator programs influence the success of start-ups. The statistical software, Statistical Package for Social Sciences (SPSS) version 25, was utilized for this study's analyses. The general model for start ups' success subject to seed funding, technical guidance, and strategic guidance is represented by the equation below:

$$\mathbf{Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon}$$

Where;

Y = Start Ups' Success,

α - Is the regression constant or intercept,

β_1, β_2 and β_3– Are regression coefficients or change induced in Y by each X_1, X_2 and X_3 that are predictor variables,

X_1 – Seed Funding,

X_2 – Technical Guidance,

X_3 – Strategic Guidance,

ε (Extraneous) - Error term that represents the variability in Y that cannot be explained by the linear effect of the predictor variables

3.6.1 Diagnostic Tests

For the validity of regression analysis, several assumptions are done in conducting linear regression models. These are; no multi-collinearity, observations are sampled randomly, conditional mean ought to be zero, linear regression model is "linear in parameters", spherical errors: there is homoscedasticity and no autocorrelation, and the optional assumption: error terms ought to be distributed normally. According to the Gauss-Markov Theorem, the first 5 assumptions of the linear regression model, the regression OLS estimators, are the Best Linear Unbiased Estimators (Grewal *et al*., 2004).

The assumptions are of great importance since when any of them is violated would mean the regression estimates will be incorrect and unreliable. Particularly, a violation would bring about incorrect signs of the regression estimates or the difference of the estimates would not be reliable, resulting to confidence intervals that are either too narrow or very wide (Gall et al., 2006).

The diagnostic tests were conducted to guarantee that the assumptions are met to attain the Best Linear Unbiased Estimators. Regression diagnostics assess the model assumptions and probe if there are interpretations with a great, unwarranted effect on the examination or not. Diagnostic examinations on normality, linearity, multicollinearity, and autocorrelation were done on the collected data to establish its suitability in the formulation of linear regression model. Normality was tested by the Shapiro Wilk which though uncommon, fails to work well where large amount of data is involved, and the test was supplemented by the Kolmogorov-Smirnov test which was suitable for testing distributions of Gaussian nature which have specific mean and variance. Linearity indicates a direct proportionate association amongst dependent and independent variable such that variation in independent variable is followed by a correspondent variation in dependent variable (Gall et al., 2006). Linearity was tested by determining homoscedastic, which was determined, by the Breuch-Pagan test.

Tests for multicollinearity of data were carried out using variance inflation factors (VIF) and Tolerance statistics to determine whether the predictor variables considered in the research are significantly correlated with each other. According to Grewal *et al*. (2004) the main sources of multicollinearity are small sample sizes, low explained variable and low measure reliability in the independent variables. Auto-correlation test was carried out through the Durbin-Watson Statistic.

3.6.2 Tests of Significance

The study adopted a confidence interval of 95%. The results were set to be statistically significant at the 0.05 level, which indicates that the significance value should be less than 0.05. A statistical inference technique was used in making conclusions relating to the accuracy of the model in predicting the market capitalization. The model significance was tested using the significance values at 95% confidence. The meaning of the association amongst every predictor variable plus response variable was also determined by the significance values, which illustrates how much standard error indicated that the sample deviates from the tested value.

3.7 Data Quality Control

Reliability and validity are the two most important quality control objects in research. The following are the explanation of validity and reliability in research and their application in the study.

3.7.1 Reliability

This measure is used in describing the overall consistency of a measure. A measure has a high reliability when it produces the same outcome under constant conditions, (Neil, 2009). Reliability in this study was ascertained using the appropriate sampling and a purposive sampling technique is another indicator of reliability. Additionally, the supervisor's comments and advice were included. The Cronbach alpha analysis also aided in ascertaining the research instruments' reliability by showing data collection instrument internal consistency. The Cronbach's Alpha depicts reliability by showing a true 'base' score. Cronbach's Alpha is crucial to a scholar in ensuring consistency and reliability of the questionnaire even if the questions are interchanged with related ones (Valencia-GO, 2015). Cronbach's Alpha was based on the formula indicated below.

$$\alpha = rk / (I + (K-I)\, r)$$

Where;

k is the number of variables in the analysis

r is the mean of the inter-item correlation.

The standard rule in most situations is given in Table 3.2. Normally, a reliability of 0.7 is acceptable and over 0.8 is good. The study applied this thresh-hold provided by Sekran (2003).

Table 3.1: Reliability Results

Variables	Cronbach's Alpha	Critical Value	Conclusion
Seed Funding	0.763	0.7	Reliable
Technical Guidance	0.776	0.7	Reliable
Strategic Guidance	0.826	0.7	Reliable
Startup Success	0.883	0.7	Reliable

Primary Data (2020)

3.7.2 Validity

This is the extent to which the data collection instrument gives an accurate representation of the particular concepts that the researcher seeks to measure (Fidel, 1993). The various types of this element are internal and external validity. Internal validity clearly shows the cause and effects in research while external validity clearly focuses on the research effects that can be applied in general. Internal validity was applied in this study. The validity of the study was enhanced through the pilot study, which was purposely undertaken for prior testing of the research tools and methods prior to the study. The researcher selected 10% of the study sample of 42 respondents, this translated to 4 respondents. Thus, 4 respondents from 4 different accelerators were chosen in the pilot study. The participants in the pilot study were not selected for the study. During the pilot test, the research instruments clarity was assessed and collected data was analysed and validity tested. The pilot study results were key in improving and strengthening data collection instruments.

Validity in this study was certainly enhanced in this study by ensuring the questionnaire was clearly checked and the questions based on the objectives of the study. To confirm the validity of the instrument, face and content validities were ensured. The instrument was used on the professionals in the accelerators for thorough scrutiny and evaluation.

3.8 Ethical Consideration

The following ethical considerations were considered in the data collection. First, every respondent was assured that responses were voluntary and only those who had provided written consent could participate. Secondly, the objectives were clearly introduced and elaborated to every respondent prior to engaging them in the fieldwork.

Thirdly, all research instruments used ensured the anonymity of the participants, to keep them from any harm. Furthermore, the study was bound by the requirements of ethics in business research ranging from professional ethics to requirements that cover the relation between the researcher and the respondent. Additionally, those that offered help to the researcher were accorded respect and privacy. The researcher acknowledged the contribution of other scholars throughout the study. Finally, ethical clearance was received from the Strathmore University Ethical Review Committee and research permit given by the National Commission for Science, Technology and Innovations (NACOSTI).

CHAPTER FOUR

PRESENTATION AND ANALYSIS OF RESEARCH FINDINGS

4.1 Introduction

This section presents the results from the study. The sections in this chapter include the general information section encompassing the response rate and demographic information. The chapter also outlines the descriptive and inference statistics in line with the objectives of the study.

4.2 General Information

This section presents the findings on the overall response rate and the descriptive statistics for the demographic profiles of all the respondents.

4.2.1 Response Rate

In survey research, a response rate is the number of responses obtained divided by the number of target respondents. The response rate is also denoted as the completion rate or return rate and it is usually expressed percentage form. Information on the rate of response for this research is displayed in Table 4.1.

Table 4.1: Response Rate

Response Rate	Frequency	Percent
Returned	36	85.7
Unreturned	6	14.3
Total	**42**	**100**

Primary Data (2020)

Table 4.1 showcases that 42 questionnaires were issued to 6 employees in each of the 7 accelerator programs in Kenya. The study findings exhibit that out of the 42 issued questionnaires to the target respondents, only 36 responses were made with adequate information and returned which translated to an overall 85.7% study response rate. This is in line with Neil (2009), who stated that a study with 70% response rate and above is adequate for a deep dive and drawing conclusions.

4.2.2 Gender

The target respondents were requested to specify their gender. Results demonstrate that the proportion of respondents who were male was 55.6% while the rest 44.4% were female. This depicts that the accelerator programs uphold gender diversity as there is no great disparity between the number of male and female employees among the target respondents. The results are as shown in Table 4.2

Table 4.2: Gender

Gender	Frequency	Percentage
Male	20	55.6%
Female	16	44.4%
Total	**36**	**100%**

Primary Data (2020)

4.2.3 Marital Status

The results reported in Table 4.3 showed that a majority of those surveyed were single, constituting 55.6%, compared to the 44.4% married. Even though single is the slight majority. Statistically, the marital status distribution is close to 1:1 hence no marital status was disproportionately represented in the study. It also reveals lack of marital status discrimination in employment in the industry.

Table 4.3: Marital Status

Marital Status	Frequency	Percentage
Single	20	55.6%
Married	16	44.4%
Total	**36**	**100%**

Primary Data (2020)

4.2.4 Age

The researcher was also interesting in establishing how old the respondents were. Table 4.4 gives an illustration of the results. Results illustrate that the largest proportion of respondents (66.7%) were aged between 30-39 years, 22.2% age bracket was 20-29 years while the least percentage (11.1%) were between 40-49 years. The results postulate that most employees in the accelerator programs are young. This is also an indication of the industry early life cycle stage.

Table 4.4: Age

Age	Frequency	Percentage
20-29	8	22.2%
30-39	24	66.7%
40-49	4	11.1
Total	**36**	**100%**

Primary Data (2020)

4.2.5 Highest Level of Education

The respondents were implored to state their highest level of education they have achieved. Table 4.5 gives an illustration of the results. Results demonstrate that the largest proportion (66.7%) were postgraduates while 33.3% had bachelor's degrees. The implication of the results is that accelerator programs are keen to hire staffs that are educated. In most cases, high level of educated is associated with competence and mastery of requisite skills required to execute one's duties at the place of work.

Table 4.5: Highest Level of Education

Education	Frequency	Percentage
Bachelor's degree	24	66.7%
Postgraduate	12	33.3%
Total	**36**	**100%**

Primary Data (2020)

4.2.6 Role in the Firm

In line with the target respondents of the study, many of the respondents were directors in their accelerator programs, constituting 58.3% of the responses. The rest (41.7) were program managers as shown in the Table 4.6

Table 4.6: Role in the Firm

Role	Frequency	Percentage
Director	21	58.3%
Program Manager	15	41.7%
Total	**36**	**100%**

Primary Data (2020)

4.2.7 Work Experience with Current Employer

The employees had spent variable number of years in the organization. The duration with an organization can be used as an indicator of their level of knowledge of internal organizational processes, capabilities, and success. However, the accelerator programmes are relatively new in

Kenya with only a few companies having operated in Kenya for more than 5 years. The results indicated that 77.8% had worked with their company for 0-5 years, 11.1% for 6-10 years and 11.1% for over 11-20 years.

Table 4.7: Work Experience with Current Employer

Work Experience	Frequency	Percentage
5 and Below	28	77.8%
6-10	4	11.1%
11-20	4	11.1
Total	**36**	**100%**

Primary Data (2020)

4.2.8 Total Work Experience

The researcher sought to establish how experienced the employees were. Although the concept of accelerator program is relatively new, most respondents had prior work experience as majority 44.5% had worked for between 6 and 10 years. 22.2% had worked for 11 to 15 years and a further 22.2% had worked for 16-20 years. Only 11.1% had worked for 0 to 5 years. The results are shown in Table 4.8

Table 4.8: Total Work Experience

Work Experience	Frequency	Percentage
5 and Below	4	11.1%
6-10	16	44.5%
11-15	8	22.2
16-20	8	22.2
Total	**36**	**100%**

Primary Data (2020)

4.2.9 Experience in a Start Up

The researcher sought to establish whether the respondents had worked in a start-up before. This is important because it shows how conversant the respondents are with the operations of Start-ups they aim to assist. From the results shown in Table 4.9, it is evident that majority of the respondents (77.8%) had worked in a start-up implying they were knowledgeable on how start-ups operate.

Table 4.9: Experience in a Start-up

Response	Frequency	Percentage
Yes	28	77.8%
No	8	22.2%
Total	**36**	**100%**

Primary Data (2020)

4.2.10 Experience with another Accelerator

The researcher sought to establish whether the respondents had worked in another accelerator before. This would help in gauging how conversant the respondents were in running the affairs of accelerator programs. From the results shown in Table 4.10, it is evident that majority of the respondents (55.6%) had worked in another accelerator programme implying more experience in running this kind of organizations.

Table 4.10: Experience in another Accelerator

Response	Frequency	Percentage
Yes	20	55.6%
No	16	44.4%
Total	**36**	**100%**

Primary Data (2020)

4.3 Descriptive Statistics

The subsection describes the descriptive findings for each of the variables under study, presented in terms of percentages, means and standard deviations.

4.3.1 Seed Funding

The mean and standard deviation for the specific attributes of seed funding are as presented in Table 4.11. Results demonstrate that the accelerator programs had adopted seed funding to a great extent. This is supported by the fact that on a five-point likert scale, the mean scores for attributes related to seed funding was greater than 3. The mean score for providing equity financing to startups going through the accelerator program was 3.95 and a standard deviation of 0.93. The mean score for providing debt funding to startups going through the program was 4.36 and a standard deviation of 1.12.

The mean score for providing grant funding to startups going through the program was 3.24 and standard deviation of 1.32. The mean score for tax incentives targeting seed funding firms was 4.04 and a standard deviation of 1.00. Further, the means score for accelerator program running its programs on a cohort basis where it takes in a number of startups at a time for a fixed duration was 3.75 and standard deviation of 1.08 while the mean score for no regulatory and administrative barriers towards seed funding in the country was 3.52 and a standard deviation of 1.29.

Table 4.11: Descriptive Statistics for Seed Funding

Statement	N	Mean	Std. Dev
Our accelerator program provides equity financing to startups going through the program	36	3.95	0.93
Our accelerator provides debt funding to startups going through the program	36	3.86	1.15
Our accelerator provides grant funding to startups going through the program	36	3.24	1.32
There are tax incentives for seed funding in our country	36	4.04	1.00
Our accelerator program runs its programs on a cohort basis where it takes in several startups at a time for a fixed duration.	36	3.75	1.08
There are no regulatory and administrative barriers towards seed funding in our country.	36	3.52	1.29
Average		**3.73**	**1.13**

Primary Data (2020)

The statement that there are tax incentives for seed funding in the country had the highest mean at 4.04 implying that the respondents agreed most on these compared to all the other statement. This would mean that the accelerators receive tax incentives for offering seed funding to tech start-ups. The statement that the accelerator programmes provides grant funding to the tech start-ups had the lowest mean at 3.24. This implies that there was a moderate agreement on accelerator programme offering grant funding. This shows while some accelerator programmes offer grand funding, others do not.

4.3.2 Technical Guidance

The mean and standard deviation for the specific attributes of technical guidance are as presented in Table 4.12. Results demonstrate that the accelerator programs offered technical guidance to a great extent. This is supported by the fact that on a five-point likert scale, the mean scores for attributes related to technical guidance was greater than 3. The mean score for the statement that accelerators offer office space for the start-ups was 4.08 and a standard deviation of 0.63. The mean score for the assertion that the accelerators take on board positions in the start-ups' going through their program to offer technical and strategic guidance to these companies was 4.04 and a standard deviation of 0.88.

The mean score for the affirmation that the firm offers infrastructure and equipment to the start-ups was 3.65 and standard deviation of 0.96. The mean score for the statement that the firm offers IT hardware to the start-ups was 3.60 and a standard deviation of 1.11. Further, the means score for the statement that the firm offers IT software to the start-ups was 3.94 and standard

deviation of 1.02. Results also illustrate that the mean score for the statement that the accelerators offers the latest technological advancements to the start-ups was 4.08 and a standard deviation of 0.93.

Table 4.12: Descriptive Statistics for Technical Guidance

Statement	N	Mean	Std. Dev
Our accelerator offers office space for the start ups	36	4.08	0.63
Our accelerators take on board positions in the startups going through their program to offer technical and strategic guidance to these companies	36	4.04	0.88
Our accelerator offers infrastructure and equipment to the start ups	36	3.65	0.96
Our accelerator offers IT hardware to the start ups	36	3.60	1.11
Our accelerator offers IT software to the start ups	36	3.94	1.02
Our accelerator offers the latest technological advancements to the start ups	36	4.08	0.93
Average		**3.90**	**0.92**

Primary Data (2020)

The statements that accelerator offers office space for the star-ups and that the accelerator offers the latest technological advancements had the highest means at 4.08. This implies that the respondent agreed on these two statements compared to the rest. This goes to show that most accelerator programmes offer office space and technological advancements. The statement that the accelerator offers IT hardware to the tech start-ups had the least agreement and this means that although the respondents agreed that they offer IT hardware, the extent of this technical guidance is not as high as compared to the other offerings.

4.3.3 Strategic Guidance

The mean and standard deviation for the specific attributes of strategic guidance are as presented in Table 4.13. Results demonstrate that strategic guidance is being practiced by the accelerators to a great extent. This is supported by the fact that on a five-point likert scale, the mean scores for attributes related to strategic guidance was greater than 3. The mean score for the statement that the accelerator programs offers mentorship to the start-ups was 3.43 and a standard deviation of 1.35.

The mean score for the affirmation that the accelerators provide access to a network of entrepreneurs to the start-ups was 3.23 and standard deviation of 1.47. The mean score for the statement that the accelerator leads to improvements in business concepts of the start-ups was

3.25 and a standard deviation of 1.38. On average, the respondents agreed that the accelerators provide strategic guidance to a great extent as shown by a mean of 3.30 and a standard deviation of 1.40.

Table 4.13: Descriptive Statistics for Strategic Guidance

Statement	N	Mean	Std. Dev
Our accelerator offers mentorship to the start ups	36	3.43	1.35
Our accelerator provides access to a network of entrepreneurs to the start ups	36	3.23	1.47
Our accelerator leads to improvements in business concepts of the start ups	36	3.25	1.38
Average		**3.30**	**1.4**

Primary Data (2020)

The statement that the accelerator programme offers mentorship to the start-ups had the highest agreement at a mean of 3.43. This means that although the level of agreement was moderate, this type of strategic guidance is the most common of the three selected. The statement that the accelerator programmes provides access to a network of entrepreneurs to the start-ups had the least agreement at a mean of 3.23. This implies that although there is a moderate agreement on provision of access to a network of entrepreneurs to the start-ups, this is the least provided type of strategic guidance.

4.3.4 Start-up Success

The mean and standard deviation for the specific attributes of start-up success are as presented in Table 4.14. Results demonstrate that start-up success had improved to a great extent. This can be explained by the fact that the mean score for start-ups experiencing higher revenue growth was 3.88 and a standard deviation of 0.87. The mean score for start-ups under accelerator programs scaling their operations was 4.12 and a standard deviation of 0.87.

Improved start-up success was also depicted by the mean score for start-ups having streamlined their operations, policies and procedures which was 4.29 and standard deviation of 0.81. The mean score for start-ups developing innovative concepts was 3.42 and a standard deviation of 1.13. Further, the average mean score for start-up success was 3.93 and standard deviations of 0.92.

Table 4.14: Descriptive Statistics for Start-up Success

Statement	N	Mean	Std. Dev.
Start-ups in our accelerator programs have experienced higher revenue growth	36	3.88	0.87
Start-ups in our accelerator programs have scaled up their operations (significant revenue growth, new products, geographical expansion) and increased their capacity	36	4.12	0.87
Start-ups in our accelerator programs have streamlined their operations, policies and procedures	36	4.29	0.81
Start-ups in our accelerator programs have developed innovative concepts	36	3.42	1.13
Average		**3.93**	**0.92**

Primary Data (2020)

The statement that the accelerator programmes have streamlined their operations, policies and procedures had the most agreement with a mean of 4.29. This means that of all the measures of success, the respondents agreed that the most successful one was streamlining of operations, policies and procedures. The statement that the accelerator programmes have developed innovative concepts had the least agreement at a mean of 3.42. This implies that the respondents had a moderate agreement on whether start-ups have developed innovative products, and this goes to show that not all start-ups have developed innovative concepts.

4.4 Inferential Statistics

The inferential statistics for all the variables are presented in this section. The inferential statistics were Pearson correlations and multiple regressions. Pearson correlations was used to establish the association between all the variables and regression was performed to establish the relationship between accelerator program (seed funding, technical guidance, strategic guidance) and startup success.

4.4.1 Correlation Analysis

The correlation analysis aided in demonstrating the association between the dependent and independent variables. This entailed the r coefficient and whether the association is positive or negative. This is as illustrated in Table 4.15.

Table 4.15: Correlation Results

Variable		Startup success	Seed funding	Technical guidance	Strategic guidance
Start-up success	Pearson Correlation	1			
	Sig. (2-tailed)				
Seed funding	Pearson Correlation	0.743	1		
	Sig. (2-tailed)	0.000			
Technical guidance	Pearson Correlation	0.715	0.386	1	
	Sig. (2-tailed)	0.000	0.000		
Strategic guidance	Pearson Correlation	0.766	0.451	0.343	1
	Sig. (2-tailed)	0.000	0.000	0.000	

Primary Data (2020)

The correlation results demonstrate a strong, positive and significant association between seed funding and start-up business success as reflected by a Pearson correlation coefficient of 0.743 and a P-value of 0.000. This is an indicator that more seed funding translates to improved start-u success. The correlation results also demonstrate a strong, positive and substantial association between technical guidance and start-up business success as reflected by a Pearson correlation coefficient of 0.715 and a P-value of 0.000. This is an indicator that better technical guidance translates to improved start-up business success.

Further, the correlation results demonstrate a strong, positive and substantial association between strategic guidance and start-up business success as reflected by a Pearson correlation coefficient of 0.766 and a P-value of 0.000. This is an indicator that increase in the level of strategic guidance translates to improved start-up business success.

4.4.2 Regression Analysis

The regression analysis encompasses the model fitness, the Analysis of Variance (ANOVA) and the regression coefficients. This is as demonstrated in below.

Table 4.16: Model Fitness

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.791	0.625	0.621	0.29172

Primary Data (2020)

Seed funding, technical guidance and strategic guidance were considered satisfactory in explaining start-up business success as presented in Table 4.16. This is as reflected by an R square of 0.621. This thus implies that seed funding, technical guidance and strategic guidance explain 62.1% of the variations in start-up business success with the difference being explained by other factors beyond the study. The other implication is that the model linking the variables relationships is satisfactory. The R value of 0.791 implies that there exists a strong relationship between the predictor variables (seed funding, technical guidance and strategic guidance) and tech start-ups business success.

Table 4.17: Analysis of Variance

Indicator	Sum of Squares	Df	Mean Square	F	Sig.
Regression	39.046	3	13.015	152.944	0.000
Residual	23.402	32	0.085		
Total	62.448	35			

Primary Data (2020)

Results in Table 4.17 confirm the significance of the model and this is shown by F statistic of 152.944 and a p value of 0.000. This shows that seed funding, technical guidance and strategic guidance are good predictors of start-up business success. The regression analysis helped to demonstrate the magnitude of influence seed funding, technical guidance and strategic guidance have on start-up business success.

Table 4.18: Regression Coefficients

Variable	B	Std. Error	Beta	T	Sig.
(Constant)	2.056	0.17		12.11	0.000
Seed funding	0.226	0.057	0.285	3.938	0.000
Technical guidance	0.144	0.059	0.172	2.43	0.016
Strategic guidance	0.168	0.037	0.379	4.559	0.000

Primary Data (2020)

Results demonstrated a positively significant relationship between seed funding and start-up business success (β 0.226, P 0.000). This illustrate that increase in seed funding by one unit would cause an improvement on start-up business success by 0.226 units. Results also portrayed a positively significant relationship between technical guidance and start-up business success (β

0.144, P 0.016). This point out that increase in technical guidance by one unit would cause an improvement on start-up business success by 0.144 units. Further, results demonstrated a positively significant relationship between strategic guidance and start-up business success (β 0.168, P 0.000). This illustrates that increase in the level of strategic guidance by one unit would cause an improvement on start-up business success by 0.168 units.

The resulting regression model is as follows:

$$\mathbf{Y = 2.056 + 0.226X_1 + 0.144X_2 + 0.168X_3 + Ɛ}$$

Where

Y = Start-ups' Success,

X_1 – Seed Funding,

X_2 – Technical Guidance,

X_3 – Strategic Guidance

4.5 Chapter Summary

This chapter included the study general information encompassing the response rate and demographic information. The descriptive statistics showing the means and standard deviation for each of the study variables, and the inferential statistics section which presents the correlation and multiple regression analysis results. The next chapter of the study presents the discussion, conclusions and recommendations.

CHAPTER FIVE
DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents a discussion, conclusion, and recommendations. The discussion, conclusion, recommendations for improvements for the study are presented in line with the study research objectives. Recommendations for further research are also presented in this chapter.

5.2 Discussion of Findings

The research aimed at finding out the effect of accelerator programs on start-ups' business success among tech start-ups in Kenya. The study sought to answer the following research questions: What is the effect of accelerator seed funding on start-ups' business success among tech startups in Kenya? What is the effect of technical guidance offered by accelerators on start-ups' business success among tech startups in Kenya? What is the effect of strategic guidance offered by accelerators on start-ups' business success among tech startups in Kenya?

Descriptive research design was adopted in this study. The study targeted 42 employees from the 7 accelerator programs in Kenya. Data was obtained from 36 giving a response rate of 85.7% which was adequate for this study. Respondents were given questionnaires to facilitate collection of primary data. Types of statistics used were descriptive and inferential. The descriptive analysis included mean and standard deviation. Inferential statistics included use of Pearson's correlation and regression analysis.

This section provides the discussions of the findings for each of the research objectives. The study also established the demographic characteristics of the respondents. The results showed that the gender distribution was close to 1:1. This reveals that there is no gender discrimination as far as employment is concerned in accelerator programs. In the same vein, many of the employees were in the reproductive age group, with fewer younger people and fewer older people, with those in the middle ages occupying many positions. This can be explained by the fact that accelerator program is a relatively new concept. Owing to the fact the fact that the industry demands higher technical qualifications, the study also confirmed a higher proportion of employees having postgraduate and bachelor's degrees. On the contrary, a higher proportion

of employees had stayed with the companies for less than 5 years. This result is attributed to the fact that accelerator program has gained popularity recently.

5.2.1 Seed Funding and Start-up Business Success

The study findings reveal that seed funding influenced start-up business success positively. The study found out that the accelerator programs provided equity financing, debt funding and grant funding to start-ups going through the accelerator program. The study also established that there were incentives targeting seed funding firms and that the accelerators run their programs on a cohort basis where they take in several start-ups at a time for a fixed duration. The regression and correlation results support the results as seed funding and start-up business success were positively and significantly related.

The study findings reveal that accelerator programs in Kenya offer funding in terms of debt finance, equity financing and grant financing. These findings are supported by Drover et al. (2017) who conducted a study on the attributes of angel and crowd funded investments as determinants of Venture Capitalists' (VCs) screening decisions by utilizing a theoretical literature review. They opined that while in the early stages, ventures tend to rely on a mixture of own, debt and equity financing – also depending on the geographical location of the start-up, in later stages and particularly high-growth-potential start-ups focus on outside equity finance sources such as VC, Corporate Venture Capital (CVC), angel investment, crowd funding and/or accelerators.

The findings of the current study concur with Fehder and Hochberg (2014) who focused on how accelerators impact availability and provision of seed and early stage venture capital funding in the local regions of the United States by utilizing a theoretical literature review. They stated that accelerators are motivated by a profit goal and are one end of the venture capital spectrum. The authors compared accelerators to angel investors and incubators and discovered that areas with accelerators benefit from entrepreneurial financing activity from within the Accelerator and outside which stimulates entrepreneurial eco-system is likely to satisfy local government and the accelerator's owners.

Further, Bluestein and Barrett (2010) focused on how incubators speed the start-up process analysing initiatives such as Y Combinator in San Francisco and TechStars in Boulder, Colorado, both located in the United States. They conducted a theoretical literature review. The study established that incubators provide more than just funding, they give added value to their

participants with early stage financing. They also stated that as much as the average start-up requires early stage financing, they do not require a large capital, the financial assistance given is enough to enable their survival while they attend accelerator program. The study findings concur with this study.

The findings of this study were that seed funding influences business success among tech start-ups in Kenya. Specifically, equity financing, debt funding and grant funding are significant determinants of start-up business success. This implies that increased number of accelerator programmes offering this type of seed capital will lead to improved start-up business success. Further, incentives targeting this accelerator programmes enhance provision of seed capital and this will lead to a greater impact on success of business start-ups.

5.2.2 Technical Guidance and Start-up Business Success

Results demonstrate that technical guidance influenced start-up business success positively. The study established that accelerator programs in Kenya offers office space for the start-ups, take on board positions in the start-ups to offer technical and strategic guidance to these companies, offers infrastructure and equipment to the start-ups, offers IT hardware to the start-ups, offers IT software to the start-ups and accelerator offers the latest technological advancements to the start-ups. The regression and correlation results support the results as technical guidance and start-up business success were positively and significantly related.

The finding that the Kenyan accelerator programs offers technical and strategic guidance in addition to infrastructure and technological advancements supports the study by Katz and Green (2009) that focused on the distinctive nature of small businesses of start-ups versus high growth firms, they conducted a theoretical literature review. They stated that accelerator programs provide office space, technical, managerial support, and access to investors.

The results are in line with MacManus (2010) who focused on TechStars historical results data in the United States. An exploratory case study approach was used to examine the leading accelerator companies and it employed descriptive statistics. The study established that accelerators provide office space, access to successful entrepreneurs, mentorship services, and other technology experts, a place where they can socialize with similar venture founders, and a conducive environment that allows the sharing of ideas or methods and that all the accelerators are provided with encouragement, assistance, and help with technical issues. The study did not

analyse all the aspects of accelerator programs and it did not also conduct inferential statistics to seek the cause and effect relationship of accelerator programs and start ups' success.

By offering office space for the start-ups, taking on board positions in the start-ups to offer technical and strategic guidance to these companies, offering infrastructure and equipment to the start-ups, offering IT hardware and software offering the latest technological advancements to the start-ups, the findings concur with van Huijgevoort (2012) who conducted a study that focussed on the difference between accelerator programs and business incubation by conducting a theoretical literature review. The study stated the major difference is that most accelerators do offer a working environment.

This study opines that accelerator programs in Kenya offers office space for the start-ups, take on board positions in the start-ups to offer technical and strategic guidance to these companies, offers infrastructure and equipment to the start-ups, offers IT hardware to the start-ups, offers IT software to the start-ups and accelerator offers the latest technological advancements to the start-ups. Further this technical guidance offered by Tech start-ups in Kenya leads to a positive and significant influence on start-up business success.

5.2.3 Strategic Guidance and Start-up Business Success

The study findings illustrate that strategic guidance influenced start-up business success positively. The study found that the Kenya accelerator programs offers mentorship to the start-ups, provides access to a network of entrepreneurs to the start-ups and leads to improvements in business concepts of the start-ups. The regression and correlation results support the results as strategic guidance and start-up business success were positively and significantly related.

Results demonstrate that ability to offer strategic guidance enhanced start-up business success. These findings are in lieu with the assertions of Radojevich-Kelley and Hoffman (2012) who analysed the accelerator companies in the United States by conducting an exploratory case study of their programs, processes, and early results through use of descriptive statistics. Their study found out that the quality mentorship, and its inclusion an accelerator, is a critical factor for its success and good mentorship increases opportunities for future investment, particularly from VCs and angel investors.

The study found that the Kenyan accelerator programs offers mentorship to the start-ups provides access to a network of entrepreneurs to the start-ups and leads to improvements in

business concepts of the start-ups. This finding concurs with Arrington (2007) who stated that accelerator programs provide an intense in-house mentorship program, and access to a network of entrepreneurs who help them to adjust and improve their business concepts, and opportunities to pitch their ideas to VCs and angel investors and also provide timely support for the start-up founders to adjust their prototype. The study further established selected founders/participants devote their time to interact with others and receive encouragement, added knowledge and great assistance.

This study finding is in line with Avery (2007) found out that the founders of accelerators accredit the success of start-ups to the availability of high-quality mentorship stating that the success rates of their small business clients, was due to the availability of high-quality mentorship. It was noted that of the many accelerator companies studied operate similarly, they engage in the provision of boot camps which provide extensive mentoring and due to the hands-on approach, they take, they are extremely selective when choosing participants. Finally, the study established that each company's idea is carefully considered, along with the availability of mentorship to assist the firm in achieving the goal of accelerators which is to foster the entrepreneurial ecosystem, generate opportunities, and assist in sustainability.

This study posits that accelerator programmes in Kenya offers mentorship to the start-ups, provides access to a network of entrepreneurs to the start-ups and leads to improvements in business concepts of the start-ups. Further, the strategic guidance offered by the accelerator programmes leads to a positive and significant influence on business success of tech start-ups in Kenya. This implies that by offering strategic guidance among the tech start-ups in Kenya, the accelerator programmes have significantly influenced the success of these start-ups.

5.3 Conclusions

This section presents the conclusions drawn from the research findings for each of the research objectives.

5.3.1 Seed Funding and Start-up Business Success

The study concluded that seed funding influenced start-up business success positively. This was reflected by the regression and correlation results support the results as there was a positive and significant relationship between seed funding and start-up business success. The study

concluded that the accelerator programs in Kenya provide equity financing, debt funding and grant funding to start-ups going through the accelerator program. The study also established that there exist incentives targeting seed funding firms and that the accelerators run their programs on a cohort basis where they take in several start-ups at a time for a fixed duration.

5.3.2 Technical Guidance and Start-up Business Success

The study concluded that technical guidance influenced start-up business success positively. This was reflected by the regression and correlation results support the results as there existed a positive and significant relationship between technical guidance and start-up business success. The study also established that accelerator programs in Kenya offers office space for the start-ups, take on board positions in the start-ups to offer technical and strategic guidance to these companies, offers infrastructure and equipment to the start-ups, offers IT hardware to the start-ups, offers IT software to the start-ups and accelerator offers the latest technological advancements to the start-ups.

5.3.3 Strategic Guidance and Start-up Business Success

The study concluded that strategic guidance influenced start-up business success positively. This was reflected by the regression and correlation results support the results as there existed a positive and significant relationship between strategic guidance and start-up business success. The study also concluded that the Kenya accelerator programs offers mentorship to the start-ups, provides access to a network of entrepreneurs to the start-ups and leads to improvements in business concepts of the start-ups.

5.4 Contribution of the Study

This study contributes knowledge on the role of accelerator programmes on tech-start up business success. The study has filled existing knowledge gap on the nature of association between the various components of accelerator programs (seed funding, technical guidance and strategic guidance) and tech start-up business success. Scholars and scholars will gain from this study as it will form a basis of conducting future studies related to accelerator programmes and business success. The study further contributes to theory development by providing more literature that can aid in development of resource-based view theory and diffusion of innovation theory.

5.5 Recommendations

The study revealed that seed funding influenced start-up business success positively. The study thus recommends that accelerator programs should be more vibrant in innovating new ways of funding start-ups as this would boost their business success and thereby sharpen their competitive edge. To achieve this, the study also recommends the need for policymakers and to come up with policies that make it easy for accelerator program to raise funds at a reasonable cost as this will contribute to the growth of start-ups.

The study revealed that technical guidance influenced start-up business success positively. The study thus recommends that accelerator programs should continue offering technical guidance as this goes a long way in ensuring start-ups continues business success. The study also recommends that accelerators should adopt new innovative ways of ensuring seamless technical guidance to the tech start-ups.

The study revealed that strategic guidance influenced start-up business success positively. The study thus recommends that accelerator programs should invest more resources into strategic guidance which would aid in enhancing success of tech start-ups in Kenya. Policy makers should provide incentives to accelerators to ensure their continued effort to boost tech start-ups is maintained.

5.6 Limitations of the Study

The study was limited to selected aspects of accelerator programs. Given that the success of start-ups could be attributable to other factors that were not covered in this research, then the results of the study wouldn't necessarily be generalizable to the entire population of tech start-ups in Kenya.

For the purpose of analyzing the data, the researcher used the multiple linear regression model. Because of the limitations involved when this model like the erroneous and misleading results following a change in variables, the findings by the researcher cannot be generalized with certainty.

5.7 Research Areas for Further Studies

This study investigated how accelerator programs influence start-up business success. The study particularly focused on seed funding, technical guidance and strategic guidance. The study recommends that a study focusing on other aspects of accelerator programs should be conducted

to show whether they differ on how they impact start-up business success. The study also recommends that a similar study should be conducted but focus on the start-ups themselves as they can offer different insights that were not captured in this study. This would help to establish whether there is any similarity on how accelerator program impact start-up business success.

The study solely relied on primary data, alternative studies can be done using secondary sources for the different accelerator programs which could either support or contradict the current study. Finally, because of the limitations of regression models, other models such as the Vector Error Correction Model (VECM) can be utilized in analyzing the relation between the variables.

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APPENDICES

Appendix I: Introduction Letter

The relationship between accelerator programs and start-ups' business success; the case of tech start-ups' in Kenya and Nigeria

Dear Sir / Madam,

My name is Wanjiku Muthoni Mugambi, a Master of Business Administration student at Strathmore University. In partial fulfilment of the Master's Degree programme, I am required to carry out a research project and write a dissertation on a contemporary subject within my field of specialization. Among other activities, the project involves data collection and analysis. I hereby request to gather information to be used in this research in your firm. The information obtained will be used for this academic purpose only and will be kept confidential. The results of the survey will not disclose any individual, company name or information in any way.

If you have any further questions about this study, you may contact me directly via my email address, wmugambi@ifc.org.

Thank you very much for your time and cooperation.

Sincerely, Wanjiku Muthoni Mugambi

Appendix II: Research Questionnaire

Questionnaire S/NO: ☐

This questionnaire is structured to collect information on the effect of accelerator programs on start ups' success. Kindly read the questions carefully and tick against the asked question as per your position or understanding and relevance to the study. Utmost confidentiality is assured as the data collected from this questionnaire will purely be used for academic purposes.

PART A: BACKGROUND INFORMATION

1. Please indicate your gender:
   Male ( ) Female ( )

2. Please indicate your marital status:
   Single ( ) Divorced ( ) Married ( ) Widowed ( )

3. Please indicate your age:
   20- 29 ( ) 30 – 39 ( ) 40– 49 ( ) 50 and above ( )

4. Please indicate your highest education level:
   Secondary ( ) Diploma ( ) Bachelor Degree ( ) Postgraduate ( )

5. Please provide your role within the organization

   .....

6. Please indicate your working experience with your current employer:-

   5 and below ( ) 6 – 10 ( ) 11 – 15 ( )

   16 – 20 ( ) 21 and above ( )

7. Please indicate your total working experience to date in years:

   5 and below ( ) 6 – 10 ( ) 11 – 15 ( )

16 – 20 ( ) 21 and above ( )

8. Have you worked in a startup prior to your current role?

   Yes ( ) No ( )

9. Have you worked in another accelerator prior to your current role?

   Yes ( ) No ( )

PART B: ACCELARATOR PROGRAMS

SEED FUNDING

Kindly indicate the extent to which you agree with each of the statements on seed funding by using the following scale:

Use 1 – Very Low Extent, 2 - Low Extent, 3 – Moderate Extent 4 – High Extent, 5- Very High Extent

	Statement	**1**	**2**	**3**	**4**	**5**
10	Our accelerator program provides equity financing to startups going through the program					
11	Our accelerator provides debt funding to startups going through the program					
12	Our accelerator provides grant funding to startups going through the program					
13	There are tax incentives for seed funding in our country					
14	Our accelerator program runs its programs on a cohort basis where it takes in several startups at a time for a fixed duration.					
15	There are no regulatory and administrative barriers towards seed funding in our country.					

TECHNICAL GUIDANCE

Kindly indicate the extent to which you agree with each of the statements on technical guidance by using the following scale:

Use 1 – Very Low Extent, 2 - Low Extent, 3 – Moderate Extent 4 – High Extent, 5- Very High Extent

	Statement	**1**	**2**	**3**	**4**	**5**
16	Our accelerator offers office space for the start ups					
17	Our accelerators take on Board positions in the startups going through their program to offer technical and strategic guidance to these companies					
18	Our accelerator offers infrastructure and equipment to the start ups					
19	Our accelerator offers IT hardware to the start ups					
20	Our accelerator offers IT software to the start ups					
21	Our accelerator offers the latest technological advancements to the start ups					

STRATEGIC GUIDANCE

Kindly indicate the extent to which you agree with each of the statements on strategic guidance by using the following scale:

Use 1 – Very Low Extent, 2 - Low Extent, 3 – Moderate Extent 4 – High Extent, 5- Very High Extent

	Statement	**1**	**2**	**3**	**4**	**5**
22	Our accelerator offers mentorship to the start ups					
23	Our accelerator provides access to a network of entrepreneurs to the start ups					
24	Our accelerator leads to improvements in business concepts of the start ups					

PART C: START UPS SUCCESS

Kindly indicate the extent to which you agree with each of the statements on start-ups' success by using the following scale:

Use 1 – Very Low Extent, 2 - Low Extent, 3 – Moderate Extent 4 – High Extent, 5- Very High Extent

	Statement	**1**	**2**	**3**	**4**	**5**
25	Start-ups in our accelerator programs have experienced higher revenue growth					
26	Start-ups in our accelerator programs have scaled up their operations (significant revenue growth, new products, geographical expansion) and increased their capacity					
27	Start-ups in our accelerator programs have streamlined their operations, policies and procedures					
28	Start-ups in our accelerator programs have developed innovative concepts					

Thank you for your co-operation

.

Appendix III: List of Accelerators' Present in Kenya

	Name	Portfolio
1	Tumi (Transformative Urban Mobility Initiative)	Ride-hailing, van pooling and truck-hailing startups such as An Nisa, Auto-truck, GetBoda and Twende. provides technical support to startups that aim to curb urban mobility challenges
2	GrowthAfrica	Focuses primarily on growing post-revenue African startups and SMEs through business acceleration, strategic advice and access to investments. Additionally, it helps local and international organizations support African ventures.
3	Pangea Accelerator	Biasharabot, Onesha, Yusudi and Tozzaplus.
4	Ygap Kenya Accelerator	Supports early stage impact entrepreneurs, it runs 44 programs and has supported 515 ventures.
5	E4Impact Accelerator	Its service offering includes; training, coaching and mentoring, market linkages and other professional services and also additionally offers seed grants as well as a co-working space for its entrepreneurs.
6	Sheltertech Accelerator Kenya	Provides access to investments, networks and business support to startups in the building and construction space. Some startups in its first cohort included AHomes, Gjenge Makers and ManPro.
7	EO Accelerator Programme	Seeks to support early-stage entrepreneurs who are keen on reaching a USD 1 Mn turnover threshold. Entrepreneurs should additionally have a turnover of between USD 250 K to USD 1Mn.

Source: Ngige (2020)

Appendix IV: Budget

Items	**Details**	**Cost**
Stationery	Printing papers	15,000
	Binders	5,000
Transport		10,000
Data collection	Internet	5,000
	Distribution of instruments	5,000
	Collection of instruments	5,000
Production of the documents	Typesetting	1000
	Printing	15,000
	Photocopying	5,000
	Binding	5,000
Data analysis		30,000
TOTAL		**101,000**

Appendix V: Work plan

Activities	**Start Time (2019)**			
	December 2019	January 2020	February 2020	March 2020
Proposal writing				
Proposal defence and corrections				
Data collection				
Data analysis				
Report writing				
Submission of Research Report				

Appendix VI: NACOSTI Research Permit

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION

Ref No: **700708**

Date of Issue: **08/July/2020**

RESEARCH LICENSE

This is to Certify that Ms.. Wanjiku Mugambi of Strathmore University, has been licensed to conduct research in Nairobi on the topic: Effect of Accelerator Programs on Business Success Among Technology Start-ups in Kenya for the period ending : 08/July/2021.

License No: **NACOSTI/P/20/5631**

700708

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION

Verification QR Code

NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.

Appendix VII: Ethics Clearance Letter

Final Decision Certificate

This document certifies that the study:

"EFFECT OF ACCELERATOR PROGRAMS ON BUSINESS SUCCESS AMONG TECHNOLOGY STARTUPS IN KENYA"

Principal Investigator: Ms. Mugambi, Wanjiku
Reference number: SU-IERC0857/20

Was reviewed and received the following status:
"approved"
Additional Comments:

Reviewer #1:
'1. In the proposal, say: "background information of the respondents." and not "back ground information of the respondents."

2. In the proposal, say: "addresses stated in the database." and not "addresses stated in the data base."

3. "Thirdly, all research tools will have introduction so that participants identities will be kept anonymous"?? How can an introduction make participants anonymous??!! This is a very strange statement.

4. Appendices on Page 41 should begin on a separate/new page.
Also, on page 42, begin the questionnaire on a separate/new page.

5. Be consistent with the spelling of "STARTUPS" in the questionnaire and the rest of the document.'