ENTREPRENEURIAL ORIENTATION, BUSINESS INCUBATION, BUSINESS STRATEGIES AND PERFORMANCE OF START-UPS IN NAIROBI CITY COUNTY, KENYA

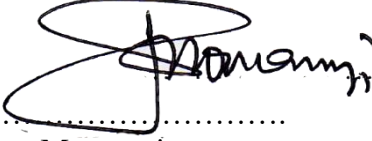JOSEPH SEGERA MOMANYI

A RESEARCH THESIS SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF DOCTOR OF PHILOSOPHY IN BUSINESS ADMINISTRATION, FACULTY OF BUSINESS AND MANAGEMENT SCIENCES, UNIVERSITY OF NAIROBI
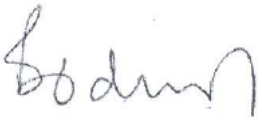
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DECLARATION

This thesis is my original work, and it has not, in part or its entirety, been submitted for examination to any other University for any academic award.

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DEDICATION

This work is dedicated to my family for their moral encouragement to keep up and understand when it required that I stay away from them to achieve this milestone.

ACKNOWLEDGMENT

God's grace has made this journey possible and to Him I raise all my hands for gratitude. My supervisors were conscientious, patient, and supportive throughout this process and they deserve my very sincere gratitude and appreciation. They offered me the support and encouragement I needed during the entire process of writing this thesis. I thank all members of my family and Mountain View SDA Church who missed my company and valuable resources at times of need. In a very special way, I wish to recognize and appreciate Mr. Cheptum Ayabei, the TSC Director (Finance & Accounts) and all colleagues at work who accorded me humble time and understanding during the process.

To you all, I say;

Thank you.

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ABBREVIATIONS AND ACRONYMS

AM   Ansoff Matrix

ANOVA   Analysis of Variance

BI   Business Incubator

BIS   Business Incubation Services

BS   Business Strategies

CFA   Confirmatory Factor Analysis

CFI   Component Fit Index

DI   Diversification

DV   Dependent Variable

EO   Entrepreneurial Orientation

FA   Factor Analysis

FP   Firm Performance

IDT   Innovation Diffusion Theory

IGT   Indigenous Growth Theory

IV   Independent Variable

LV   Latent Variable

MDS   Market Development Strategy

MPS   Market Penetration Strategy

NFI   Normed Fit Index

OLS   Ordinary Least Square

OV   Observable Variable

PD   Product Diversification

PCA   Principal Component Approach

PESTEL Political Economic, Social, Technological, Environmental and Legal

PMEG   Product-Market Expansion Grid

PSFP   Persistent Superior Firm Performance

RDT   Resource Dependence Theory

RMSEA Root Mean Square Error Approximation

SEM   Structural Equation Model

SME   Small and Medium Enterprises

SPSS   Statistical Package for Social Sciences

VIF   Variance Inflation Factor

ABSTRACT

The need for the establishment mechanism to influence and run successful start-ups especially on new technological platforms formed the basis for the study of entrepreneurial orientation, business incubation and business strategies. Entrepreneurial orientation, business incubation and business strategies have been identified as feasible players in influencing performance of start-ups globally. Entrepreneurial orientation is observed on its behavioural attributes of innovativeness, risk-taking and pro-activeness towards upcoming business opportunities. Business incubation, on the other hand, is concerned with nurturing conceived ideas and ensuring they are born into start-ups and support them grow. The process involves mentorship, absorption capacity-building and linking new enterprises to resourceful networks. The study considered business strategies as guided by Ansoff (1957) matrix including the critique by Sener (2014). Ansoff matrix alternatively called Product-Market Expansion Grid is widely used globally (Peter and Jarratt 2015) as a decision scale for strategic alternatives involving diversification, market penetration, and product development. The theories of entrepreneurship, resource dependency, endogenous growth and social network considered for underpinning the study. The predominant theory was social network due to its attributes of interacting with the study latent variables. The study considered positivism philosophical reasoning to design, collect data, analyse it, and report the findings in order to reject or accept the hypothesis. This approach enabled the researcher to derive information logically from empirical data using the scientific method thereby testing the hypotheses about the constructs under theoretical underpinnings. The study successfully obtained 210 responses from start-up owners who had used the services of any of the five business incubators situated within Nairobi City County namely; ihub, Strathmore University, C4lab of University of Nairobi, Chandaria – BIIC of Kenyatta University, and Nairobi Industrial Park and Technology. Structural Equation Model (SEM) was applied to analyse data and deduce conclusions. The findings indicate that entrepreneurial orientation explains significantly the performance of start-ups in Nairobi City County (β=.7876, P=0.000) holding other factors constant. It was further revealed that that business incubation significantly influenced performance of start-ups (β=1.8547, P=0.000) in Nairobi City County ceteris paribus. Holding other factors constant, there existed a significant influence of business strategies (β=2.1089, P=0.000) on performance of start-ups in Nairobi City County. Further, it was found that entrepreneurial orientation, business incubation and business strategies jointly had significant influence ($R2$= 0.5850, chi2=455.94, P=0.000) the performance of start-ups in Nairobi City County. The study, therefore, recommends provision of business incubation services to all new enterprise as primary condition before any incentives in the market. Business incubation services are further recommended to secure entrepreneurial orientation through mentorship, capacity building and networking. The application of business strategies is a skill whose proper use will influence start-up performance as observed in survival, finances and employment. The government at national and county administration levels must establish policy framework to guide the provision of business incubation services for new and ongoing firms to foster entrepreneurial orientation and also in readiness for competence based curriculum (CBC) graduates. Good preparation of entrants into start-up sector will ensure better start-up performance which in turn will guarantee social, economic and political stability.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Start-ups have been placed in the front position (Muathe & Otieno, 2022) in the development of entrepreneurship in Kenya. Graduates from low level colleges to universities in Kenya are encouraged to venture into business as a way of executing entrepreneurship orientation, self-employment and attainment of social and economic stability. It is believed (Shukla, 2015) that entrepreneurial orientation has the potential to catalyse innovation, create employment and improve performance of start-ups. Successful establishment of start-up mark the beginning of successful entrepreneurship (Schumpeter, 1991). Start-ups differ from small and medium enterprises on one thing; small and medium enterprises may choose to remain so for long time while start-ups have the potential to go beyond small. Meru and Struwig (2016) argue that the Government may foster performance of small and medium enterprises through funding and training.

According to Kiprotich (2017) and Munene (2018), the successful creation and growth of start-ups is a precursor to social, economic, and political stability. The existence of unemployment in a country may bring about both social and economic instability. Wairimu and Mwilaria (2017) recognized that start-ups are incubated through a process and may employ one to ten people besides the owner. Empirical studies (Shukla, 2015) attribute 75% of start-up failures due to a lack of business incubation and that most of them die after the first three years of inception. This rate is not only a great concern for the unemployed but also policymakers and young investors too. According to Gimenez-Fernandez, Sandulli and Bogers (2020), business incubation is an ideal intervention for the

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provision of start-up services, which include managerial skills, use of technology, mentorship in innovations, strategy making, business networking, cost reduction through rental sharing, and expansion of absorption capacity.

It is further claimed (Gimenez-Fernandez et al., 2020) that most start-ups experience financial limitations, management skills, myriads of risks, lack of experience, and fierce competition, all of which eventually fail them. Start-ups operate in competitive environments, where strategy making and management skills are both a critical ingredient and a necessary intervention for sustained favourable performance (Moreno et al., 2008). A study by Zehir et al. (2015) indicates that huge costs, learning new activities, investor instability, bad relationships, strange markets and severe competitors form part of the reasons for failure. Firm strategy is a business supportive activity, where internal resources are reorganised for exploitation of emerging external opportunities. Wiklund and Shepherd (2005) allude to the successful business sector as responsible for rolling wheels of economic growth. Performance of start-ups are observed through reduced firm mortality rates, increased profits, job creation and ultimate poverty reduction (Lechner et al., 2012). Amatulli and Guido (2011) argued that product market expansion grid advanced by Ansoff, (1957) is one of the best models applicable for to new business facing uncertain future in the market

The Product Market Expansion Grid (PMEG), also called the Ansoff Matrix (AM) is a tool used to develop business growth strategies by examining the relationship between new and existing products, new and existing markets, and the risk associated with each possible relationship. The matrix aids growth plans through the introduction of existing or new

products, in existing or new markets. Although developed as early as 1957, business strategies developers use it as a rule of the thumb when deciding which strategy to adopt (Peter & Jarratt 2015).

This study argument is underpinned on the four theoretical propositions. The first proposition is entitled 'entrepreneurship theory' and was made by Schumpeter (1991) which provides framework for the establishment of start-ups. The critical feature with the theory of entrepreneurship is its ability to differentiate between innovation and imitation during business creation process. The second theory is resource dependence theory by Davis and Cobb (2010) whose argument for resource sharing justifies start-up locations. Social network theory (Bollingtoft & Ulhoi, 2012) provides valuable pronouncements that 'entities link to each other by use agents. The four conceptualized study variables of entrepreneurial orientation, business incubation, business strategies and performance of start-ups are typically linked by agents through social networks. Endogenous growth theory by Romer and David (2011) provides a framework for the position and value of start-ups in the national development.

1.1.1 Entrepreneurial Orientation

The definition of entrepreneurial orientation has evolved over time since Miller's time (1983) to date. Miller's definition viewed an entrepreneurial oriented firm as one that engages in innovation, undertakes risky ventures, and is proactive to commercialize. Most recent scholars, like Olaolu and Obaji (2020), define entrepreneurial orientation as corporate behaviour in firms, where there is deliberate policy to manage products or service through innovations, risk-taking and pro-activeness in all business decisions. Dess and

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Lumpken (2005) explain the entrepreneurial orientation concept as an observed behaviour at firms where the managers adopt a culture of generating strong impetus for innovations, risk-taking, autonomy and aggressiveness in their pursuit to new venture creation. The impetuses are the desirable observable characteristics whose level of availability is the measure of the firm's entrepreneurial orientation.

Top on the list of entrepreneurial orientation characteristics is innovativeness. Dess and Lumpkin (2005) define innovativeness characteristic as an inclination toward generating new and better business ideas. The ideas are implemented through a simple process. Salamzadeh (2015) asserts that innovation is exhibited in a diverse manner in different firms in terms of the level of preparedness to try new product lines or master the use of new technology. Innovative behaviour amongst entrepreneurs is a very significant attribute of entrepreneurial orientation (Wiklund, 2005). Shepherd (2005) notes that entrepreneurs operate under an environment which may or may not support experimentation, new ideas or new solutions to emerging problems and develop processes that are creative and innovative. Start-ups with innovative tendencies are likely to perform better than traditional methods of serving customers. There is consensus in recent literature that entrepreneurial orientation is a strong force that drives business activities across the globe (Wales and Runyan 2011). It is clear that firms with entrepreneurial orientation have the ability to manage risks (Bellu 2010) and are efficient in problem-solving (Schillo 2011).

Clausen and Korneliussen (2012) performed research on entrepreneurial orientation and time to market among incubator businesses, using entrepreneurial orientation as a single-dimensional concept. According to Rauch et al. (2009), it is premature to advocate a

multidimensional definition of entrepreneurial origination since viewing entrepreneurial orientation as a one-dimensional notion gives more accurate findings.

Risk-taking dimension of entrepreneurial orientation is demonstrated when a firm makes a bold decision to either take business into new territories or invest huge sums of money on ventures with unpredictable returns (Wiklund & Shepherd, 2005). Starting a new business is the best example where risk taking decisions are demonstrated. Persons with no business experience are unlikely to start a new business unless they have entrepreneurial orientation. Start-ups face unpredicted pressure from mature and more experienced firms across the world. This pressure becomes more and more sophisticated as customer behaviours are also changing (Salamzadeh, 2015). Kreiser (2011) posited that deliberate support mechanisms for start-ups should be put in place to influence performance. Wiklund, et al., (2009) positively linked entrepreneurial orientation to the performance of new firms irrespective of their geographical location, size, and sector. The ability to take risk is an important component for measuring the existence of entrepreneurial orientation. Business risk refers to anything that is likely to threaten a start-ups' set objectives. The risk is reduced where firm owners have an entrepreneurial orientation and support mechanism. Callaghan and Velter (2011) confirm that indeed entrepreneurial orientation characteristics contribute substantially to start-ups survival across the globe. Entrepreneurial orientation is a necessary skill at all levels of business life cycle right from idea conception, opportunity identification to need satisfaction.

Pro-activeness in entrepreneurial orientation is a demonstration of a characteristic of forward-looking to upcoming opportunities that provide business an advantage. An organisation chooses to adopt a way to act whenever there is opportunity to take charge of situations. It is sometimes referred to as an attitude that firm owners or managers have (Leboi 2019). They are on the lookout for future markets and capable of predicting demand changes and swiftly changing course of action. The firm's spirit of pro-activeness is also noticed in the manner in which a firm designs its administrative structures, processes, policies and operational procedures. According to Jelenc et al. (2015) the firm's administrative structures, processes, policies and operational procedures are coordinated in a manner depicting responsiveness to changes in the upcoming markets. According to Leboi (2019), pro-activeness and competitive aggressiveness are one and the same thing and they refer to the firm's ability to challenge consumers to support changes. Individuals that are proactive do what needs to be done to make their ideas into reality with the goal of getting an edge by being the first to capitalize on fresh opportunities.

The autonomous entrepreneurial orientation characteristic refers to freedom as inherent with an entrepreneur's attitude towards decision-making. Autonomy characteristics will as well mean independent actions by the firm based on performance objectives. According to Monsen et al. (2009) the level of entrepreneurial orientation may be measured using its characteristics of innovativeness, risk-taking and pro-activeness and autonomy. The pursuit of opportunities aggressively in the market is also considered pro-activity.

There is concurrence in literature where entrepreneurial orientation has been explained as crucial in providing sustainable competitive advantage for start-ups (Wiklund & Shepherd,

2005). Start-ups face unpredicted pressure from mature and more experienced firms across the world. This pressure becomes more and more sophisticated in an environment where customer behaviours are changing (Salamzadeh 2015). Kreiser (2011) posited that deliberate support mechanisms for start-ups should be put in place to support entrepreneurial activities especially where market conditions are competitive. As the enterprise grows entrepreneurial orientation skills continue to be demonstrated as a corporate behaviour within the firms and is characterised by product or service inventiveness, risk-taking, and making business choices in a proactive manner (Kreiser, 2011).

The entrepreneur's proactiveness characteristic is demonstrated when one goes straight for business activities and events with money-making opportunities that are soon upcoming. Leboi (2019) argued that the proactiveness dimension is more of an attitude of speculating about future markets based on predicted changes in product demand. An enterprise demonstrates its pro-activity by setting its structures, processes, policies and operational procedures in a manner that's responsive to changes in the market. Jelenc et al. (2015) claim that pro-activeness behaviour of a firm increases innovativeness at an early stage of inception. On the other hand, competitive aggressiveness behaviour is demonstrated in the firm's ability to challenge consumers to focus on the methods applied to improve market situation (Leboi, 2019).

Kreiser (2011) defines entrepreneurial orientation as a three-factor comprising risk taking, innovation and proactiveness. Covin and Slevin (2011) claimed that entrepreneurial businesses must take risks, be inventive, and take the lead in reaching their consumers

under this structure in order to be labelled entrepreneurial. The point is that if a firm alters its technology, methods and product line by copying others through benchmarking it is not considered entrepreneurial orientation (Kusumawardhan et al., 2013). The second model views entrepreneurial orientation as a five-factor dimension with competitive aggression and autonomy in addition to Miller's (2011) dimensions (Lumpkin & Dess, 1996).

According to Monsen et al. (2009), an entrepreneurial orientation may be identified by how it displays its traits of innovation, risk-taking, proactivity, and autonomy. According to Wiklund et al. (2011), innovativeness among business owners is seen as a key factor in entrepreneurship, while the firm's propensity for taking on hazardous initiatives and taking decisive action to meet organizational goals is seen as risky behaviour (Kreiser, 2011; Leboi, 2019). The pursuit of opportunities aggressively in the market is also considered as pro-activity.

To put an issue for consideration in research, this study perceives entrepreneurial orientation as key to both economic and social growth. Before then, new entrepreneurs are found struggling to survive while others close down extremely soon (Jeff, 2017). It was observed (Jarvis, 2015) US small business below 10 year had survival rate of 34 per cent explained by entrepreneurial orientation. According to (Bernama, 2017) who placed his studies on resource based theory, Malasya achieved 48% survival rate due to enhanced competitive advantages. Taking note from this entrepreneurial orientation is observed as one of the most desired resource in the firm (Lorenzo, Rubio & Garcés, 2018) outside financial and network strength. Entrepreneurial orientation then becomes key sources in building competitive advantage for the survival of new firms (Castellaneta, 2016) which is

deemed to influence better performance. These previous studies connect entrepreneurial orientation to performance of new firms thereby motivating a research in testing the direction and magnitude of the relationship. Entrepreneurial orientation is conceptualized in terms of Innovativeness, Risk-taking and pro-activeness.

1.1.2 Business Incubation

The United Nations Economic Commission for Europe (2002) defines business incubation as an enabling and stimulating environment for learning entrepreneurship. The proponents of the business incubation idea (Remedios & Cornelius, 2003) suggest that there is a difference between big corporation business incubation and small-enterprise incubation. Remedios et al. (2003) propose that small-enterprise incubation is a dynamic process through which start-ups are nourished in order to survive and flourish through challenging times. According to Hackett and Dilts (2004), just as a firm is not just an office in a building, business incubation should be seen through the lens of the variety of networks and services that function inside and outside environments.

Globally, the United Kingdom business sector attributes business incubation as being responsible for the development of a wide range of businesses, processes, infrastructure and change of people's business culture especially those involved in small and medium firms at their initial stage (UKBI, 2012). Accordingly, business incubation is regarded as an economic tool whose initial objective is to support the creation of new firms. In Europe, growth and development in entrepreneurial cultures the influence in business clustering, the start-up networking, including linking them to financial providers and government agencies were attained through the help of business incubation (European Business and

Innovation Centres, 2000). On the other hand, Aernoudt (2004) perceives business incubation as an interactive development process, where start-ups are inspired to begin their own new enterprises.

Hannon (2003) argues for the importance of comprehending the incubation process's pillars, most notably the transmission of ideas, information, or research to the market. Hannon (2005) adds that new opportunities to investigate methods for facilitating incubation processes encompass a variety of critical aspects of business incubation, including governance and control, management and leadership, professionalism and personal development, client monitoring and tracking, and impact assessment and evaluation.

According to Gonsalves and Rogerson (2019), the support arrangements for all small and medium sized businesses in South Africa are contextualized in terms of local or regional sectors. Additionally, the local business environment varies in terms of legislative framework, financial needs, and institutional requirements. In general, the services that are provided may include things like real estate, fundamental office services, advice and support services, training, and the cultivation of relationships. The financial models include a variety of different elements, including rentals and outside services, subsidies, sponsorships, and deferred revenue such as royalties. In conclusion, the setting may be rural or urban, and the kind of incubation could range from the implementation of newly developed technology to the employment of pre-existing regulations in commercial settings.

Beckett and Dalrymple (2020) describe business incubation as supportive service given during the birth as well as growth of business and is characterised by innovations and mentorship activities. The term incubation has its origin in Latin and was picked up by the Americans in early 1950s as a religious belief for nurturing people's dreams to come to reality (Shukla et al., 2015). Over time, the concept was borrowed by the medics and was applied to save the lives of new-born babies (Beckett & Dalrymple, 2020). Business incubation is a clinical concept applicable for nurturing entrepreneurial dreams with the objective to turn them into reality.

Currently, business incubation construct is of great concern by all administrators because of the number and variety of practical services it guarantees. The best description of a business incubation is a business solution framework, social in nature and is capable of managing business right from infancy to maturity. The transition between entrepreneurial dream and establishment of a start-up is measured and explained as survival rate. The survival rate of start-ups does not only demonstrate the social, economic and political stability but also the speed at which the economy is growing (Al-Mubaraki & Busler, 2011). Sillitoe and Chakrabarti (2010) argue that business incubation alters the direction and speed at which firms grow.

According to Wang et al. (2020), it is worth encouraging business incubation in both practice and application especially in fostering growth and technology because of its ability to shield society from lack of employment and ensuring social stability. Given the existing dynamic and competitive start-up environment, start-ups require systemic and deep-rooted support to steer them up, grow, maintain and meet their optimal capacity. The start-ups

potential and through influence of business incubation programs such as physical infrastructure, network access, financial support, office support services and process support, there will be social, political and economic stability.

Business incubation programs promote innovations and growth of new business (Beckett & Dalrymple, 2020). Al-Mubaraki and Busler (2011) posited that business incubation is designed to add value to incubatees in order to increase their absorption capacity. The programs activate internal linkages and sharing of knowledge between firms (Kitagawa & Robertson, 2012). The programs help the incubatees to link external organisations and individuals making it possible to access information that is vital for the present and future periods. The knowledge and reputation acquired by the incubatees help them manage customers', suppliers', competitor', and institutions' interest which would otherwise be hard and costly to attain in the market (Spithoven & Teirlinck, 2015). Business incubation has the ability to reduce risk by linking start-ups to other networks thus accessing valuable information including how and where to access affordable credit (Kitagawa et al., 2012). Salvador et al. (2011) affirms that firms associated with incubator programs have a better risk rating index than those not associated with any.

Sillitoe and Chakrabarti (2010) argue that business incubation alters the direction and speed at which firms grow. It is a clear demonstration that the change in the incubatees' change of attitude toward entrepreneurial orientation, dimensions of autonomous decision-making, innovations, risk taking, and proactiveness is a beginning of start-up performance. Zehir (2015) asserts that business incubation is the most relevant tool that supports an entrepreneur maintaining the vision. The culture of mentorship and strategic planning are

part of the incubation programs offered. Saukkonen (2017) posited business incubation as being measured by the number of surviving young firms and start-ups due to their association with the training related to their businesses.

Business incubation by nature of its services seek to help start-ups network with important network resources (Cooper et al., 2012). One of the primary goals of business incubation programs is to cultivate the incubatees' social networks so that the programs' client start-ups may benefit from the incubatees' social networks in the form of intellectual and resource content. It does this by providing chances for in-house tenants to create collaborative partnerships with other businesses that offer other fundamental services in areas where network resources are robust. These possibilities come in the form of networking events. There will most certainly be intense competition brought to the market by the new businesses.

A study in Denmark by Bollingtoft and Ulhoi (2012) about the role of networking between incubatees and agents indicated that mutual trust is more important than formal contracts, and physical location catalyses the formation of a relationship. This is supported by the findings of Cooper et al. (2012) about the relationship between motivations and obstacles of networking. In Hong, a multiple case study was done on six incubators where one appeared to have succeeded mainly due to extensive relationships between knowledge sharing and incubator firms (Chan & Lau, 2005). In Germany, a study on whether business incubation on industrial specialisation would foster internal networking incubatees revealed that specialisation increased internal networking (Schwartz & Hornych, 2010). The attractive research feature in business incubation is its ability to increase capacity in

human capital to not only uptake rapidly changing technology, but also understanding consumer behaviour under given market opportunities. The term incubation has the ability to attract support without anticipating returns in the short-run. It also provides an opportunity for diagnostic research on suitable lessons for posterity. In this study therefore business incubation is conceptualized in its activities involving mentorship and coaching capacity building and networking.

Mentoring is a process whereby relationships are developed to ensure objectives are successfully met and there is impact observed on the mentee on the subject matter. According to (Bozeman, and Feeney 2007) mentorship is an informal process of transmitting knowledge, social capital, and the psychosocial support perceived by the mentee as relevant to work, career, or professional development. Face-to-face communication is usually preferred for sustained period of time, between the trainer and trainee.

According to OECD (2020), capacity building is defined as a process whereby trainers and institutions organized for that purpose unleash knowledge, strengthen, create, adapt and maintain capacity to the trainee over long time. Capacity itself is explained as the ability where by people, are able to manage their affairs successfully.

1.1.3 Business Strategies

Business Strategies here is used to refer to Product Market Expansion Grid (PMEG), also called the Ansoff Matrix (AM). This tool was developed to guide strategic plans for business growth by examining the relationship between new and existing products, new and existing markets, and the risk associated with each possible relationship. The matrix

aids growth plans through the introduction of existing or new products, in existing or new markets. Although developed as early as 1957, the relationship between product-market strategies and the growth of new firms is incompletely understood. According to Hitt, Ireland, and Hoskisson, (2012) the word strategy comes from the Greek verb 'strategos' which is translated as plans adopted by the army leader to achieve one or more long-term or overall objectives under conditions of uncertainty. This definition provide basis for anyone working under conditions of uncertainty to develop plans that mitigate the uncertain variables in order to minimize loses and maximize the benefits. Entrepreneurs conceptualizing new business begin with a vision, set objectives and then strategize to secure the birth, survival, growth and compete in the market.

According to Parnell et al. (2012) the critical concerns of strategy is to look at the vision of an enterprise, which in essence defines the scope to ensure that the right objectives, and targets are set based on the existing environmental dynamics and resources. This is an indication that, given the right strategy, organisations will leverage risks posed by weak market conditions. Raguseo (2018) attributes the success of the firm to proper use of internal factors and its unique bargains. This argument favours firm strategy as a means to uncover those internal factors and bargains responsible for realization of the entrepreneur's vision.

Harrison and Harrison (2003) view business strategies as a persuasive tool to influences the choice of product to market and where to do so. It is a means to confidence-building for entering competition, acquire advantage over others and easily achieve the overall objectives. The emphasis is to enter and compete in the market. This view is supported by

Hunger and Wheelen (2014) and Koch (2011), who agree on the fact that business strategies is an activity where firms design plans on how to compete and win more customers and remain feasible in the market. Start-ups with inclination to this view, conscious or unconscious have their focus on market behaviour needs.

Porter (1980) asserts that all firms should have vision and mission factored their strategic plans thereby classifying them into corporate, business and functional level strategies. Corporate-level strategy focuses on mission and shareholder value while business strategies focuses on the realization of the vision. Functional strategies are specific to units within an organization tasked to deliver specific functions. This study focuses on business strategies category whose attention is to formulate plans to establish business objectives, ensure competitive advantage, grasp of available opportunities and manage threats in the market considerably. Start-ups may be inclined towards business strategies (Grant, 2012).

Grant (2012) views objective setting as an activity that involves the development of plans designed to motivate and guide an entrepreneur toward achieving the desired target. An entrepreneur establishes business objectives in mind and resolves on how to proceed which shapes the emotions and behavior on the application of resources. Elizabeth (2017) proposed SMART criteria (specific, measurable, assignable, realistic and time-related as standard objective setting to guide for business strategic maker to ensure quality. However, many startups do not write their objectives but are conscious about them and often conform to this criterion.

Ries (2010) provides three case scenarios for consideration under business strategies. These case scenarios are: 'unknown customer- unknown product, new product – unknown

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customer', besides 'known customer- known product'. Accordingly, he proposes business strategies to be adopted in each case scenario. This is in perfect conformity with Ansoff (1957) matrix model shown in figure 1.1

Market penetration strategy is a deliberate effort by an enterprise to increase sales of existing products. General performance is improved by either increasing the volume of sales to its present customers in which case reduction of price is key or by finding new customers for present products in which case advertisement is preferred. According to Ansoff (1957) model, where there is an existing product proposed into an existing market, (known customer- known product scenario) the market penetration business strategy was suggested. The objective is increase market share and increase sales. Where there is an existing product proposed for a new market (new product – unknown customer)', market development business strategy was suggested. The objective is to introduce the product or service to the new market and ensure acceptability. Lastly, where there is new product proposed to the new markets (unknown product to unknown market) product or service diversification business strategy was suggested. Technology is the best example for providing a solution to a new problem.

Diversification strategy calls for a simultaneous departure from the present single product line and the present single market structure to both product and market perspective. Aichner and Coletti (2013) pointed out that new products on new markets will require diversification business strategy so that both the product and market are put to perspective. This basically means that data is not available for analysis on consumer preferences because all situations are new. Diversification helps establish competitive advantage

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among competitors on local markets, reduce costs on production, spread and develop innovation through the company. Startups that approach new markets with new products are engaged with the riskiest endeavours and are advised to develop diversification business strategy (Ansoff, 1991). In relative terms, a diversification business strategy is generally the highest risk endeavours after all, both product development and market development are required. While it is the highest risk strategy, it may reap huge rewards – either by achieving altogether new revenue opportunities or by reducing a firm's reliance on a single product/market fit (Ries, 2010).

Market development strategy is considered when an enterprise seeks adaption of its present products or at least minimum modification to new markets. Ansoff (1957) developed a generally adoptable model for startup to apply when engaged in market development to manage existing products to be presented to new markets. The underlying purpose of market development strategy is to increase sales of existing products. Most new entrepreneurs, who identify a new market for an existing product, also increase the customer base. Market development business strategy is achieved when the enterprise considers new geographical market locations (Kim & Mauborgne, 2005) together with other dimensions such as packaging and new distribution channels.

Paternoster et al., (2014) opined that market development strategy does not ordinarily require a lot of investments in the side of research and development. Rather, it provides an opportunity for the decision makers to leverage on advantages of existing products and enter new markets. They do this by creating segments on targeted markets be it local or foreign. Most business strategies adopted by startups are not written but are good enough

for recognition and conceptualization. Strategies new entrepreneurs focus on are typically operational and sensitive to   market uncertainties. New products provide new solutions likely to disrupt the existing businesses (Valkokari et al., 2018). The challenge to start-ups owners is that the proposition value of new product is not yet properly estimated among potential consumers (Ries, 2010). In this study, we define a start-ups a company that targets emerging markets or it develops a novel solution or business model for the existing markets.

Meyer and Roberts (1986) examined and reported that the reason for startup rapid expansion technologically was concentration on original products and customers focus. They also found that firms that diversified their products performed better. In contrast, Covin and Slevin (2011) examined the relationships between product-market strategies and startup growth. Covin and Slevin findings were different from Meyer and Robert's for the following reasons: the unit of measure, definitions of startup, different strategic grids mix used, and study framework. Belitski, et al., (2021) argues that business strategy/PMEG provide the greatest sales growth model for startups especially those involved in high-technology goods or services, making it the major tool for strategic choices.

The dilemma startups face include but not limited to choice of products or service to sale, the place to do business and the right time to launch. This study is intended to provide a well-thought-out business plan for any startup. The plan should include a clear description of product or service, the target market, available competitors, and general financial performance.

Figure 1.1: Ansoff (1957) Business Strategies Matrix Model
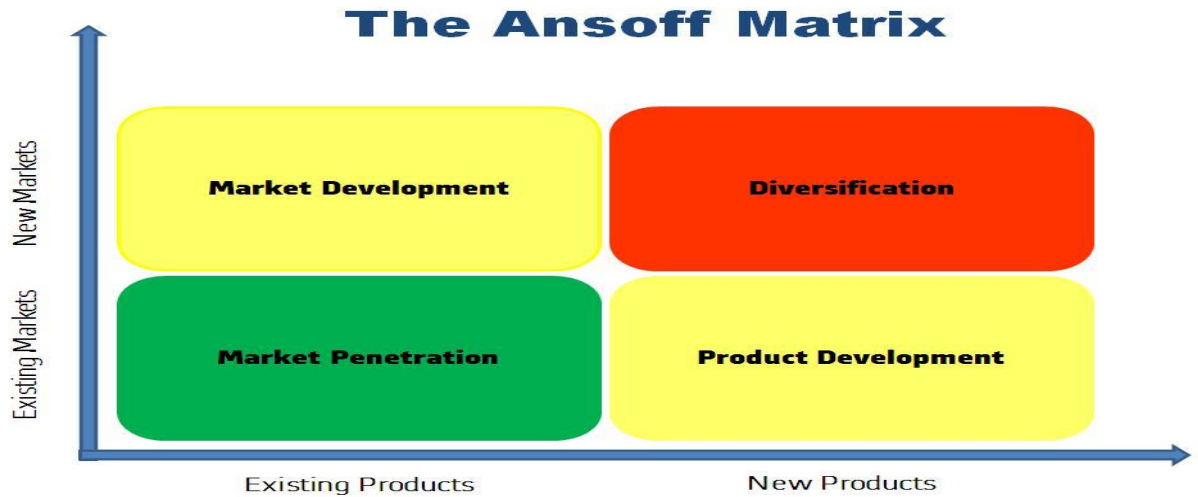
Source: Ansoff, (1957) – business strategies matrix

Where there is a new product or new market scenario it forms a basis of strategic decisions. The task of designing strategy is a leadership skill based on business orientation. To develop appropriate strategy befitting the enterprise's business using competitive strategic alternatives it must be preceded with competencies and abilities of management and an accurate database (Thompson and Strickland, 2003). The strategies give the firm a sense of direction and also act as a tool for guiding entrepreneurs in decision-making. Warner (2010) asserted that enterprises without strategy are not likely to be consistent in business direction and prudent use of resources.

Consequently, the inclusion of business strategy as a latent variable in academic research will explain the success or failure of start-up performance. This thinking further provides policy makers with an opportunity to vary resource commitment thus regulating performance (Saukkonen, 2017). Although strategy making is an attractive pre-cursor for start-up performance, little is known about how it is done (Raguseo, 2018). The philosophy

of establishing a new venture is observed through the characteristics of entrepreneurial orientation (Covin & Slevin, 2011). Parnell et al., (2012) assert that the observable startup performance indicators are closely linked to strategy conceptualization skill interventions.

It is explained Sener (2014) that determining growth strategies using Ansoff Matrix a selection should involve understanding of the basics of strategic decisions. Whether at corporate level or by new business, the principles are the same. In the process of strategy selection, businesses should define the rudiments, where they will have competitive advantage, in terms of market, customer and business capabilities (Johnson, Scholes, & Whittington, 2005). Management of business strategies covers four stages namely; the analysis of external environment against the capabilities of the firm, defining strategies, application of strategies and performance evaluation.

The external environment is analysed using Porter (1996) guidelines which allow factorization of determinable risks in the environmental through a process deemed as political, economic, social, technological, legal and environment (PESTEL) analysis.

In this process, SWOT analysis and Ansoff matrix are used. The main challenge at the stage of strategy application is the need for coordination to conduct the required alterations when the business is aware of the process of strategy application and when some alterations are needed for the success of the business. Performance evaluation is based on the need for evaluating the performance of the business. The techniques, used at this stage, which allow defining performance scales and evaluation are critical success factors/key performance indicators and balanced score cards in this study determined by the objectives (Cadle et al., 2010).

1.1.4 Performance of Startups

The performance of start-up firms may be viewed as the capability of start-ups in meeting set objectives in an unfamiliar adventure. The concept of performance may as well be viewed from various perspectives. Gerschewski and Xiao (2015) view performance as an attainment of set objectives early than the time expected or an achievement of higher and better market share than normally is possible for new firms, or higher and superior profits than it is normally expected in the circumstances, better survival rate in unusual environment, employing more people than it usually is the case, or growing and expanding faster than usual.

The broader view of performance of start-ups relates to the effectiveness in utilisation of its opportunities and resources. According to Man et al. (2002) performance of start-ups is simply the degree of success attained by the small business. Most starting businesses are not likely to meet excellence in success due to lack of experience and training. Start-ups have multidimensional challenges relating to the business sector, product experience, location in relation to suppliers and customers, seasonal variations, political and social challenges, technological and economic changes (Wanda & Stian, 2015).

Start-up performance refers to the commercial effectiveness and ability to optimally implement the conceptualised vision of a new business in delivering the product or service in a manner that meets the expectations of consumers. The term performance may also refer to successful management of strategic activities into action (Hrebiniak, 2013). Startups across the globe face business challenges in their pursuit to attain excellence in performance. According to Gerschewski et al. (2015) two -thirds to three-quarters of new

firms have performance execution challenges. Therefore, it is a primary aim in any organization and has the potential to be evaluated either independently or as the end product of internal procedures. Some indicators of an organization's or a company's overall effectiveness include its ability to remain in business, its reputation, how well it is seen to be doing generally, and the results it achieves.

The performance of new businesses may be evaluated based on the innovations they create. The term "innovation" refers to the actions of participating in experimentation and creative processes, which might result in new goods, services, or technical processes. Innovations can also refer to the outcomes of these activities (Wanda & Stian, 2015). The creative performance activities of new businesses are dependent on and pushed by external influences such as consumer demand, the activities of rivals, and even regulations passed by the government (Wanda et al., 2015). Companies that are more inventive will have more success in meeting the requirements of their consumers and in establishing new capabilities that provide them the opportunity to attain higher levels of performance or larger levels of profitability. The study of the impacts that different dimensions of innovation have on firm performance has increasingly received greater attention in the academic literature (Wang et al., 2012), and as a result, the link between the two constructs is expected to exist.

According to Wang and Wang (2012) there are three approaches to measuring performance of start-ups. The first approach is start-up financial performance, which is an outcome-based and is considered as the leading business conception performance indicator. Start-ups are known for not keeping financial records or publishing their financial outcomes. A second approach includes non-financial measures such as market share, introduction of

new products, marketing effectiveness and internal process outcomes such as realisation of strategic objectives.

Innovativeness, which Lumpkin and Dess (1996) and Wang (2008) define as the degree to which an enterprise embraces new ideas and engages actively or proactively in experimentation, and that lead to creative new services, product. This may be observed as an aspect of a company's inclination and it contributes to its survival in at difficulty times (Calantone et al., 2002). There is relationship between learning of an enterprise and innovation. The stock of past knowledge is a resource since it may enhance an organization's comprehension about new technologies and market circumstances, as well as the development of new ideas and products. Organizations with a higher innovation capacity are able to adapt to environmental concerns more quickly and effectively than companies with a lower innovation capacity (Cepeda-Carrion et al., 2012).

It is possible for a company's degree of innovation to be determined by its capacity to convert and use information. For example, this may include developing novel approaches to problem-solving and new goods in order to swiftly respond to changes in market demand (Wang et al., 2012). According to Tangen (2004) economics of management and accounting includes an extensive discussion about the performance of new businesses and how to quantify it (2004). Setting goals and determining how they will be attained using a predetermined set of criteria and standards is one of the most important aspects of this conversation. Performance evaluation refers to the process of determining how efficiently an organization operates and is run (Sainaghi, Phillips & Zavarrone, 2017). The two primary components of performance are a company's level of effectiveness and its level of

efficiency. Taking a more holistic perspective on a company's performance guarantees that the many stakeholders' interests are taken into account.

Ogbari (2018) describes the process of determining a company's performance as the act of assessing the efficacy and efficiency of an organization. According to Sainaghi, Phillips, and Zavarrone (2017), the act of assigning value to things or events in such a manner as to reflect quantities, qualities, and categories of an attribute is seen as the method by which a company's performance is evaluated. The evaluation of an organization's efficiency has historically been measured according to monetary standards, which include metrics such as yearly sales, annual profit, number of customers, and growth, amongst others. Wiklund and Shepherd (2005) alludes that the successful business sector as the engine that rolls the wheels of economic growth is observed through increased firm survival rates, increased profits, job creation and ultimate poverty reduction. The performance measurement for start-ups is observed in reduced mortality rate, growth in sales, profitability, job creation and stakeholders' satisfaction (Lechner et al., 2012).

To execute start-up performance, one needs to carry out a variety of activities and decisions. Each component in the performance process is linked and interlinked with each other. Businesses have considerable obstacles in obtaining and sustaining high performance and competitive advantage at the time (Nyanga, 2013). Globalisation, rapid technical advancement, and increasing consumer awareness are just a few examples of external market forces affecting organisations' performance and competitiveness. Given the developed competitiveness of the business environment, the conditions for success

should be built from within. In other words, firms must build a solid foundation via meticulous planning, formulation and execution.

Performance execution is a discipline composed of a variety of behaviours and techniques that firms must master (Aremu & Oyinloye, 2014). Performance execution is the coordination and integration of operations and activities across company divisions, departments, and individual employees. Each individual inside a company must be aligned with the performance strategy in order to execute it and initiate strategic performance action. At a time when the global business environment is changing at a breakneck pace, it is vital for firms to stay watchful and adaptive in their operations. Successfully completing a task is more crucial than ever (Aremu et al., 2014). Performance strategy execution is the result of several daily decisions made by company employees. Executives and managers have the ability to influence these decisions by establishing decision-making power, adjusting and adapting organisational structures, aligning employee motivators, and organising information flows (Aremu et al., 2014). Performance strategic execution is mostly founded in the tactical level of the organisation, while performance strategy implementation is primarily entrenched in the operational level of the organisation. Thus, performance strategy execution acts as a link between the formulation and implementation of performance strategies.

The concept of a company's performance, as well as attempts to quantify it, have its foundations in the economics of management and accounting (Tangen, 2004). The purpose of performance measurement is to discover, by the application of a predetermined set of criteria and standards, the degree to which an organization is successfully run and managed

(Sainaghi, Phillips & Zavarrone, 2017). Effectiveness and efficiency are the two primary components that determine a company's level of performance, and a more holistic perspective on a company's performance makes certain that the many stakeholders' interests are taken into account. Performance of start-ups in this study is conceptualized in survival, finances and job creation.

1.1.5 The Start-ups Firms

The phrase "start-up" refers to a brand-new company entity that is just beginning to do business. One or more entrepreneurs come up with the aim of launching a new company with the intention of creating a product or service that they believe will be in demand. Salamzadeh (2015) defines start-up as the creation of a new enterprise which may employ one person besides the owner and the business may be between one and ten years. The European Start-up Monitor (ESM) identifies start-ups using three dimensional criteria namely: established within the last ten year, engaged in innovations or technological activities, and has less than fifty employees (ESM, 2015). Forbes (2013) describes start-ups as newly created firms which have existed for the last ten years and this is the definition adopted by this study.

Salamzadeh (2015) posited that the formation of start-ups is in three phases beginning with bootstrapping, seed and creation. Bootstrapping phase is the very early stage where the ideas are born and consensus built for business while the seed phase is the stage where the founder sets out to develop the product and enter the market. Creation stage is observed when the firm finally takes position in the market and starts hiring its first employees. All stages require business incubation and acceleration services in order to hatch the business

ideas into a start-up. Forbes (2013) links successful start-ups to influence of business incubation and business acceleration services

Nairobi City County has a lot of economic activities and is home to a number of headquarters for many companies. According to Forbes (2013) Nairobi leads in digital infrastructure in the region and has the best entrepreneurial ecosystem, where a sizable amount of the capital, businesses, and talent flow freely in and out of the country. Furthermore, the presence of world class universities makes Nairobi resourceful for conducting business incubation and acceleration services.

The establishment and growth of start-ups is not an easy thing. Delmar and Shane (2006) asserts that previous experience in creating new organisations and work in the new firm industrial field are very key in identification and evaluation of new opportunities especially in acquainting with industry rules, norms and customer-supplier networks and labour practices. Recent studies (Munoz-Bullon et al., 2015) indicate previous experience in start-ups and knowledge on industry norms influence significantly the relationship between the skill resource and start-up performance. Previous experience increases the ability to manage start-up resources more effectively and influence performance to overcome the liability of starting new. However, industry experience is more reliable in predicting start-up performance (Cassar, 2014).

Developing an original concept for a firm is the difficult process to do. The generation of innovative approaches is not a daily activity. The very first obstacle that must be overcome by each and every entrepreneur is the launching new enterprise from the ground up. According to Lohitkumar et al., (2016), for an entrepreneur to be successful, they need to

have the capacity to 'envision the concept' which is another term for seeing what others cannot see. This talent is necessary in order to achieve success. If you want to be successful as an entrepreneur, you need to be able to spot opportunities, where others perceive obstacles. Then and only then will these prospects develop into a concept for a company that may potentially be pursued.

It has been determined (Lohitkumar et al., 2016) that one of the additional challenges that new company owners often experience when beginning the process of establishing a business after having a concept is the process of acquiring finance for their business start-up (Nyanga, 2013). The understanding of fundamental business concepts alone is not sufficient for a firm to get off the ground, particularly in the absence of initial investment funding. An entrepreneur is the person who is responsible for looking for investors in order to obtain funds for their own company. It is a necessary step that has to be taken, and it is undoubtedly a difficult chore for new business owners. According to the study findings the responsibilities of a business owner is to search for an excellent site for their company. According to Ries, (2010) the choice of business strategic mix corresponds with performance. In order to succeed in achieving this goal, a business owner has to take into account the existing infrastructure, as well as factors such as a fast-expanding population, a solid road network, and other facilities located in a favourable location.

1.2 Research Problem

Startups occupy conspicuous position in business sector on both social and economic development of people by their ability to not only unpack new technology but also attract all cradles in society Wang (2016). At the very bottom of business sector is the formation

of new enterprises by the name start-ups. According to Shibia and Barako (2017) most start-ups are formed by people with limited or no experience at all and lack plans to overcome the associated risks including survival, competitiveness increased sales and job creation. On the other hand, start-up performance constraints which may include but not limited to, the amount of capital, accessibility to the desired market, and no or little entrepreneurial orientation (Odongo and Wang 2016). It is further noted (Mairura, Ngugi & Kanali, 2016) that in Kenya, start-ups are urgently formed without the necessary skills to break technology within the commodity or service, and little capacity to develop and apply appropriate business strategies.

Start-ups are faced by various internal and external challenges. Entrepreneurs face numerous internal strains on their pursuit to succeed in establishing start-ups. Before beginning a new business venture, one may feel what is widely known as "personal pressure," which is a reference to the internal problems that must be overcome. These difficulties are mostly the result of personal problems. Among the challenges are: establishing a business vision, developing business proposals, and raising capital for new enterprise. The locational challenges are there but they are insignificant. There has been several policy developments in Kenya since independence to address Small and medium enterprises but not wise enough to cover even start-ups.

Small and medium enterprises may not mean the same thing as startups although they share the number of features. According to Kiprotich (2017) and Munene (2018) most of the government sponsored businesses failed due to lack of capacity building and low level of embracement of technology. The level of failure is captured by Gerschewski and Xiao

(2015) who identified 60 out of 100 start-ups failures in Nairobi were due to negative influence at birth by competition, access to resources and lack of networking (Kiprotich, 2017; Munene, 2018). Start-up failure is not only a risk for losing employment opportunities but also a serious cause of social instability. Kalyanasundaram (2018) established that 33 out of 100 new businesses die within the first six months of inception, 50 out of 100 die within the first two years, and 75 out of 100 within three years.

Very recently, year 2022, there has been an establishment of start-up Act. 2022 for purpose of promoting an enabling environment for business development by providing necessary regulations. The Act promotes establishment and use of business incubation facilities at both county and National Government administration levels. It however fails to provide mechanism for enforcement for use and monitoring and evaluation start-up performance. According to Kibuchi (2016) the utility of business incubation facilities are often ignored due to lack of enforcement mechanism. This should never be ignored especially in the face of incoming Competency Based Curriculum (CBC) and the new Government policy on supporting small enterprises.

There have been paradigm shifts in the Kenyan education from examination based to practical skills intended to equip the learners with competencies to fix the existing disconnect between the worlds of school and work. This study configuration is motivated by its ability to not only hatch unborn business dreams and innovations but also fix the existing disconnect between dreams and actual business.

Zehir (2015) and Stubberud (2016) established the link that exist between entrepreneurial orientation and performance start-ups on absorption capacity and ability to utilise the network of Norwegian firms. However, these studies were done in a developed country and used classical experiment methods. Kibuchi (2016) established incubation programs, network value and absorption capacity with positive correlation with performance of small firms. However, his study forecast on services of incubators using a case study method at ihub in Nairobi. There still exists a gap linking business incubation and performance of start-ups. Cohen et al. (2014) posited an attractive assertion that business incubation has the ability to increase survival chances of new firms and positively alter the direction and speed at which they grow. The assertion needs to be established under social network theory (Gimenez-Fernandez, Sandulli & Bogers, 2020).

Cohen et al. (2014) correlated positively business strategies variables with performance of small firms and negatively with innovations in Iceland. This study did not consider firms below five years. Many entrepreneurs do not consider the influence of product market expansion grid on performance of start-ups (Zehir, 2015). Based on the attributes of structural equation model in terms of precision and error accountability the researcher sought to investigate the significance of the relationship between entrepreneurial orientation, business incubation, business strategies and performance of start-ups in Nairobi City County.

The motivation of this study was to attempt and reconcile scholarly findings on the link between the theoretical underpinning, and the realities in the development of entrepreneurship beginning with start-ups. The study intended to bring out practical

solutions through policy development to organize and nurture startups and graduate them from being small into large corporations. The study then probed the question; to what extent does entrepreneurial orientation, business incubation, and business strategies influence performance of start-ups in Nairobi City County significant?

1.3 Research Objectives

The overall objective of this study was to establish the influence of entrepreneurial orientation, business incubation and business strategies on performance of start-ups in Nairobi City County, Kenya.

The specific objectives were to:

 i. Establish the relationship between entrepreneurial orientation and performance of startups Nairobi City County.

 ii. Determine the relationship between business incubation and performance of start-ups Nairobi City County.

 iii. Ascertain the relationship between business strategies on performance of start-ups Nairobi City County.

 iv. Establish the combined effect of entrepreneurial orientation, business incubation and business strategies on performance of start-ups in Nairobi City County.

1.4 Value of the Study

This study was done with National and County Governments in mind, who are regulators and policy makers as they pursue fair trade practices and social-economic development. The two levels of the Kenyan Government have developed strong interest to not only seek increased revenues but also create jobs. This study has further increased the new

knowledge on the application of entrepreneurship, social network, resource dependence and endogenous growth theoretical underpinnings on the establishment and growth of start-ups.

Unlike previous studies that focused on the moderations and intervention relationship with performance of start-ups (Grimaldi & Grandi, 2005), this study highlights the influential relationship between entrepreneurial orientation, business incubation and business strategy on the performance of start-ups. It was observed that entrepreneurial orientation, business incubation and business strategy significantly increase the performance of start-ups in job creation, profitability and absorption capacity. This study gives insight on how start-ups may use business incubation to manage competition, risk and innovativeness and the development of business strategy.

Theoretically, the results of this study contribute to advancing knowledge on how incubation best suits advancement of network resources involving suppliers and customers at the start-up stage. The underpinning of entrepreneurship theory brought new understanding of the knowledge-based view on starting new performing ventures being supported by endogenous growth theory. Further knowledge was acquired on the application of resource dependence theory for young entrepreneurs making the best advantage of the environmental resources. According to Davis and Cobb (2010) the theory presupposes that an enterprise aligns itself with entities that control major resources which in itself it does not have. For the best performance of start-ups, the entrepreneur must consider other resources in the environment other than materials, customers and labour.

1.5 Organization of the Study

This study constitutes six chapters namely: Introduction, Literature Review, Research Methodology, Data Analysis, Interpretation and Presentation, Hypothesis and Findings, Discussion, and its Summary, Conclusion and Recommendations.

Chapter one presents the study concepts of entrepreneurial orientation, business incubation, and business strategies in the context of Ansoff (1957) Matrix, and Performance of startups, Nairobi City County. Chapter one also provides the problem statement, the outline of research objectives and ends up with a brief discussion on the value of the study.

Chapter two presents the literature review of the study. It outlines a review on the study theories beginning with entrepreneurship theory (Schumpeter, 1991), Resource dependency theory (Davis & Cobb 2010) endogenous growth theory (Romer & David 2011), and finally, the anchoring theory of social network (Bollingtoft & Ulhoi, 2012). This chapter also provides the summary of the conceptual gaps drawn from empirical review as well as conceptual analysis of the variables.

Chapter three is fully dedicated to the study methodology. It begins with the philosophical reasoning that guides the methodology that is, positivism. It then addresses the research design, target population, data collection, and how the study variables of entrepreneurial orientation, Business Strategies matrix and performance of startups were operationalized.

Chapter four provides the data analysis, interpretation and presentation. Data analysis involved statistical of response rate and demographic representation of respondents. The analysis of data involved diagnostic tests descriptive statistics for the study variables,

correlation analysis and the hypothesis testing. The chapter also presents the interpretation of the results of the tests.

Chapter five presents a discussion of the results of hypothesis testing thereby connecting the research objectives of hypothesis, the conceptualization, theories underpinned and the interpretation. The researchers carried out all data diagnostic tests to check data conformity with the model assumptions. This was followed by the main hypothesis tests and models tests for fitness index and interpretation.

Chapter six is the summary of the study, conclusions made and the recommendations. The chapter also highlights the study contribution to the theory understanding, policy development and new knowledge. Areas that future studies may focus on are also suggested.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This section presents the literature review on the influential relationships between the study variables of entrepreneurial orientation, business incubation, firm strategy and performance of start-ups. The reviews begin with exposition of the theoretical foundations the study is underpinned namely: the theory of entrepreneurship, resource dependency theory; endogenous growth theory, and the propositions of social network theory. The empirical reviews on and around the area of the study are also done to clearly identify the gaps, and set the basis for the research in filling them. This chapter further presents the research conceptual framework and model together with the study methods for null and alternative hypotheses that were tested for the influence relationship that exist between the predictor variables and performance of startups in Nairobi City County, Kenya.

2.2 The Theoretical Foundations

This research reviewed the theoretical foundations underpinning the influential relationship between entrepreneurial orientation, business incubation, and business strategies together as latent variables and performance of start-ups as observable variable. According to Soetanto and Jack, (2013) social network theory is keenly demonstrated when explaining performance of startups. Patton (2014) supported this view by indicating that, both entrepreneurial capability and social network theory received less attention but were very crucial in the performance of start-ups within the context of the university spin-offs in Spain. Resource dependence theory developed by (Davis & Cobb 2010) and endogenous growth theory by (Akcigit, Ufuk; Ates, and Sina (2021). This study, therefore,

confined its reasoning within the framework of the theory of entrepreneurship, resource dependence theory, endogenous growth theory, and more specifically, underpinning it on social network theory.

2.2.1 The Theory of Entrepreneurship

The clearest and shortest definition of an entrepreneur was provided by Schumpeter (1991) who asserts that an entrepreneur is a person, who creates a new business to produce a new service or product or changes an old service or product into new. In his opinion, Schumpeter (1991) alluded the difference between an entrepreneur and an imitator is that the entrepreneur has innovative characteristics of producing goods and services and is always the first to discover new markets. The ability to innovate provides an entrepreneur a chance to make super profits which reduces the number of imitators entering the market. Of course, the imitators will eventually enter the market but the time lag between the entrepreneur's innovations and the entry of imitators into the market provides the entrepreneur with monopolistic status and super profits. He further alludes the attainment of higher competitive advantage and abnormal profits to perennial gale of moves by the other firms and counter reactions.

When the imitators enter the market, success formally obtained as a result of innovation is eroded and the profits drop. These market dynamisms are characteristic of the capitalist system and help in explaining entrepreneur's innovations as the main cause of business cycles (Porter, 1980). According to Schumpeter (1942) entrepreneurship is a process of evolution inside the capitalist system that creatively changes the economic order from

within and by destroying the former order and constructing the new one, thus the phrase 'creative destruction'.

The initial argument advanced by Schumpeter (1934) in his theory of economic development was that innovations originate with the new and small firms but later changed his mind that even large enterprises may enjoy monopolistic advantage in the short run. He further claims that technology reduces the risk of involvement in copying other people's work. Under the circumstances, perfect competition is a most likely phenomena responsible for the establishment of start-ups but to a lesser degree (Lee, 2013).

The theory of entrepreneurship tends to suggest that entrepreneurship has a rare ability to mobilise resources and therefore mitigates the risk element in undertaking new business. Since entrepreneurs undertake socio-economic engagements that are outside their routine tasks and sometimes resisted by environmental dynamics, there is an urgent need to encourage and protect them by reducing the risks they take (Leach, Stirling & Scoones, 2010). Entrepreneurial risk and uncertainty are reduced through training, planning and improved performance.

The theory of entrepreneurship focuses on creating value and employs a two-level framework to validate the internal entrepreneurial process. From the first stage of enterprise implementation, the entrepreneur, motivated by an entrepreneurial behavior or an aspiration for entrepreneurial reward, identifies an external opportunity, which is then leveraged by the entrepreneur's current resources through an effectuation mechanism (Oftedal, Iakovleva & Foss, 2017). The entrepreneurial opportunity is redesigned in order

to cultivate entrepreneurial ability, hence creating an asymmetric benefit for the entrepreneur.

Entrepreneurship is not just the act of establishing a new business, but also the specified addition of value and resource allocation in an unpredictable environment (Mishra & Zachary, 2014). The system is guided by the aim of the entrepreneur to collect compensation. The entrepreneurial process entails the entrepreneur defining an external opportunity, matching the available entrepreneurial resources to the opportunity in order to demonstrate entrepreneurial competence, acquiring resources available, if necessary, creating sustained value, and utilizing the entrepreneurial reward. The reward becomes bigger if the competences are higher.

Schumpeter's entrepreneurship theory however has some limitations: The theory does not recognize individuals, who operate business without performing innovative functions. Most startups are owned and run with people, who are not necessarily entrepreneurs. Very few innovative entrepreneurs are available in Kenya. Schumpeter did not include risk taking attitude on his analysis of who an entrepreneur is as well as his failure to explain reasons for the disparities in entrepreneurial orientation between countries. According to Schumpeter, an entrepreneur exists only if the factors of production are combined for the first time. The concept of entrepreneurial orientation may be underpinned on entrepreneurship theory but the performance of startups or new enterprises is not fully explained.

2.2.2 Resource Dependence Theory

Resource dependence theory (RDT) has been widely applied in the context of startup businesses in the recent times. This study reviews and analyses the wisdom contained in the theory pronouncements that has attracted literature on new enterprises. Resource dependence theory presupposes that an enterprise aligns itself with entities that control major resources and are important to its operations but the entity itself has no control over those resources (Davis and Cobb 2010). This is explained by the fact that no entity entirely relies on its own resources to function.

The theory presupposes that, environmental conditions set organisations and institutions in a pattern where critical resources are controlled externally thereby encouraging organisational interdependence. This argument favours consideration of basic factors such as location whenever an entrepreneur wishes to start a new enterprise. The theory predicts that entities that conform to nature and quantity of supply of key resources even if they do not own them are likely to succeed (Georgallis, Albino-Pimentel, & Kondratenko, 2021).

The organisation acquires power to control resources from experience, skill and knowledge. According to Davis and Cobb (2010) resource dependence is an organisation's lack of power or authority to acquire or control or manage the environment resources where it is situated. This means that the uncertainty, availability or lack of, the abundance or shortfall of critical resources is not within its control. The organisation, therefore, discovers the need for external support to network and achieve connections between organisations. This power is then explained as the ability to obtain control over these

resources, which are also desired by other organisations in an almost similar measure (Harris & Holden, 2001).

According to Penrose (1960), some firms perform better than others not because of abundance of resources but the availability of unique competencies and how they are organised in relationship with the environmental dynamisms. The study configuration where performance of start-ups is influenced by entrepreneurial orientation, business incubation and firm strategy conforms to the resource dependence theory in explaining how establishment of new firms are influenced by resources. Lish (2012) argues that business incubation brings out untapped internal resources through mentorship where the incubatees are taught on how to set achievable business objectives. The theory makes clear the relationship that exists between resources such as human, finance, materials and customers will re-align with technology in determining nature, size and rate start-up growth. Investors are bound to make investment decisions based on the cost and availability of resources that guarantee good returns.

Resource dependence theory advocates for organizations to create strategic collaborations so as to mitigate their environmental dependencies and uncertainties (Davis and Cobb 2010). This creates a need to focus on negotiating relationships that result in creative dependencies on each other (Johnson, 1995). The gaps are then clearly identified by the entrepreneurial capabilities and opportunities established within and outside this framework (Petison & Johri, 2018). The clear opportunities under resource dependence theory are the emergence of agency services and contract drafting. If these relationships are not properly managed there is a likely negative effect on the performance of the

enterprise. In the context of this research, new enterprises need to be aware of the need to scan the environment for the availability of resources that they do need but could not be controlled. Consideration should be done on the most preferred style of relationship to be established and the cost of establishing the relationships. According to (Williamson 2016) strategic partnerships significantly reduce association costs and increase productivity, product quality and speed to access markets.

One of the disadvantages of resource dependence theory is that it mixes prescriptions with theoretical predictions (Casciaro and Piskorski, 2005). External entities often provide prescriptions on how their resources should be applied and entities or startups should modify them. Sometimes what they provide is a very critical resource like finances. Some very strategic enterprises have adopted a way of working around prescriptions like co-opting suppliers or financiers into the board. The most useful future work will address one or both of these issues: updating the sources of power and dependence, and cataloguing the new set of available tactics for managing dependence.

Three master trends that have altered the profiles of power and dependence, and the methods of managing the organization's environment, are the ubiquity of information and communication technologies (ICTs), the rise of finance, and globalization in trade. ICTs (computers, the Internet, mobile telephony) can lower transaction costs by making information about prices and alternatives more readily available, generically lowering dependence among new enterprises.

2.2.3 Endogenous Growth Theory

Endogenous growth theory proposes that an economy may grow not because of its more of internal factors but more of external ones. The theory proposes that positive changes in production will directly lead to increased innovation that motivates governments and private investors to invest in human capital. The theory explains that investment in knowledge will significantly contribute to economic growth, especially the influence of knowledge which rolls the wheels of development. Proponents of the theory, (Akcigit et al., 2021) emphasise the importance of the government providing incentives and subsidies to private sector businesses. They argue that incentives influence research and development in firms that help them keep up with market dynamisms.

Mazzei, Ketchen, and Shook, (2017) have argued that investing in human capital through education or training programs results in increasing returns to scale. This can result in an increase in labour quality, which results in an increase in productivity. The theory views the government as a regulator who should enact policies that influence growth of entrepreneurship with job creation in mind. The government may do this through investments in infrastructure and manufacturing. Romer and David (2011) posited that the growth rate of any economy depends on the policy path the government chooses to follow. Proponents of endogenous growth theory, Akcigit et al., (2021) link new knowledge to change of technology and ultimately better production index. Meier (2015) noted that endogenous growth theory advocates for the government to influence policy on complementary investments. These investments involve creation of human capital in knowledge-intensive industries such as technology (Mazzei et al., 2017). The applicability of endogenous growth theory lies on the assumptions that developing countries will want

to establish interventional measures such as business incubation to foster entrepreneurial orientation.

2.2.4 Social Network Theory

Studies underpinned on social network theory begun in 1960s through mid 1970s.The concern has been largely in the field of social sciences and economics. This research on 'the influence of entrepreneurial orientation, business incubation and firm strategy on performance' of start-ups is basically constructed under social network theory as the leading theory. Business incubation creates an environment that orients entrepreneurs on the operations of start-up performance on survival, job creation and financially using network resources which are basically social. Social network theory was coined in the late 19th century to clarify how individuals, groups and communities connect with each other. According to Kadushin (2004), the concept is best discussed under social sciences. The establishment of start-ups is largely a social process where image is built, business branded and ultimately relationships are enhanced. Networks provide for sharing of valuable information, flow of resources and division of technology. The term "network" refers to a structure where actors are tied in a social system (Nohria & Eccles, 1992).

These actors could be roles, industries, organisations, individual persons, or even nation states. The links may vary in strength and form but they create a channel through which exchange of resources happen and flow of information that led to creation and growth of enterprises (Kadushin, 2004). According to Birley (1985) entrepreneurs develop new businesses through their informal personal and business networks. Social network contacts are very valuable to the new and small enterprises especially in overcoming challenges

which come with newness. Network connection refers to a strategy that focuses on entrepreneurs establishing and sustaining long-lasting relationships with their network (Premaratne, 2002).

Granovetter (1982) puts it clear that network theory is demonstrated at two levels namely: strong tie and weak tie. Network ties are strong when the association between an individual and his kinship are close and they interact with or without a role. The linkage between the individuals is strong and connection is close too. One of the key features of strong ties is the frequency of interaction between the individuals, the amount of information shared. Strong relationships are characterized by traits such as regular contact, mutual trust, and a high degree of information sharing, among others.

On the other hand, weak ties represent connectivity, where individuals and groups interact because they have a role to play (Noah, 1980). In many cases individuals and groups with weak ties are only acquainted with each other but not close. According to Granovetter (1982), weak ties are crucial for diffuse of information through existing social structure.

Tsui, Rao, Carey, Feng, and Provencher (2020) believe that social network theory supports the establishment of business incubation, whose decisions will always affect other networks and members for reference. Greve and Foss (1990) opined that networks are patterns of lasting social associations between individuals referenced to each other. Scott (2011) explains social network theory as a three-line perspective namely; sociometric analysis, interpersonal relations and an anthropology tradition. Stoichiometric analysis examines interpersonal links based on the psychological structure of people. Under this view, social structure is represented as patterns of relationships involving individuals with

ability to influence those without ability so as to act in a manner that brings desired outcomes such as performance. Krause, Croft and James (2007) explains that sociometric analysis relies on graphical presentations meaning resourceful entities are located at different places away from each other. Business incubation process provides the opportunity and platform for mentorship and networking allowing incubatees to link with suppliers, customers and financiers located at different places, whose access could not be possible without the facility. The configuration fit the thinking of sociometric analysis based on interpersonal relationship.

The anthropology tradition of social network theory refers to social networks in a structural sense, where formal ties such as biological relationships have a more influence for groups to yield the desired outcome. This approach explains why the formation of startups are largely influenced by people with strong blood relationships (Friedkin, 1993). Other concerns are highlighted by Aldrich and Zimmer (1986), who explain that networks have critical factors that enable them to work effectively and reliably.

The theoretical configuration where entrepreneurial orientation, business incubation and business strategies latent variables influence performance of start-ups, whose observables are startup survival, financials and job creation is deemed to fulfil the network theory tenets. Hindle and Klyver (2011) pinned their study of successful start-ups on social network theory and concluded that successful start-ups were attributed to a tie between start-ups, markets and consumers, and failures were attributed to lack of influencing mechanisms. Conceptually, this study configuration is based on the thinking of Scott (2011), who alludes to the business incubation process to social networks linking

entrepreneurial orientation, firm strategy and performance of start-ups. Their assertion is supported by Goldman and Cornwell (2015) popped holes on social networks theory claiming that boundaries are not broken into formal and new enterprise with other resourceful entities thereby creating informal cost-free links that lead to easy access of information which could otherwise have been costly to start-ups. These holes prevent the transfer of information or other resources, for example. Actors, who bridge such holes by connecting sub graphs, and acting as a bridge, can have advantages because of their structural location within a network.

This study focused on the influence of entrepreneurial orientation, business incubation and firm strategy on performance of start-ups under social network theory. Entrepreneurial orientation has been explained as entrepreneurs' innovative, risk-taking, pro-activity and aggressiveness characteristics while business incubation is the process of nurturing vision and mentoring the vision bearer to realise the business dream. Business incubation provides start-ups with resources such as office space, mentoring to stimulate internal networking. Internal resources are organised through a firm strategy making process.

The underpinning of social network theory to the study of entrepreneurial orientation is based on the premise that a networks provides an entrepreneur with access to necessary resources. Kanter (1983) categorized resources into three broad areas namely information, motivational resources and material resources.

2.3 Empirical Studies

This section highlights a review of empirical evidence on the link between entrepreneurial orientation and performance of startups, business incubation and performance of startups,

business strategies and performance of startups, and the collective effect of entrepreneurship orientation, business incubation, business strategies and performance of startups.

2.3.1 Entrepreneurial Orientation and Performance of Start-ups

There have been numerous studies both internationally (Cohen et al., 2014) and locally (Kibuchi, 2016 and Meru 2016) linking entrepreneurial orientation and startups all studies with varied objectives. The review of these studies conceptually provided a research gap for this study closure.

In China, Shan, Song and Ju (2016) studied the effectiveness of entrepreneurial orientation on firm performance. The study employed descriptive survey design applying both qualitative and quantitative methods. The study targeted a population of 265 start-ups in the manufacturing sector and employed stratified sampling techniques in collecting data. Questionnaires were used to gather primary data, which was analysed using descriptive statistics with correlation and regression analysis to determine the association. The result of the study indicated existence of a relationship between innovation dimension and startup performance. It concluded that the rate of innovation leads to sustainable startup performance. Innovativeness increases, not decreases, innovation speed. Risk-taking reduced innovation speed. Finally, proactiveness had a negative effect on innovation speed. The study was particularly targeting innovation speed, and not the entire startup performance

However, the study was not founded on any theoretical framework and was done in a developed country, whose target population, and therefore, a clear gap to be studied in Kenya underpinning it on relevant theories. It was observed further that the study did not conduct diagnostic tests such as normality, linearity, multicollinearity and heteroscedasticity tests, which are mitigated in the current study.

Kusumawardhan (2013) applied structural equation method (SEM) to study the part of entrepreneurial orientation in the performance of start-ups in Indonesia's furniture sector. The study sampled 13 respondents on a personal interview, and confirmed that entrepreneurial dimension of pro-activeness is significantly related to performance of start-ups than innovativeness and risk-taking. In a systematic study, Wiklund et al. (2005) sampled 51 out of a population of 134 articles about the influence of entrepreneurial orientation on performance of start-ups in Finland and established that start-ups performed well in growth and profitability significantly. They forecast on the services of the incubator and not the incubatees' performance. There still exists a knowledge gap on the performances of the incubatees. The study did not explore the role of business incubation and firm strategy interventions on performance of start-ups. The study failed to consider firms below five years in developing countries. This was mitigated in the current study.

Frare (2021) investigated the influential interrelationships between the three elements of entrepreneurial orientation, education and age of the entrepreneur on the decision to launch an international entrepreneurial business venture (IEBV). The data was gathered from a sample of 539 respondents, who were working at dynamic, internationally oriented firms in South Africa. Multiple discriminant methods were used to analyse and examine new

decisions using IEBV new entry decision metric. Findings indicate that the decision to start a business is directly correlated to the risk-taking and proactiveness elements of an entrepreneurial orientation, as well as the age of the lead entrepreneur, and that the decision to start a business is negatively related to the lead entrepreneur's education.

As projected, the element of entrepreneurial orientation that relates to innovativeness does not have a role in the decision to establish a business. By assessing the risk-taking and proactiveness, elements of entrepreneurial orientation, as well as the age and educational background of the lead entrepreneur, investors may determine the probability of a venture start-up to occur. Because older and less educated entrepreneurs have a higher possibility of launching ventures, entrepreneurial training programs that target youths and education groups may provide better returns. Diagnostic tests of normality, linearity, heteroscedasticity and multicollinearity tests were not conducted thereby setting the case for the current study.

Kropp, Lindsay and Shoham (2008) studied the role of management in setting up start-up objectives for the firm control system configuring the impact of entrepreneurial orientation on the firm's performance using a sample of 100 graduates from technology-based responding firms in Brazil. The study used squares structural equation (SEM) to analyse data and the results indicate positive correlation between entrepreneurial orientation and managerial decision in starting a new business.

Song (2018) examined the association between entrepreneur orientation and firm performance in terms of job creation. The first research objective was to establish the relationship between entrepreneurial orientation and performance of start-ups in Nairobi

City County. The study employed a panel regression model. Results revealed that application of entrepreneur orientation increased job opportunities thus more job creation. Thus, the study concluded that entrepreneur orientation is a major determinant of a firm's performance. Diagnostic tests were not conducted such as linearity test, normality test, heteroscedasticity test and multicollinearity test which are mitigated in the current study.

Kantur (2016) studied the association between entrepreneurial orientation and financial and non-financial performance. The study used a descriptive survey research approach with 68 SMEs as the target group. In addition, the questionnaire was the primary data gathering tool. From the results, it was discovered that Entrepreneurial Orientation depicted a positive and significant influence on financial and non-financial performance creating a link in the relationship. The study draws conclusions that given a positive association between entrepreneur orientations and financial performance and non-financial performance of firms, managers and staff of firms should embrace the role of entrepreneur orientations for expansions and positive performance of firms.

In a study by Koe (2016) on individual entrepreneurial orientation and job market expansion using descriptive survey design targeting a population of 286 managers of SME in Zambia, it was revealed that individual entrepreneurial orientation enhanced skills and increased labour capacity. The respondents were 126 out 286 being 44%. The sample size was 286 calculated using Cochran formula, selected using a stratified sampling method. Primary data was collected using a standard questionnaire to measure performance of small and medium enterprises and measure job market expansion. From the findings, the study, however, failed to anchor on any theory posing a gap. This is mitigated using social

network theory, resource dependency theory and endogenous growth theory in the current study. Contextually, the study was based in China which might not be applicable in Kenya. The study failed to conduct diagnostic tests that were not conducted such as linearity test, normality test, heteroscedasticity test and multicollinearity test which was allayed in the current study.

Kollmann and Stockmann (2014) examined the role of entrepreneurial orientation, business incubation and firm strategy on start-ups' job creation visible among the management. The study sampled 14 firms with a target population of 106 respondents. Data was collected using a questionnaire. The data was analysed using descriptive statistical analysis and inferential statistics. From the results, it was discovered that entrepreneurial dimension positively and significantly enhanced performance of start-ups than innovativeness and risk-taking. This finding is supported by Mitchell (2016). The study concluded that firms should embrace entrepreneurial orientation, business incubation since they greatly enhance firms' performance through job creations. The study failed to conduct diagnostic tests that were not conducted such as linearity test, normality test, heteroscedasticity test and multicollinearity test, which are mitigated in the current study.

In Kenya, Birech, Karoney and Alang'o (2018) investigated the link between entrepreneurial orientation and the performance of small and medium enterprises (SMEs) in Uasin Gishu County targeting 81 women owners. Questionnaire was used for primary data collection. Research assistants assisted in the questionnaires administered. The Chi-square test was employed in determining the relationship between entrepreneurial oriented dimensions and performance. The study also suggests that SMEs should embrace the

entrepreneurial oriented elements of innovation, proactiveness, and risk taking for their long-term survival and success. Further, enterprises expand their operations in order to succeed in a changing environment, women entrepreneurs must be imaginative, proactive in acquiring new market prospects, and willing to take risks. The study failed to conduct diagnostic tests that were not conducted such as linearity test, normality test, heteroscedasticity test and multicollinearity test which are mitigated in the current study.

Pratono (2018) assessed the impact of competitive advantage on firm performance. The primary goal of this study was to examine the associations between technological capability and inter-organizational collaboration, as well as how these aspects influence the competitive benefit of start-ups in Thailand. Using in-depth interviews and surveys, this research was conducted using a mixed techniques approach that included both quantitative and qualitative techniques. The sample used in this study was composed of entrepreneurs and executives from start-ups in Thailand who were selected using a stratified random selection procedure, as described in the introduction. In order to verify the study results, the acquired data was exposed to a path analysis in order to be assessed.

From the findings it's clear that the determinants of inter-organizational collaboration and technological capability depicted a positive and significant competitive advantage effect of start-ups, and that competitive advantage had a direct positive effect on the performance of start-ups in Thailand, respectively. The results of the study also revealed that technological capability and inter-organizational collaboration had a direct impact on the performance of start-ups in Thailand, with all of the aforementioned influence being statistically significant. The study however failed to anchor on any theory posing a gap. This was

mitigated using social network theory, resource dependency theory and endogenous growth theory in the current study. Contextually the study was based in Thailand, which might not be applicable in Kenya.

Hung and Chiang (2010) opined that the critical ingredient determining the rate of difference in the performance of new organisations is the application of influencing variables. A market-based study using the social network theory approach concluded that it is necessary to explore the causes of successful start-ups and their creation (Hindle & Klyver, 2011). Social network theory allows the application of business incubation as latent variable in linking new firms to new markets and cheaper funding options. The profit motive has been previously used as a measure of performance. However, there has been a lack of capabilities for setting up a start-ups business model for emerging markets hence making them vulnerable to failure.

Lee et al. (2019) examined the connection between entrepreneurial approach and start-up success, as well as the roles of technical orientation and social capital. 144 distinct start-ups located in start-up supporting institutions were the subject of an empirical study. A PLS-based structural equation model was utilized to assess the applicability of the research model. The findings of this research indicated that the entrepreneurial approach of start-ups has a beneficial influence on their success. The results also indicated that entrepreneurial orientation positively impacted all three variables of social capital and technology orientation. Moreover, the results demonstrated that technical orientation and the cognitive component of social capital influence the association between entrepreneurial orientation and start-up performance. This demonstrated that entrepreneurial approach has

a direct effect on start-up performance, and even promoted the expansion of businesses by enhancing their technical superiority and their intrinsic social capital. In addition, the study revealed the necessity for further investigation into the link between strengthening of technology orientation and strategic orientation in start-ups.

Small and Medium sized Entrepreneurs (SMEs) are essential to the growth of an economy. Khan, Rathore and Sial (2020) conducted a study on the entrepreneurial orientation and performance of small and medium-sized businesses: the influencing of entrepreneurial abilities. The research intended to demonstrate the need of recognizing entrepreneurial orientation and entrepreneurial abilities in entrepreneurs in order to improve firm performance. Using a basic random sample approach, the study gathered data from Pakistani SMBs. In order to examine the data and test the assumptions, partial least squares-based structural equation modelling was utilized. The findings of the research revealed favourable connections between entrepreneurial orientation and entrepreneurial competences, entrepreneurial orientation and entrepreneurial performance, entrepreneurial competencies and entrepreneurial performance. In addition, entrepreneurial competence was revealed to be a mediator between entrepreneurial attitude and performance. Resource-based perspective revealed the significance of entrepreneurs as competent resources in elevating the performance level of SMEs.

2.3.2 Business Incubation and Performance of Start-ups

One of the objectives of business incubation is to nurture ideas and actualize them into business. Successfully created business is a major observable performance variable. Using a structured questionnaire, Shukla (2015) sampled 28 start-ups incubatees and tested for

the business mortality rate. The result indicated that 12% incubated start-ups failed as opposed to 75% non-incubated firms. Similarly, using a case study methodology approach, Al-Mubaraki et al. (2010) sampled 10 model incubation centres with a total of 937 start-ups from 10 different developing countries thereby examining programs offered. The result indicated that business incubation programs are model tools for start-up acceleration and significantly influence entrepreneurial development. The significance in influencing effect comprises the relationship between latent and observable variables comprising a gap to be explored and bridged. The study however, failed to conduct diagnostic tests such as linearity test, normality test, heteroscedasticity test and multicollinearity test. Further, theoretical foundation was not considered in this study. The current study mitigated this by employing three theories: social dependency theory, social network theory and endogenous growth theory.

Incubators are more often established with the objective of stimulating economic growth in their local area by assisting start-ups and businesses that will generate employment, as well as creating a more dynamic local business environment (Al-Mubaraki & Busler, 2013). They not only help young entrepreneurs get started by encouraging quick invention, but they also improve their chances of survival and success by developing strategic ability, knowledge, and networks. Best practices demonstrate the need of properly integrating incubator programs with overall performance development strategies, with incubators being planned and deployed to accomplish specific objectives as part of, or in conjunction with, bigger strategic capabilities and direction (Al-Mubaraki & Busler, 2013).

Incubators and incubator firms alike are focused on start-up performance. They are intended to achieve success via technological advancements by assisting incubated enterprises in developing new goods and processes in a competitive market (Al-Mubaraki & Busler, 2013). Furthermore, an incubator should assist start-ups in increasing their chances of survival, even after they have completed their incubation, by laying out a long-term strategy (Tsai et al., 2009). To reach their goal of sustainability, start-ups must be able to not only innovate, but also make strategic choices based on knowledge and abilities for recognizing opportunities and exploring the real-time market (Campbell & Allen, 1987).

Mian, Lamine and Fayolle (2016) examined the relationship between firm incubation and firm survival rates. Sampling survey was employed, and 519 respondents were selected from the region from 8 different sub sectors in the study. In addition, a partial least square structural equation modelling technique was employed. From the findings, the results depicted a positive and significant relationship between firm incubation and survival rate of firms. Technology business incubation forms critical value-added input that creates development of innovative technology-based firms thus increasing the survival rate of firms. The study concluded that firm incubation is a major determinant for survival rates of firms. The study, however, failed to anchor on any theory posing a gap. This is mitigated using social network theory, resource dependency theory and endogenous growth theory.

Several research streams concentrate on objective measurements of start-up or new venture performance (Clausen & Korneliussen, 2012). In spite of the fact that researchers often employ interchangeable terminology such as growth, turnover and profits, they all emphasise the significance of financial indicators in start-up success. However, using this

model to measure "incubator firm success" may be pointless since it follows the traditional methods of assessing performance in any business unit and is frequently as easy as analysing an annual report or profit and loss statement (Voisey 2006).

Schwartz (2009) studied firm survival and exit dynamics beyond incubation in Germany. The study objective was to analyse the business survival rate beyond incubation. The study employed The Chi-square test was used in determining the survival rates of SMEs beyond incubation. This study explores the survivability of 352 enterprises from five German BIs following their graduation. The data imply that graduation creates a negative effect on survival rates up to 3 years after the incubation period. Furthermore, diverse trends of post-graduation dropout dynamics seen between BIs were discovered. It was also shown that performance during the incubation stage is an indication of the susceptibility of business shutdown after graduation. This study gives useful insights and consequences for all stakeholders of BI-initiatives.

Ssekiziyivu (2021) studied the role of business incubation (BI) on the business start-ups in Uganda. This is a cross-sectional research, and a triangulation of both qualitative and quantitative data was employed to gather the results. The data was gathered through the use of an interview guide and questionnaire for data collection from 28 incubators. From the findings, business incubators provide a variety of functions in their communities, including business support, networking, the provision of critical infrastructure, and the creation of a humble environment. Furthermore, business intelligence techniques such as human resource, management networking, tenant management, and assessment processes were found. Because this was a cross-sectional study, it was not able to track changes in

the behaviour of incubates over the course of the experiment. The study was done in Uganda, whose findings are applicable to other developing countries with similar environment.

Ogutu and Kihonge (2016) carried out a study on the effect of business incubation on financial performance. The research target population was small and medium enterprises in Kenya. Data analysis was conducted using a descriptive research design. Further, Z-tests were employed in establishing the relationships and checking the hypotheses in the research results revealed that business incubation enhanced financial performance of SMEs in Kenya. The research concluded that business incubation was a significant determinant of financial performance of firms thus the study recommended that improvement should be on business incubation for better financial performance firms. The study however, failed to examine the role of other significant concepts such as entrepreneur orientation and firm's strategy on firm and how they influence financial performance of a firm posing a gap that will be mitigated by this study. Significant tests were not considered in the study diagnostic tests were not conducted such as linearity test, normality test, normality test, heteroscedasticity test and normality test which are mitigated in the current study.

Lukeš, Longo and Zouhar (2019) conducted a research on the link between business incubation and entrepreneur growth. The study employed Partial Least Square (PLS) for data analysis and hypothesis testing. The study revealed that business incubators positively enhance entrepreneurial growth. Thus, managers and top management of firms and companies should embrace business incubation since it enhances entrepreneur growth. The study, however, missed the theoretical foundation which is mitigated in the current study

by employing three theories that are social network theory, resource dependency theory and endogenous growth theory.

Al-Mubaraki and Busler (2013) examined business incubation and start-up's job creation among Omani industrial companies. The target population was the recorded firms in the Muscat Securities Market (MSM) for the period from 2010 to 2014. A total of 46 industrial companies were tested in the model. Independent variables were the effect of business on financial performance and effect of intangible assets on the job creation among the firms. The results revealed that business incubation depicted a positive and significant effect on start-up's job creation. The study concluded that stakeholders of business should enhance business incubation and extensions of start-ups for improved job creation. The researchers, however, failed to anchor the study on any theory posing a gap. This is mitigated using social network theory, resource dependency theory and endogenous growth theory. Contextually the study is based in Oman, which might not be applicable in Kenya. The current study is based in Kenya.

Mungai and Njeru (2013) investigated the impact of business incubation services on the performance of business ventures at the Nairobi Incubation Lab (NaiLab), in Kenya. The correlation research design was used in this research. The scope of the investigation included all of the company endeavours housed at the Nairobi Incubation Lab (NaiLab). The information was gathered through the use of structured questionnaires that were created by the researcher and then collected for analysis. The statistical methods used were both descriptive and inferential in nature. The independent and dependent variables were described using descriptive statistics such as the mean, frequencies, and standard deviation,

while the relationship between business incubation services and the performance of business ventures at various stages of incubation was tested using inferential statistics and correlation analysis. One-way ANOVA was also used to evaluate hypotheses in addition to the other methods. The key conclusions of the study were that physical infrastructure, networking, business management, and overall performance of business endeavours are all favourably associated with one another. According to the findings of the study, business incubation services should be delivered in a variety of formats in order to increase business performance.

Vincent and Zakkariya (2021) using a multivariate multiple regression analysis, assessed the effect of business incubation on financial and non-financial performance of technology start-ups. The study employed survey data collected from incubator firms. According to the results of this research, business incubation services can assist in overcoming the difficulties associated with business incubation. Further, the dimensions of business incubation have a statistically significant positive effect on the performance of start-ups. Due to the fact that their goals and objectives are similar, this discovery is significant for both managers of incubated enterprises and managers of incubators. Thus, the study recommended that entrepreneurs and business incubator managers should strive to improve and expand business incubation services in response to the needs of incubated enterprises on a personalised basis. The study lacks theoretical foundation. Further, significant diagnostic tests were not conducted such as linearity test, normality test, heteroscedasticity test and multicollinearity test which are mitigated in the current study.

In Thailand, Munkongsujarit (2016) found that a growing number of new start-up businesses are emerging and entering the market, making the current business landscape more complicated. These start-up companies begin as small and medium-sized enterprises, but widely regarded as the engine of the economy, particularly in developing countries. The reality is that new start-up companies frequently fail to succeed in a highly competitive industry if they do not have a sound business strategy and assistance (Graham, 2012). A business incubator is considered to be one of the most important support systems for new businesses. As a developing country, Thailand is the subject of this research, which investigates the necessary business incubation activities that assist start-up enterprises and small- and medium-sized businesses. Additionally, in addition to the study, the report provides a recommendation for a business incubation model for developing economies. The study, however, failed to anchor on any theory posing a gap. This is mitigated using social network theory, resource dependency theory and endogenous growth theory.

Petrucci (2018) conducted research on the mid-stage start-up incubation process from a business network viewpoint. This study's main goal was to investigate the phenomenon of company incubation from the perspective of industrial networks. The research established a longitudinal case study illustrating a mid-stage start-up company's establishment and development of a commercial connection with a private business incubator. The connection was investigated using an abductive research approach based on the IMPARA analytical model. The inquiry emphases on how the incubation process evolves through interactions between resources and actors at several levels of analysis: the internal environment of incubation, and the surrounding network. The process of business incubation was an emergent and interdependent interaction between the incubator and external networked

participants. In this aspect, the purpose of the research was to revisit the function of the incubator in the process of creating and growing a new firm, given its limited position in the context of the incubator's larger developmental context.

2.3.3 Business Strategies and Performance of Startups

A study carried out by Al-Abdallah et al. (2021) established the existence of an association between business strategies and start-ups innovation performance. The study employed a sampling survey on 441 respondents. In addition, a partial least square structural equation modelling method was employed. The study established that there was a positive and continuous link between business strategies and start-ups innovation performance. The study concluded that skills in business are needed for the start and acceleration of enterprises by reducing material and time resource wastages but could not identify the most crucial skills. It recommended that management of both small and large firms ought to do product diversification to enhance firm expansion and hence job creation. The study, however, failed to anchor on any theory posing a gap. This is mitigated using social network theory, resource dependency theory and endogenous growth theory.

Heugens et al. (2015) examined publicly listed family firms with an objective to find out if indeed family firms outperform other types of as per the ownership. This study, was based on a research synthesis of literature in the US financial institutions. The extended purpose of Heugens et al. (2015) study was to broaden the focus on the differences between family enterprise and the forms of established firms that might be linked to a particular set of strategic choices that were made by each group. Results showed that family firms outperformed other categories of public firms in terms of financial performance, according

to the weight of the evidence. The study also compared and contrasted opposing narratives about the types of strategies adopted by family firms and showed how their diversification, product differentiations and financing alternatives mediate the relationship between performance and consistence. Other interesting revelations from the study worthy to note is that family-founded firms severely declined in performance after the first generation influenced by personal spending styles. However, the study did not have theoretical grounding.

While Heugens et al. (2015) studies indicated family, owned firms did not utilize strategic alternatives to promote their enterprise, this particular research is anchored on social network theory, resource dependence theory, and endogenous growth theory to counteract. There was no application of formal training or mentorship in family business. The research was conducted in Chile, which limits its applicability to Kenya. Consequently, the present investigation is carried in Kenya.

Lechner and Gudmundsson (2014) assessed the effect of a firm's strategy on the firms' survival among small firm performance. The study employed secondary data mined from firms' annual reports. The census method was used in selecting firms. Further, a multiple regression analysis was carried out to ascertain the connection by using, SPSS version 21. Results revealed that the firm's strategy depicted a positive and significant effect on the firm's survival rate. The study concluded that business strategy and diversification are significant determinants of business' performance. Thus, firms should strengthen their internal strength to enhance their performance. The study concentrated on the SMEs leaving other sectors like private companies, and how they are affected by regulations thus

there exists a conceptual gap. The study, however, lacked a theoretical foundation. This will be mitigated in the study by using social network theory, resource dependency theory and endogenous growth theory.

Laban and Deya (2019) studied the link between the business' strategy and the firm's survival rates information technology in Kenya. The target population was 14 information technology firms within Nairobi City County. The study utilised panel data from 2008 to 2017. Further, a descriptive research design. Inferential statistics were used to analyze the data. From the results, business' strategy is a direct relationship with the firm's survival rates, information technology firms in Kenya. The studies concluded that internal strength and human resource development must be top priority of firm's management given their positive influence on survival rates of the firms.

Muiruri (2020) on the research on strategic business services and performance of firms in Kenya argued that the promotion of technology start-up companies throughout the world is made possible by the presence of technology business incubators (TBIs). Technology business incubators play a similar role as ordinary business incubators. Both are critical components of the entrepreneurial ecosystem. Although they have evolved in a variety of ways over time, in terms of typologies, services offered and functions, incubation process support delivered through hard and soft infrastructure, achievement as well as in terms of theoretical foundations, they have all remained relatively consistent. In order to develop a framework that describes the contribution of business incubation to start-up generation, the goal of this paper is to evaluate the existing literature on the service of whichever type of business incubators and draw conclusions.

The empirical literature reviewed therefore indicate that if systematic evaluation on the role of business incubation in regards to the strategies to be adopted, it will shed more light on the impact typology functions and the process to be undertaken to expect better outcomes and accomplishments of each strategic program.

Lechner et al. (2012) studied the intervening role of firm strategy linking entrepreneurial orientation and the performance of startups in Iceland using a causal – predictive method and confirmed a positive correlation with new technology, tendency for risk and being aggressive. Each dimension was correlated with product differentiation and cost leadership strategies. The study sampled 335 small firms aged between 3 and 10 years. The study exhibited a contextual gap because the results in Iceland could not be assumed in the Kenyan context. This necessitated this study to determine the effects of entrepreneurial orientation on performance of business start-ups in the Kenyan context.

Zehir et al. (2015) established that corporate strategy significantly mediates the performance of start-ups and entrepreneurial orientation in product differentiation and innovations. This was further clarified that skills in business are needed for the start and acceleration of enterprises by reducing material and time resource wastages but could not identify most crucial skills. The research failed to consider the influencing effect of business incubation under social network theory and indigenous growth theory, which implies a knowledge gap. Hence, this will be mitigated in the current study by investigating the influencing role of business incubation in the link between entrepreneur orientations on firm start-ups.

2.3.4 Entrepreneurial Orientation, Business Incubation, Business Strategies and Performance of Start-ups

Entrepreneurial orientation, according to Soininen (2015), is crucial for the formation and viability of developing small-scale firms. This is because it has been shown that this perspective is critical to a business's development and profitability. Entrepreneurial orientation is defined by a willingness to take risks, be proactive, and be inventive. It has been strongly associated with a high rate of company growth, better performance, and longevity (Rua, 2018). Magaji (2014) on the other hand, admits that one approach to determining an entrepreneur's likelihood of success is to ascertain that individual's entrepreneurial orientation. Entrepreneurial orientation (EO) refers to the process of developing a strategy that serves as the foundation for entrepreneurial decisions and activities (Ramjugemath, 2015).

Wiklund et al. (2011) identified entrepreneurial orientation as a predictor to firm performance. As part of the incubation programs, mentorship of young entrepreneurs on strategic making is part of the lessons. Robinson et al. (2014) performed a causal effect relationship experiment for the performance of a business incubator service for 20 Norwegian start-up firms between the year 2008 and 2010 on network value and absorptive capacity. They established a significant influence of business incubation on entrepreneurial orientation, specifically linking strategy making and performance of start-ups to network value and absorptive capacity (Stubberud, 2016). Network value attributed to business incubation is a resource whose contribution to the performance of start-ups has not been fully explored. This study sought to bridge the gap of knowledge on the impact of business

incubation and business strategies on the performance of start-ups, underpinning it on social network theory and resource dependence theory.

Burgess (2015) researched on the Entrepreneurial Orientation-Performance Association, attempted to quantify the impact of entrepreneurial orientation on company performance via the use of a postal survey with managing directors of enterprises serving as key informants. The data set included developing young high-technology enterprises that were housed in business incubators around the United Kingdom. The median age of these businesses was 2.5 years, and they had six employees. They assessed innovativeness by inquiring about the ability to discover new ways of doing things, the inventiveness with which operations are conducted, and the proactive introduction of innovations into the firm. Customer and product performance were used to operationalize business performance. Customer performance was determined by analysing the firm's effectiveness at recruiting, maintaining, and sustaining consumers, as well as obtaining repeat purchases. The relative success of the firm's goods in generating revenue and capturing market share was used to measure product performance.

Sedita et al. (2019) investigated how business incubation affected the link between innovation and start-up performance. The research also evaluated how incubation affected companies' creativity. Empirical data gathered from a sample of companies situated in Northern Italy and engaged in manufacturing and services, respectively, support it. The results show that the incubation effect is crucial in determining how well new businesses do in terms of innovation in their early phases. Additionally, business incubation showed a favorable effect on internal technical skills and the acceptance of a small portfolio of

executed partnerships for innovation. The study, however, failed to have a theoretical foundation, posing a gap. This will be mitigated using social network theory, resource dependency theory and endogenous growth theory.

Other research on entrepreneurial orientation has proven that there is no association between organisational creativity and the innovation process. Rua, França and Ortiz (2018) conducted a study to investigate whether organised creativity really resulted in innovation?" The research examined 147 organisations and found that organised creativity does result in innovation, but only product innovation. Additionally, promoting creative behaviour among workers in a dynamic work environment, allocating resources, and offering idea time all contributed significantly to generating creativity and fostering product innovation. Additionally, it was shown that large degrees of freedom operate against product innovation.

Hillemane et al. (2019) assessed whether Entrepreneurial Orientation and Firm Strategy jointly influenced firm's performance. The study employed a full survey to conduct a study on 700 SMEs randomly selected with identifiable business locations. The sample of the study was 575 enterprises using the coherent test. Further, the study used descriptive statistics for data analysis. From the results the research discovered that entrepreneurial Orientation and business Strategies jointly and greatly enhance firm's performance through job creation. These studies concluded that firms' management should embrace internal strategy and entrepreneurial Orientation jointly for improved performance in terms of job creation. The study however, lacks theoretical foundation. This will be mitigated in the

study by using social network theory, resource dependency theory and endogenous growth theory.

A study by Linton (2015) aimed to figure out how many small businesses would last in a rapidly changing trade environment by using long-term surveys and focusing on the role of entrepreneurship. The two study questions of the research were how small informal businesses could stay in business when there was a lot of competition from big formal businesses, and what factors were important for the survival of those businesses. Between 2012 and 2014, a categorical regression model was used to look at the results of long-term surveys of 300 small businesses in Soweto, South Africa. The business survival variable was the dependent variable. Entrepreneurial skills and business management skills were found to be the best predictors of small business survival, according to the findings. When business models do not work as well as they did before, entrepreneurs need to be able to change them to stay alive in more competitive economic environments (Ligthelm, 2015).

Vincent and Zakkariya (2021) examined the joint effect of entrepreneur orientation, business incubation on a firm's survival rates. The study variables were entrepreneur orientation and business incubation. The research adopted descriptive survey design with both qualitative and quantitative techniques. Questionnaire was used for Primary data collection and analysed using descriptive statistics together with correlation and regression analysis to check the relationship. From the results it was revealed that entrepreneur orientation, business incubation had jointly influenced firm's survival rates. These findings are in tandem with those by Saukkonen (2017). The study concluded that entrepreneur orientation, business incubation jointly depicts a greater influence compared to

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independent influence. Thus, firms should consider the two concepts jointly in enhancing firm performance in terms of survival.

A study by Gomez-Conde et al. (2021) on the joint influence of entrepreneur orientations, business incubation plays a joint role on start-ups survival rates. The study employed descriptive survey design. Also, least square structural equation modelling technique was employed. The findings revealed that entrepreneur orientations, business incubation jointly influence the start-ups survival rates. According to Lukeš, Longo and Zouhar (2019) entrepreneur orientation, resource planning are the main determinants of a firm's performance in terms of job creation. The research employed both quantitative and qualitative methodologies in the analysis of data. Further, the study employed a correlation coefficient to check the relationship. The study further establishes that resource planning depicts a high impact on performance compared to entrepreneur orientation. However, the joint influence on job creation is greater compared to single factor influence. Thus, the study recommended that companies should employ these factors jointly to enhance performance in the long run.

Li et al. (2020) assessed how start-ups benefit from business incubators because they combine their entrepreneurial energy with the resources that are normally available to new enterprises, resulting in increased value for all parties involved. The study objective was to investigate the function of business incubators in entrepreneurship growth by providing more services than previously available. A total 567 samples were established using structural equation modelling, which is a quantitative tool used in this study. The findings showed that business incubators are efficient middlemen in supplying networking services,

financial assistance, and training programs to people and entrepreneurs, all of which are crucial for the growth of entrepreneurship.

Saukkonen (2017) evaluated the influencing role of entrepreneur orientations on the link between business incubation and job creation in a university in California. The study employed structural equation model (SEM) and purposive sampling method. Inferential and descriptive statistics were utilised to analyse the data that was gathered. The hypotheses were tested using correlation and multiple regression analysis, respectively. The findings revealed that entrepreneur orientations play a significant influencing role between business incubation and job creation though job market expansion.

Kiprotich et al. (2015) evaluated the influencing effect of social networking on the association between entrepreneurial orientation and the performance of small and medium-sized enterprises in Kenya on the perspective of resource-based theory (2015. In addition, an explanatory research design directed the investigation. A questionnaire was used to collect data from 214 small and medium-sized enterprises (SMEs) in the city of Nakuru. Inferential and descriptive statistics were used to analyze the acquired data. Using correlation and multiple regression analyses, respectively, the hypotheses were evaluated.

According to the data, there is a considerable association between risk-taking, entrepreneur orientation, and innovativeness and the success of SMEs. In addition, the data revealed that social networking had a positive impact on the link between risk-taking and entrepreneur orientation, as well as the performance of SMEs. It is advised that small and medium-sized businesses (SMEs) join in and embrace social networking since it is a cost-effective means of expanding contact bases and boosting a company's profitability. Additionally, the

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research adds to knowledge and theory by establishing the influence of social networking and the link between entrepreneurial approach and performance of small and medium-sized firms (SMEs) in Kenya. However, the research did not undertake diagnostic tests such as the linearity test, normality test, heteroscedasticity test and multicollinearity test, which will be remedied in the present study.

Pratono (2018) evaluated the impact of competitive advantage on the success of businesses. The major purpose of this study was to investigate the causative elements of technical capacity and inter-organizational cooperation that influence the competitive advantage of Thai start-ups. Using in-depth interviews and surveys, this study used mixed methodologies that included both quantitative and qualitative approaches. Using a stratified random sampling technique, the sample for this study was comprised of Thai entrepreneurs and executives of start-up companies. Path analysis was utilized to verify the study conclusions by analyzing the collected data.

The findings indicated that technical capacity and inter-organizational cooperation had a direct beneficial influence on the competitive advantage of Thai start-ups, and that competitive advantage had a direct positive influence on the growth of Thai start-ups. Moreover, it was evident that technical capacity and inter-organizational cooperation had a direct impact on the success of start-ups in Thailand, with each of the aforementioned impacts being statistically significant. The study lacked theoretical foundation. This was mitigated in the study by using social network theory, resource dependency theory and endogenous growth theory. Further, the study lacked proper statistical analysis methods like inferential statistics and diagnostic tests neither were nor conducted such as linearity

test, normality test, heteroscedasticity test and multicollinearity test, which will be remedied in the present study.

Shafique and Saeed (2020) evaluated the effect of business incubators on the connection between entrepreneur orientation and start-up performance. The research on entrepreneurial orientation revealed that it had a positive correlation with business success; however, the strength of this correlation depends on a variety of factors. In this research, a knowledge-based method is utilized to develop and analyze a model that demonstrates how start-ups may enhance their entrepreneurial orientation while incubating in incubator settings. This research proposed, in line with the notions of dynamic capabilities and strategic fit, that absorptive ability plays a role in speeding the achievement of favourable performance outcomes for the organization. Only when start-ups combine their current resources with the absorptive power to implement their strategic choices can they surpass their competition.

The research model was experimentally validated using survey data obtained from 304 start-ups from several technological incubators in India. This study demonstrated that it strengthens the relationship between entrepreneur orientation (EO) and success in incubator environments. The research also discussed the implications of the results for theory and practice. However, diagnostic tests such as linearity test, normality test, heteroscedasticity test and multicollinearity tests.

2.4 Summary of Empirical Studies and Knowledge Gaps

The empirical literature reviews, as has been presented in section 2.3 above, are summarized in Table 2.1 below.

Table 2.1: Summary of Empirical Studies and Knowledge Gaps

Author (s)	Study Title	Methodology	Results	Knowledge Gap
Cohen et al. (2014)	How network-based incubation helps start-up performance	Step-by-step process for content analysis of literature: a review of literature systematically	Incubation that is based on networks brings about more benefits to start-ups and are important	The contribution of influence of business incubation is not explored.
Kibuchi (2016)	Business incubation start-ups in Kenya. Case study of iHub programs	A case study method of iHub program, a model of Incubation service in Kenya.	iHub brokered credit facilities (M = 2.67, SD= 1.08), recruitment and training (M = 2.64, SD= 1.08) financial and organisational management skills (M = 2.60, SD= 1.07) where 65.7% were youth.	They forecast on the services of the incubator and not the incubatees performance. There still exist knowledge gap on the performances of the incubatees
Meru et al. (2016)	Business incubation and business development in Kenya:	A survey on a population sample of 12 incubators drawn from a population of 25 BI obtained from the records of business association	With a response rate of 62.3%, 67% of the respondents confirmed that business incubation programs are key to the	Research did not address entrepreneurial orientation issues in Kenya and performances of firms as a source of resources.

Author (s)	Study Title	Methodology	Results	Knowledge Gap
		incubators of Kenya and 200 incubated firms in Kenya was tested.	performance of firms in Kenya	
Sharma et al. (2014)	The influencing role of Incubators and accelerator in the performance of new enterprises	Personal interviews (cross section method) with 10 incubators in India.	Incubators and accelerators help in improving the mortality rate of new enterprises. They also positively impact on the growth of and on their revenue plan.	This same study needs to be done in Kenya using Structural Equation (SEM) approach to establish the nature of mediational role of business incubator and business strategies
Shukla et al. (2015)	Difference between start-ups expectations and incubator performance	Structured questionnaires and case study methods were applied. This study was done in India.	Out of 28 incubators surveyed for mortality rate, 12% was attributed to incubated firms and 75% to non-incubated start-ups	This study was done in India. Being a case study, similar procedures can be used for Kenya on specific Counties as case study.
Stubberud (2016)	Business incubation and entrepreneurial performance: the influence of network value and strategy	The classical experimental method was used on Norwegian start-ups with less than 20 staff. Contacted 163 incubatees, 93 responded being 57.1% response rate.	a direct effect of network value on firm performance at ($\gamma = .45$, $p<0.001$), and absorptive capacity on firm performance at ($\gamma = .14$, $p<.05$), and combined	The study was done for young firms in the developed Country. The current study was for the interest of Kenya to carry out similar study here.

Author (s)	Study Title	Methodology	Results	Knowledge Gap
			effect is (β = .32, p<.001).	
(Wales et al., (2011)	Entrepreneurial orientation, business strategy and small start-up performance	Cross sectional survey method, a sample of 335 small Icelandic firms, with 153 bankruptcy, and 182 active in their registry records were contacted. 47 bankrupt and 70 active respondents representing 30.7% and 38.4%, respectively.	Innovativeness is positively correlated with strategy. EO is negatively correlated with both differentiation and cost leadership strategies.	The study did not explore the role of business incubation and business strategy interventions on performance of start-ups. The study failed to consider firms below five years in developing countries
Wiklund et al. (2011)	the relationship between EO and start-up performance on growth and profitability	They surveyed, identified and sampled 51 out of 134 previous studies in Finland by searching through Social Science Citation Index,	The result indicated entrepreneurial orientation is positively correlated with performance at p= 0.242, This is regarded as moderately high.	A market-based study using social network theory approach on the causes of successful start-ups and their creation is critical.
Zehir (2015)	entrepreneurial orientation, business strategy and small firm performance	A survey was done on 991 firms by use of mail and phone contacts in Turkey. The 991 sample was reduced to 331. The data was analysed using SPSS.	Differentiation and innovation performance business strategies are positively correlated with EO and the outcome of the firm.	The study did not consider the influencing effect of business incubators under social network theory and indigenous growth theory, hence provides a gap of knowledge.

2.5 Conceptual Framework

The research conceptual framework (figure 2.6) is premised on an integrated philosophical reasoning of positivism and the concepts of entrepreneurial orientation, business incubation, business strategies and their observable sub-constructs. The study considered the complexity of the study variables relied heavily on the views of Lincoln (2011) and Mertens (2010) and put in the perspective of Structural Equation Model.

Structural Equation Model (SEM) framework as purposed by Karl (1970) integrates maximum likelihood, in both measurement and structural models. According to (Bentler, 1980) structural equation model of study is credited for integrating factor and path analysis as well. Path analysis explains the theoretical underpinnings while the measurement model provides the conceptualized relationship.

Based on entrepreneurship theory, performance of start-up firms is observed on survival, financials and job creation. Business incubation provides the best model for underpinned of social network theory thereby linking start-ups with suppliers through mentorship, building of absorption capacity. Mentorship activities also involve the application business strategies/Product Market Expansion Grid is observed on Market penetration, Diversification and product development.

Entrepreneurial orientation (EO) under the sub-constructs of innovativeness, risk-taking and proactiveness. The study constructs of entrepreneurial orientation; business incubation and business strategy/Product Market Expansion Grid and performance of start-ups are positioned as latent variables (LV) thus allowing the use of confirmatory factor analysis

(CFA) model for in examining the patterns of interrelationships among them. The positive effects of CFA are its ability to test data conformity with the hypothesised model.

CFA is founded in psychometrics and therefore suitable for measuring observable characteristics of latent variables. According to (Pearson and Lee 1903) principles, the measurable characteristics for entrepreneurial orientation variables include innovativeness dimension (ID), Risk–taking dimension (RTD), and Pro-activeness dimension (PAD). Business incubation variable was observed in Mentorship (ME), networking (NE), and capacity building (AC). The business Strategies (BS) variable is observed using Ansoff (1957) matrix for Diversification (BS1), market penetration (BS2), and market development (BS3). Performance of startups (PS) variable was observed in Survival (SR), Financials (FR) and job creation (JR).

Path analysis, on the other hand, was founded on biometrics (Wright 1921) and is used to find the causal relationship among the latent variables by creating a path diagram. For posterity, SEM combines CFA and path analysis methods (Joreskog and Goldberger 1975) to make it popular in many fields, including social sciences. It should be noted that path analysis explains causal relationships among variables. An important function of path analysis is to play the role of mediation where variable influence an outcome directly or indirectly through another variable (Zhao and Lynch 2010). The use of SEM was reviewed and updated by Grace et al. (2010) and Eisenhauer et al. (2015) who assert that it's the most comprehensive applicable method recommended in social sciences where respondents' views are measured.

2.6 Conceptual Hypothesis

Entrepreneurial Orientation (EO)
-Innovativeness dimension (ID)
-Risk-taking dimension (RTD)
-Proactiveness dimension (PAD)

$H0_1$

Business Incubation (BI)
 -Mentorship (ME)
 -Networking (NE)
 -Absorption capacity (AC)

$H0_2$

Performance of Start-ups (PS)
- Survival (SR)
- Financials (sales, liquidity) (FR)
- Job Creation (JR)

$H0_4$

Business Strategies (BS)
-Diversification (New Product and New Market) (BS1)
- Market Penetration (New Product and Old Market) (BS2)
-Market Development (new Products and existing market) (BS3)

$H0_3$

Figure 2.1: Conceptual Model

The null hypothesis that were tested in this study are:

H_{01}: The relationship between entrepreneurial orientation and performance of startups in Nairobi City County is not significant.

H_{02}: The relationship between business incubation and performance of startups in Nairobi City County is not significant

H_{03}: The relationship between Business Strategies and performance of startups in Nairobi City County is not significant

H_{04}: The joint relationship between entrepreneurial orientation, business incubation, business strategies and performance of startups in Nairobi City County is not significant

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CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This methodology chapter presents the approach that was incorporated in this research process. The process starts with explanation of the philosophical underpinning for the study, the research design, the target population, determination of sample size, and how data was collected from the respondents. Lastly, this chapter provides a summary table indicating how the study variables were measured and analysed.

3.2 Research Philosophy

Research philosophy here refer to the philosophical reasoning that guided this study to establish the new knowledge. Crotty (2003) considers research philosophy as a line of thinking where knowledge itself is developed. The theoretical perspective of research philosophy is to describe the philosophical reasoning behind the choice of research methodology and the demonstration that indeed the study constructs of entrepreneurial orientation, business incubation, business strategies and Performances of start-ups are correctly operationalized. According to Easterby-Smith, et al., (1999) the importance of research philosophy is to guide the approach towards appropriate research design.

The philosophical thinking discussed below of ontology and epistemology on one part and positivism and realism on the other part separately. Although they largely converge in the study objectives, the research relied on the contribution of Augustine Comte about positivism. Conte believed that the whole universe is governed by natural laws and these laws could be learned through the method of science (Zembroski, 2011). This study took a

scientific perspective to determine the truth about the hypotheses. Positivism advances this approach through data collection, analysis and the drawing of conclusions based correlating findings with previous empirical studies.

3.2.1 Positivism Research Philosophy

Positivism research philosophy refer to a process of adherence to gaining factual knowledge through observation, data collection and measurement and analysis of the results. In positivism philosophical approach the researcher's role is limited to data collection and interpretation.

The history of positivism dates back to 17th century, a period called the Enlightenment and inspiration. During this period, the scientific community promoted a movement where philosophers and scholars valued individual thinking and the worldview of objective knowledge. Based on this view this study sought the views of the plays in the study phenomena and respected them.

Positivism relies on the hypothetic deductive method to verify a priori hypotheses that are often stated where functional relationships are derived between explanatory and observable variables. The primary objective of positivist research is to generate explanatory of associations that ultimately lead to prediction and control of the phenomena in question (Gergen 2001). Typical positivism approach to developing knowledge follows these principles; that in Social and natural sciences the focus should be discovery and facilitate of explanation and prediction. That; the methodology for social sciences should be consistent and based deductive model beginning with theory, hypothesis,

operationalization, and analysis. That; the larger the sample the more generalizable tendencies to reality.

Philosophical foundations of the positivist Paradigm is explained as Ontological assumptions. Ontological assumptions state that a single tangible reality exists and that it can be understood, identified, and measured. This assumption allows diverse explanation and prediction in a causal research framework so as to infer relationships such as if X causes Y, then X must precede Y. In terms of relationships, if X and Y are correlated and no other factors besides them then X is the only cause of Y (Hoyle and Harris 2009). The conceptualization of the study framework where entrepreneurial orientation, business incubation, business strategies are expected to explain the performance of startups based on the ontological assumptions.

The epistemological assumption of positivism contend that knowledge must be developed objectively, without the influence of researchers own values or prior-knowledge. Knowledge, when appropriately developed, is truth—that is, it is certain, congruent with reality, and accurate. To appropriately develop truth, absolute separation must exist between the research participant and the researcher. To achieve this separation, positivists operate in dualism and objectivity (Hansen 2004).

In other words, positivist thinking asserts that participants and researchers can actually be separated from the research itself. This interest is expressed on the statement of ethical consideration taken when undertaking this study. The entire conceptualizations of the study constructs and entrepreneurial orientation, business incubation business strategies and

performance of start-ups are operationalized on positivism philosophical reasoning (Cohen et al., 2014; Stubberud, 2016; Zehir, 2015; Wales et al., 2011).

Entrepreneurial orientation was conceptualized as corporate behaviour in firms where there is deliberate policy to manage products or service through innovations, risk-taking and proactiveness in all business decisions (Olaolu & Obaji, 2020). Business incubation was conceptualized as a process of nurturing ideas with a purpose to translating them into actual business (Shukla, 2015). On the other hand, business strategies refer to activities undertaken to build confidence to entering competition, acquire advantage over others and easily achieve the overall objectives (Hunger & Wheelen, 2014; and Koch, 2011). Performance of start-ups was conceptualized as an attainment of set objectives early than the time expected or an achievement of higher and better market share than normally is possible for new firms in terms of survival, profits and employment (Gerschewski & Xiao, 2015).

Positivism research philosophy beliefs that only factual knowledge gained through observation is trustworthy. In this case, the researcher restricts himself or herself to data collected and interprets it objectively. In other words, the researcher is to ensure that there is no personal influence on the data collected. Positivism research philosophy reasoning is intended to ensure research findings are strictly observable and quantifiable in nature. In positivism approach observations are translated into quantifiable indices and analysed. Crowther and Lancaster (2008) argue that studies of positivism nature tend to adopt the approach of deductive towards discovery of knowledge and therefore concentrate on facts finding.

3.3 Research Design

The term research design is defined as conceptual plan, structure and framework followed by the researcher in collection of data analysis and the interpretations of a phenomenon under study (Cooper & Schindler, 2011). It is therefore an overall strategy intended to incorporate different components of the study into one logical coherent way to address the problem. The major designs available in scientific research relevant to this study include but are not limited to, case study, longitudinal survey and cross-sectional survey. Most studies which cover a relatively large area use either longitudinal or cross-sectional surveys (Nganga, Onyango & Kerre, 2011). This research applied a cross-sectional survey method.

This study followed cross-sectional survey design because it assured similar data collection procedure and clear verification amongst myriad respondents at any given time. In addition, the design enables the researcher to document the characteristics of a given population and eventually testing the hypotheses in an appropriate manner. The method assured credibility of the research findings and effectively reduced the error margin. Cross-sectional design studies appear to be resilient in studying relationships due to their ability in recording the population characteristics freely and naturally.

3.4 The Target Population for the Study

Hair et al. (2014) defined population as total elements that meet the specified criterion. (Creswell, 2003) made it clear that the target population of the study comprise individual who fulfil specific attributes of interest and relevance. The broad objectives of this study was to establish the influence of entrepreneurial orientation, business incubation and

business strategies on performance of start-ups in Nairobi City County, Kenya. The provided startups as the unit of analysis for this study represented by the owners.

Using (Creswell, 2003) criteria, the researcher obtained list of graduates from the five business incubators in Nairobi as shown in table 3.1 below. The list comprised incubatees in the database of ihub, Strathmore University, C4DLab of the University of Nairobi, Chandaria – BIIC of Kenyatta University, and Nairobi Industrial and Technological Park. The respondents were randomly picked form the list of 715 and they formed the unit of observation. Among the questions provide, the respondents were required to state period of operation in years and if indeed they had the services of any one of the five business incubators picked randomly within Nairobi City County, Kenya. The population comprised of 715 graduates from the five business incubators as sawn in Table 3.1 below.

Table 3.1: Population of the Study

	Name of Business Incubator	**Population size**
1	Ihub	164
2	Strathmore University	212
3	C4Dlab (University of Nairobi)	105
4	Chandaria - BIIC (Kenyatta University)	148
5	Nairobi Industrial and Technological Park	86
	Totals	**715**

Source: Author (2021)

This population was found to be suitable by virtue that, the entrepreneurs were not only on the incubators registers but also answered the research tool affirmatively to have received business incubators trainings from Nairobi City County.

3.4.1 Nairobi City County

Nairobi City County is one of the forty-seven administrative regions which doubles as Capital city of the republic of Kenya. Kenya is one of the African Countries whose economy is at middle class level and is rapidly growing. The County has a lot of economic activities and is home to a number of headquarters for many companies. According to Forbes (2013) Nairobi leads in digital infrastructure in the region and has the best entrepreneurial ecosystem where a sizable amount of the capital, businesses, and talent flow freely in and out of the country. Furthermore, the presence of world class universities makes Nairobi resourceful for conducting business incubation and acceleration services.

According to Wairimu and Mwilaria (2017), one-third of start-ups in Kenya collapse within the first 3 years of inception and 80% of those that survive fail to get to their fifth anniversary. The failure is attributed to the existence of inadequate strategies as cited by Akaeze and Akaeze (2017). Odongo and Wang (2016) asserts that the owners of start-ups develop strategies to overcome constraints but still meet obstacles due to lack of mentorship support mechanisms. The study on the influence of entrepreneurial orientation, business incubation and firm strategy on the performance of start-ups in Nairobi City County will provide reasons for policy guidelines to support start-ups. The study findings are expected to contribute to the literature on start-up survival, job creation, and financial performance strategies for young entrepreneurs.

3.5 Sampling Technique

Sampling technique refer the name of the specific process by which the entities of the sample have been selected for the target population of the study. The process allows the

researcher to infer information about a population based on results from a subset of the population without having to investigate the entire population. The study population comprised the incubatees from any of the five business incubators in Nairobi City County.

The study adopted simple random sampling technique where a given size of all subsets have an equal probability of being selected. Each element of the frame was considered equal for selection. This guaranteed unbiased collection of views from the respondents and simplified the analysis of data obtained. However, it was noted that simple random sampling was vulnerable to errors that may not be reflected in the characteristics of the population. To make up for these errors the study also employed systematic and stratified techniques. Accordingly, Hair (2014) a sample of at least 200 was considered to be sufficient when considering models with five or less constructs using Structural Equation Method (SEM). The population of respondents from each of the five incubator centres were considered homogeneous.

The sampling fraction was also maintained (Williamson 2016). Yamane (1967) specified the formula for the determination of sample size with the assumption that attributes under consideration were normally distributed. The start-up owners were randomly sampled and a total of 257 were requested to respond. Galvin (2015) defined sample size as a random number of target respondents placed on equal chance of being selected, Muthén and Muthén (2002) posited that different guidelines are available for the determination of adequacy of sample size when using SEM in the research. According to Yamane (1967) the following formula should be applied when using SEM n=N/(1+ 〚N(e)〛 ^2)

Where;

n = sample size,

N = the number of incubatees (known population),

e = error term (desired precision or confidence level) and in this case = 95%

N/{1+N(e^2)}

Given the population size of 715 at 95% confidence level, the number of respondents should be 257 obtained as follows:

715/{1+715(0.05^2)}=715/2.7875=257

The sample distribution amongst the Business Incubators in Nairobi City County is represented on table 3.2 next page.

Table 3.2: Sample Distribution

	Name of Business Incubator	Population size	Percent (%)	Sample Size
1	iHub	164	23	59
2	Strathmore University	212	30	76
3	C4Dlab (University of Nairobi)	105	14	38
4	Chandaria - BIIC (Kenyatta University)	148	21	53
5	Nairobi Industrial and Technological Park	86	12	31
	Totals	**715**	**100**	**257**

Source: Author (2022)

3.6 Data Collection

The study incorporated the use of primary data which was collected using questionnaires, prepared and customised in the Google Forms format. With the prevailing COVID-19 pandemic, which posed a challenge in data collection, the questionnaires were administered partly via online Google forms. Vanette and Krosnick (2014) asserts that surveys may be effectively done online if consistent follow-up is done.

The researcher posted questionnaires to the respondent's emails and followed them up with the respondents through drop pin system using smartphone within a timeframe. The advantage is to obtain informed responses in collecting primary data (Monsen & Horn, 2008). The questionnaire was structured according to the latent and observable variables providing respondents opportunity to vary the strength of the answer. To achieve the results, a sample of 257 respondents was examined from the targeted population of 715 incubates.

3.7 Operationalization of Study Variables

The main purpose of this study was to ascertain the influence of entrepreneurial orientation Business incubation and business strategies on the performance of start-ups in Nairobi City County. Shabarati et al. (2010) defined operationalization of variables as procedures applied in aligning the conceptual-theoretical foundations underpinned in research and the empirical observations made in the literature review. The four recognized traits associated with entrepreneurial orientation as latent variable are propensity for taking risks, inventiveness, pro activeness, and autonomy. Business incubation was tested under mentorship, networking and absorption capacity while business strategies under diversification, market penetration and market development. This study is underpinned on the theory of entrepreneurship network, resource dependence and endogenous growth theoretical foundations. Performance of start-ups is measured via business survival rate, profitability, growth and job creation.

Entrepreneurial orientation was considered as latent variable where propensity for taking risks, innovativeness and proactiveness were tested. Each responded was given one

questionnaire containing at least three questions to measure each sub-construct. Innovativeness tested required the respondent to state the firm's ability to take innovative initiatives that influence start-up performance on survival, financial and job creation. Similar approach was used to test risk-taking initiatives and proactiveness dimensions of entrepreneurial orientation. All were evaluated on a 5-point Likert scale where; 1= strongly disagree, 2= disagree, 3= Indifferent (neither agree nor disagree), 4 = agree, and 5= strongly agree.

Business incubation construct whose nature of influence is being investigated in this study was regarded as second latent variables. The variable was tested under the subcontracts of mentorship, networking and absorption capacity. Mentoring is a relationship between two people with the goal of professional and personal development. The "mentor" is usually an experienced individual who shares knowledge, experience, and advice with a less experienced person, or "mentee''. The incubatees are mentored under business incubation programs to start or accelerate business. Survival rate is the observable indicator since many start-ups in Kenya were found to have died before the age of five year (Barako, 2017). Financial performance for start-ups is a measure of how well a company uses assets and generates revenues. In brief, start-up financial performance was measured through the perception on sales revenue. Better financial performance (sales) and job creation were considered indicators of start-up financial performance. Operationalization involves translating a mentorship, networking and absorption capacity into a measurable conceptualized value form. Ability of business incubation to link the firm to Suppliers, Customers and Financiers and act as reference at times of need. The three variables were

evaluated on a 5-point Likert scale, where; 1= strongly disagree, 2= disagree, 3= Indifferent (neither agree nor disagree), 4 = agree, and 5= strongly agree.

Business strategies was evaluated using Product Market Expansion Model suggested by Ansoff (1957), where; an existing product proposed into an existing market, depicting known customer- known product situation by Market Penetration strategy. Where an existing product is proposed for new market depicting new product to unknown customer, market development strategy is applied. In cases where the new product is proposed to new markets depicting unknown product to unknown market situation, product or service diversification strategy is recommended. There diversification, market development and Market Penetration strategies were used as sub-constructs for business strategies. The ability of a start-up to perform on survival, finances and job creation through diversifying, market penetration and market development business strategies were evaluated on a 5-point Likert scale.   where; 1= strongly disagree, 2= disagree, 3= Indifferent (neither agree nor disagree), 4 = agree, and 5= strongly agree.

Performance of start-ups was observed on three sub-constructs, namely, start-up survival rate, financial performance and job creation. Shibia and Barako (2017), established that young entrepreneurs tend to start a business with limited experience and lack strategies to overcome constraints that hinder business survival within the first years of operations. According to Kiprotich (2017) and Munene (2018), various challenges that negatively influence the birth and growth of new ventures are competition, access to resources and networking; 60 out of 100 start-ups in Nairobi fail after the first three months of creation. Start-ups play a critical role in the Kenyan economy by influencing entrepreneurship

performance, which has the potential to catalyse innovation, create employment, and expand business outlets. The influence of entrepreneurial orientation, business incubation and business strategies/PMEG were observed through start-up performance on survival rate, financials and employment. Evaluated on a 5-point Likert scale.   where; 1= strongly disagree, 2= disagree, 3= Indifferent (neither agree nor disagree), 4 = agree, and 5= strongly agree. The operationalization table of this study variables is conceptualized in table 3.3.

The study methodology applied the structural equation method (SEM). This helped establish a more accurate relationship providing a fountain of knowledge in business management. Structural equation modelling applied multivariate method of analysing data of method complex relationships nature among constructs and indicators. Whereas covariance-based SEM is primarily a method of data analysis to confirm theories, the method is accurate in analysing causal–predictive relationships whose structures are designed to provide detailed causal explanations. The method was used to confirm measurement models and is concise on explaining key characteristics of each variable and fit indexes in order to provide a more accurate result. The conclusions made out of this study are more reliable and recommendations are made for references to academic, policy and regulators who wish to influence not only the survival of start-ups, but also the acceleration in growth and performance in financial returns.

Table 3.3: Operationalization of Study Variables

Variable	Indicators	Measures	Questions	References
Entreprene urial orientation	Innovative	The firm's ability to influence performance on survival, financials and job creation through innovative initiatives, evaluated on a 5-point Likert scale where; 1= strongly disagree, 2= disagree, 3= Indifferent (neither agree nor disagree), 4 = agree, and 5= strongly agree	E1 to E3	Monsen et al. (2009)
	Risk taking	The firm's ability to influence performance on survival, financials and job creation through risk taking activities. Evaluated on a 5-point Likert scale. where; 1= strongly disagree, 2= disagree, 3= Indifferent (neither agree nor disagree), 4 = agree, and 5= strongly agree	E4 to E6	Monsen et al. (2009)
	Pro- activeness	The firm's 1st move in the market characteristics. Evaluated on a 5-point Likert scale. where; 1= strongly disagree, 2= disagree, 3= Indifferent (neither agree nor disagree), 4 = agree, and 5= strongly agree	E7 to E8	Monsen et al. (2009)
Business incubation	Mentorship	The firm's mentorship support services provided by business incubation right from creation of business management up to strategy making. Evaluated on a 5-point Likert scale. where; 1= strongly disagree, 2= disagree, 3= Indifferent (neither agree nor disagree), 4 = agree, and 5= strongly agree	B1 to B3	Saukkonen (2017)

Variable	Indicators	Measures	Questions	References
	Networking	Ability of business incubation to link the firm to Suppliers, Customers and Financiers and act as reference at times of need. Evaluated on a 5-point Likert scale. where; 1= strongly disagree, 2= disagree, 3= Indifferent (neither agree nor disagree), 4 = agree, and 5= strongly agree	B4 to B6	Saukkonen (2017)
	Absorption capacity	Ability of business incubation to support the firm, innovate, expand product base and do more than one business. Evaluated on a 5-point Likert scale. where; 1= strongly disagree, 2= disagree, 3= Indifferent (neither agree nor disagree), 4 = agree, and 5= strongly agree	B7 to B9	Saukkonen (2017) & Zehir (2015)
Business Strategies	Diversification (Unknown product and Unknown Market)	The ability of Diversification business strategy to influence performance of start-up survival Evaluated on a 5-point Likert scale. where; 1= strongly disagree, 2= disagree, 3= Indifferent (neither agree nor disagree), 4 = agree, and 5= strongly agree	F19 to F21	Ansof, (1957) & Parnell et al., (2012)
	Market penetration (New product and Known Market)	The ability of Market penetration strategy to influence financial performance of start-ups. Evaluated on a 5-point Likert scale. where; 1= strongly disagree, 2= disagree, 3= Indifferent (neither agree nor disagree), 4 = agree, and 5= strongly agree	F22 to F24	Ansof, (1957) & Parnell et al., (2012)

Variable	Indicators	Measures	Questions	References
	Product Development (Known product and Unknown Market)	The ability of Market development business strategy to influence performance in job creation of start-up Evaluated on a 5-point Likert scale. where; 1= strongly disagree, 2= disagree, 3= Indifferent (neither agree nor disagree), 4 = agree, and 5= strongly agree	F25 to F27	Ansof, (1957) & Parnell et al. (2012)
Performance of start-ups	Start-up survival rate	The ability of a start-up to survive during creation due to the influence of entrepreneurial orientation, business incubation and business strategy. Evaluated on a 5-point Likert scale. where; 1= strongly disagree, 2= disagree, 3= Indifferent (neither agree nor disagree), 4 = agree, and 5= strongly agree	P1 to P3	Salamzadeh (2015) & Lechner et al., (2012).
	Start-up financial returns	The ability of a start-up to perform well financially due to the influence of entrepreneurial orientation, business incubation and business strategy. Evaluated on a 5-point Likert scale. where; 1= strongly disagree, 2= disagree, 3= Indifferent (neither agree nor disagree), 4 = agree, and 5= strongly agree	P4 to P6	Lechner et al., (2012).
	Job creation	The ability of a start-up to create employment due to the influence of entrepreneurial orientation, business incubation and firm strategy. Evaluated on a 5-point Likert scale. where; 1= strongly disagree, 2= disagree, 3= Indifferent (neither agree nor disagree), 4 = agree, and 5= strongly agree	P7 to P9	Lechner et al., (2012).

3.8 Test for Research Instrument Reliability

Reliability refer to the characteristic of a set of test scores obtained from measurement process that relates to the random error embedded in the scores. Scores are said to be reliable if similar process under similar circumstances are undertaken will be produce same results. Various kinds of reliability coefficients, with values ranging between 0.00 (much error) and 1.00 (no error), are usually used to indicate the amount of error in the scores.

Past studies by Cabrita (2008) allude research biasness to the nature of instruments used to collect data or characteristic variations on the part of respondents. A test on the reliability and validity of the research instruments are key for the assurance of the research findings. The validity of the outcome of a study greatly depends on the reliability of the process adopted. The process is said to be reliable when the measuring instrument considers the estimated consistent errors (Leedy & Ormrod, 2015). Only random errors affect reliability. Reliability entails the span to which a measuring instrument accommodates variable errors which are observed inconsistently. Structural equation method provides for error of estimation and hence the chosen method of testing data reliability.

In this study, the questionnaires were used to measure each construct under consideration. A carefully designed questionnaire was given to 30 respondents who elicited the same responses under similar conditions that yielded nearly the same result. Cronbach's alpha index scale was utilised to test reliability and was evaluated on ranges from 0 to 1, with the acceptable range being between 0.5 and 0.8. In addition, sampling adequacy was tested using KMO and Bartlett's test.

The measurements of the explanatory variables of entrepreneurial orientation, business incubation, business strategy and the dependent variable of performance of start-ups were evaluated. The internal consistency between the variables was greater than 0.5. The results obtained showed reasonable reliability for the constructs and average variance. This is crucial for establishing content and producing authenticity.

Cronbach's Alpha was generated for each of the study constructs as illustrated in table 3.4 below. Cronbach's Alpha values indicate the extent to which all items measure the same construct, that is, if there is evidence of internal consistency. Cronbach's alpha index scale ranges from 0 to 1, with the acceptable range being between 0.5 and 0.8. The Cronbach's alpha values in table 3.4 show that entrepreneurial orientation, business strategy, and performance of start-ups constructs had their respective Cronbach's Alpha values (0.557, 0.692 and 0.701, respectively) being within the acceptable range to back up the adequacy and reliability of data collected for entrepreneurial orientation and business strategy to warrant an informative further analysis. However, business incubation had a Cronbach's Alpha value of 0.374 which was below the threshold of 0.5. But, from the overall Cronbach's Alpha of 0.715, the data collected for the study constructs were adequate and hence reliable.

Table 3.4: Reliability Test

Item	Observations	Alpha	Decision
Entrepreneurial Orientation	30	0.557	Reliable
Business Incubation	30	0.374	Unreliable
Business Strategy	30	0.692	Reliable
Performance of Start-ups	30	0.701	Reliable
Overall Test Scale		0.715	Reliable

Source: Field Data (2022)

3.9 Validity Test for Research Instruments

Validity test is a degree to which the instrument measures what it is meant to measure. Cabrita et al. (2008) assert that validity is a check on whether the researcher is measuring what he wants to measure. It is the degree to which the outcome of the data analysis reflects the phenomenon being studied. Leedy et al. (2005) classified validity as face, content or construct. Face validity refers to how well the purported concept is covered. Content validity is the number of elements represented by a measure in the phenomenon, while construct validity is the level at which the operationalization fits the theories the study is underpinned. Validity was measured by subjecting the research tools to expert and supervisors' opinion and critique. The appropriate adjustments were then incorporated into the research tool.

To ensure face validity, the researchers modified the earlier scholars' methodologies while keeping them intact to reflect the local dynamics. The surveys were given to 30 respondents twice, two weeks apart, in order to evaluate what it was intended to measure. The normality test indicated that the model fulfilled Kline's (1998) criteria. According to Kaiser (1974), for sampling adequacy, KMO values that were statistically greater than 0.5 were adequate.

Table 3.5: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.595
Bartlett's Test of Sphericity	Approx. Chi-Square	14.750
	df	6
	Sig.	.036

Source: Field Data (2022)

From table 3.5, the Kaiser-Meyer-Olkin (KMO) test statistic was 0.595. As a result, the KMO value of 0.595 in this study implies that the sampling was appropriate. The dataset's

constructs were significantly connected, as indicated by the P value of 0.036 obtained from Bartlett's Test of Sphericity.

3.10 Diagnostic tests

This section provides diagnostic test results that are the normality test, heteroscedasticity test, and multicollinearity test. The tests are to validate the model estimates. The Shapiro-Wilk test determines whether a population variable is normally distributed. It serves as a substitute for the Kolmogorov-Smirnov test. The study preferred Shapiro-Wilk test over KMO in the test for normality. According to Collis and Hussey (2009), the Shapiro-Wilk test is better ideal for data sets of fewer than 50, although it can also accommodate samples as large as 2,000, whereas the KMO test is utilized for high sample sizes. The significance of the normality test is shown by values exceeding 0.05 at 95% confidence level (Collis & Hussey, 2009). Consequently, if the findings are below the benchmark of 0.05, the data significantly differ from a normal distribution (Krishnan, 2006).

The study also tested for the presence or absence of heteroscedasticity via the Breusch-Pagan test. If the p_{value} is less than 5% level of significance, then it can be deemed to be present whereas if it was more than 5% level, then it may be deemed present. If present, the study would then use robust standard errors. For multicollinearity, the study further employed VIF test where if VIF values were less than 10 which is considered to be a threshold beyond which collinearity would be reported. In this case, if there was no collinearity hence the researcher would be bound to proceed, and if otherwise, then one of the correlating variables will be dropped or differencing may be applied till the error is corrected.

3.11 Inferential Statistics

Inferential statistics refer to the process of analysing data for the purpose of inferring based on the properties of the underlying distribution (Corbin et al., 2015). Inferential statistical analysis sets base for deriving estimates of population in the form of hypotheses testing by assuming that the sampled is representative. Corbin and Strauss (2015) opined that inferential statics are two-fold. The first is to identify commonalities and create codes, and the second is to reduce the volume of information for ease of management and interpretation. The objective of regression is to explain the variation of an observable variable based on the variation of latent variables in order to explain the significance of construct influence.

The data analysis, therefore, sought to test the existence of direct and joint effects of latent and observed variables. In the framework model entrepreneurial orientation, business incubation and firm strategy are predictors of performance of start-ups. The EO → BIN→ BS relationship is that of explanatory variables. The use of Statistical Package for Social Sciences (SPSS) and STATA software to analyse data were preferred.

The procedure involved converting the study theoretical framework into STATA graphics and analysing the data. The measurements of latent constructs were validated using confirmatory factor analysis (CFA) procedure. Once the latent constructs are validated, the researcher used path analysis to establish casualties and correlation effects. To demonstrate the relationships in the study model, structural equation modelling (SEM) was used for analysis. SEM is a powerful analytical tool of the second generation that is used to test latent variables and their interrelationships. Although SEM was originally developed for

use in genetics as a statistical instrument for assessing theoretical and conceptual models and/or testing empirical relationships, it has gained momentum and prominence in other fields (Shanmugam & Marsh, 2015). In a single comprehensive run, SEM can evaluate multiple variables and their connections. It also enables the researcher to simulate the interrelationships between manifest and latent constructs. It was utilised to evaluate the measurement model, confirm the fit of the model, and to verify the construct's convergent and discriminant validity.

In order to estimate the predicted models, the study did undertake some key diagnostic tests including test for normality using Shapiro Wilk test, multicollinearity test using VIF test, and heteroscedasticity test using Breusch-Pagan test. Respective remedies were applied in the event of any failure of adherence to such assumptions.

3.11.1 Hypothesized Test Model

The hypothesised statistical test model presented in figure 3.1 shows how key latent variables, entrepreneurial orientation (EO), business incubation (BIN) and business strategies, and explanatory variable performance of start-ups (PS) were tested. SEM is the most preferred method when using multivariate data.

Structural-equation model is an extension of factor analysis whose methodology is designed primarily to test theoretical underpinnings from empirical data. Structural-equation model (SEM) is a system of linear equations among several unobservable constructs and observed variables. An SEM is composed of two parts: a structural part, linking the constructs to each other (usually, this part expresses the endogenous or

dependant constructs as linear functions of the exogenous or independent constructs), and a measurement part, linking the constructs to observed measurements.

The results of the CFA analysis indicate that each construct of the research model has a strong reliability, convergent validity, and discriminant validity. Therefore, it is suitable for the study to use an SEM structural model in this section (figure 6). Structural equation modelling (SEM) was utilized to analyze, firstly, the measurement model and, secondly, estimate the structural model and test the proposed research hypotheses.

The second part resembles a confirmatory factor analysis model. The interconnectedness of the constructs is presented in figure 3.1.

Figure 3.1: Hypothesized Structural Model
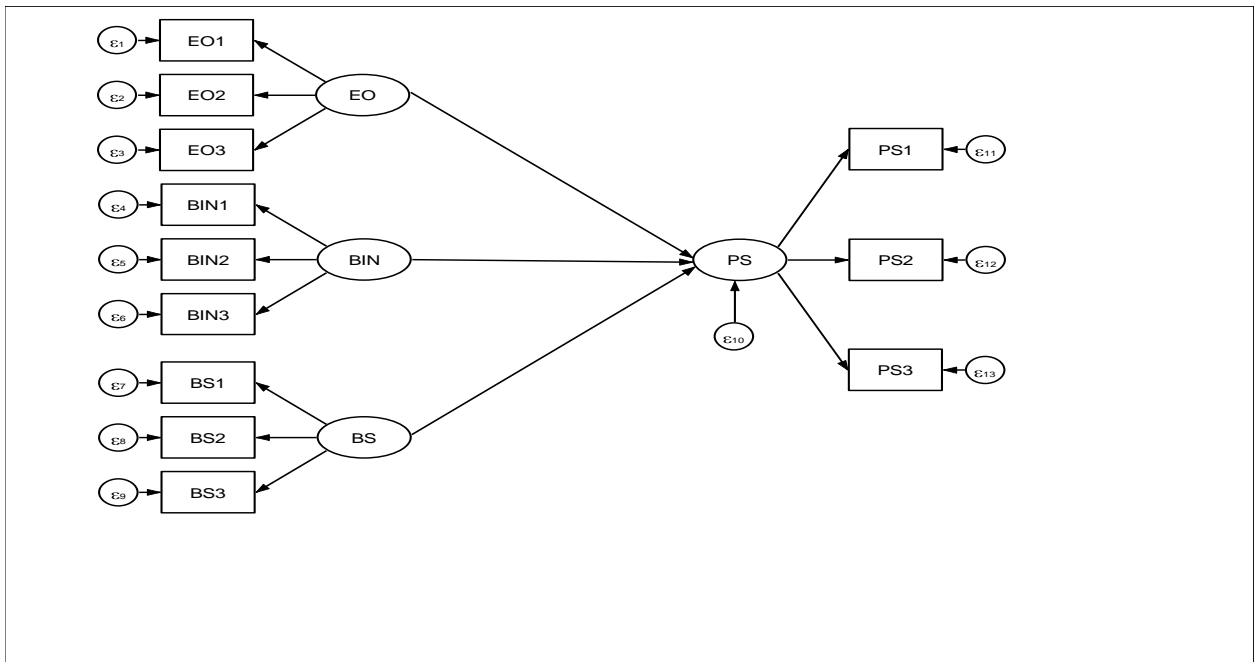
Source: Author, (2022)

The model labels entrepreneurial orientation (EO) being represented by three dimensions' sub constructs; innovativeness dimension (ID), risk-taking dimension (RTD) and proactiveness dimension (PAD). The latent variable business incubation (BI) is represented by; mentorship (ME), networking (NE) and absorption capacity (AC). Further the model represents another latent variable as business strategies/Product Market Expansion Grid (BS/PMEG) measured by diversification (BS1), market penetration (BS2) and product development (BS3). Finally, the observable variable is performance of start-ups (PS) measured by survival rate (SR), financial returns (FR) and job creation (JC). Three structural sub - models that is; entrepreneurial orientation sub model, business incubation influencing effect sub model and business strategies influencing effect sub model were developed and analysed separately to confirm the independent effect of each on performance of start-ups, thereafter the overall model was assessed, refined and fitted to conclude on the findings.

3.11.2 Analytical Model

An analytical model is a well-designed framework intended to translate quantitative data in nature, and use it to answer a specific research question. Different types of analytical models may be used to address different aspects of the research objectives such as to measure performance, level of reliability and validity. This study applied structural equation models (SEM) to analyse data and deduce conclusions. SEM uses more than one measurement model and a structural model. The measurement model defines the relationships between observed variables and latent (unobserved) variables. The latent (unobserved) variables are hypothesized to be measured within the measurement model. The measurement model allows the researcher through confirmatory factor analysis (CFA)

to evaluate how well the observed variables combine to identify underlying hypothesized constructs.

According to Gerbing and Anderson (1992) Confirmatory Factor Analysis (CFA) may be used to test the measurement model before estimating the full structural model. This test and determines if indicators load on specific latent variables as proposed and if any indicators do not load as expected. The indicators may load on multiple factors instead of loading on a single factor and may fail to load significantly on the expected factor. The summary of data analysis and hypothesis testing and how the results is threated is table 3.6 below.

Table 3.6: Summary of Data Analysis and Hypothesis Testing and Interpretation of Results

Objective	Hypothesis	Analysis Techniques	Interpretation
Objective one: Establish the relationship between entrepreneurial orientation and performance of start-ups	H_{01}: The relationship between entrepreneurial orientation and performance of start-ups is not significant.	Structural Equation Modelling (SEM Analysis)	Chi Square (df) Prob P < 0.05 GFI (Goodness-of-Fit Index) ≥ 0.90 RMSEA (Root Mean-Square Error of Approximation) ≤ 0.05 is good ≤ 0.08 is adequate CFI (Comparative Fit Index) and TLI (Tucker-Lewis Index) > 0.90 - Good model fit
Objective Two: Determine the relationship between business incubation and performance of start-ups	H_{02}: The relationship between business incubation and performance of start-ups is not significant.	Structural Equation Modelling (SEM Analysis)	Chi Square (df) Prob P < 0.05 GFI (Goodness-of-Fit Index) ≥ 0.90 RMSEA (Root Mean-Square Error of Approximation) ≤ 0.05 is good ≤ 0.08 is adequate CFI (Comparative Fit Index) and TLI (Tucker-Lewis Index) > 0.90 - Good model fit
Objective Three: Ascertain the relationship between business strategies and performance of start-ups	H_{03}: The relationship between business strategies and performance of start-ups is not significant	Structural Equation Modelling (SEM Analysis)	Chi Square (df) Prob P < 0.05 GFI (Goodness-of-Fit Index) ≥ 0.90 RMSEA (Root Mean-Square Error of Approximation) ≤ 0.05 is good ≤ 0.08 is adequate CFI (Comparative Fit Index) and TLI (Tucker-Lewis Index) > 0.90 - Good model fit
Objective Four: Establish the combined influence of entrepreneurial orientation, business incubation, business strategies on performance of start-ups in Nairobi City County.	H_{04}: The combined influence of entrepreneurial orientation, business incubation and business strategies on performance of start-ups is not significant.	Structural Equation Modelling (SEM Analysis)	Chi Square (df) Prob P < 0.05 GFI (Goodness-of-Fit Index) ≥ 0.90 RMSEA (Root Mean-Square Error of Approximation) ≤ 0.05 is good ≤ 0.08 is adequate CFI (Comparative Fit Index) and TLI (Tucker-Lewis Index) > 0.90 - Good model fit

3.12 Ethical Considerations

Mugenda and Mugenda (2003) argued that a researcher must be cautious when conducting a research to prevent causing physical or psychological harm to respondents by asking humiliating and inane questions, using violent language, or leaving respondents anxious.

Sommer and Sommer (1997) also suggested that there ought to be ethical considerations such as secrecy, identity, and the avoidance of fraud in social research as these are crucial issues.to ensure ethical issues were complied with, permission was first secured from the study site, i.e., the numerous incubation centres, where a formal request for clearance to conduct the research was submitted. The other clearance sought was from the School of Business, University and National Commission for Science, Technology, and Innovation, a government agency whose responsibilities include approving scientific research conducted in Kenya.

CHAPTER FOUR

DATA ANALYSIS, INTERPRETATION AND PRESENTATION

4.1 Introduction

This chapter entails: the research response rate, demographic characteristics, as well as diagnostic tests. In addition, descriptive and inferential analysis of the data collected is presented. Descriptive analysis is presented in a manner where objectives are systematically addressed.

4.2 Response Rate

Response rate also occasionally referred to as return rate (Dvir, et al., 2018) is the number of people who successfully answered the questionnaire expressed as percentage of those contacted to respond. In marketing research, it refers to refer to the number of people who responded to an offer without necessary tagging it to percentage. Response rates have previously been viewed as an important indicator for quality research (Aday 1996). It is also worthy to note that there is cost implications in research. It is presumed (Babbie (1990) that the higher the response rates the more accurate survey results.

In this study the researchers anticipated 257 respondents as calculated in section 3.5.1 from business incubators namely, ihub, Strathmore University, C4Dlab (University of Nairobi), Chandaria - BIIC (Kenyatta University) and Nairobi Industrial and Technological Park. However, 210 respondents fully filled the issued questionnaire and returned them, leading to a response rate of 81.71% which was dequate to facilitate an insightful analysis (see table 4.1 and figure 4.1). Only 18.29% of the targeted sample did not fully fill the issued questionnaires or did not consent to fill the research tool. According to Nachmias and

Nachmias (2004), 50% and above response rate is satisfactory especially if there are challenges or existence of inevitable circumstances such as COVID-19. This response rate is further supported by (Creswell & Creswell, 2017) who propose 70-85% response rate as good enough.

Table 4.1: Study Response Rate

Response	Total	Percentage
Returned Questionnaires	210	81.71%
Unreturned Questionnaires	47	18.29%
Issued Questionnaires	257	100%

Source: Researcher (2022)

Empirical evidence stipulate consequences of lower response rates in regards to accuracy and reliability of the outcome of the study (Choung et al. (2013). The study observed 52% response rate from a random sample of 428 mailed questionnaire about functional gastrointestinal disorders and considered the result as more accurate. Interestingly, Visser, Krosnick, Marquette and Curtin (1996) achieved a more accurate results with lower response rate of 20% than higher response rate of 70%.

Yin (2017) opined that response rates are used to measure the quality of data and that low responses will result in bias conclusions. Response rates provide an important measure for surveys where low response rates affect the reliability and validity of analytical estimates and inferential statistics. According to Yin (2017) a response rate category of 50% is satisfactory, 60% is good, and above 70% is a I very good category. In this study, the response rate was 81.71%, which means the data is in the "very good" category.

Figure 4.1: Response Rate
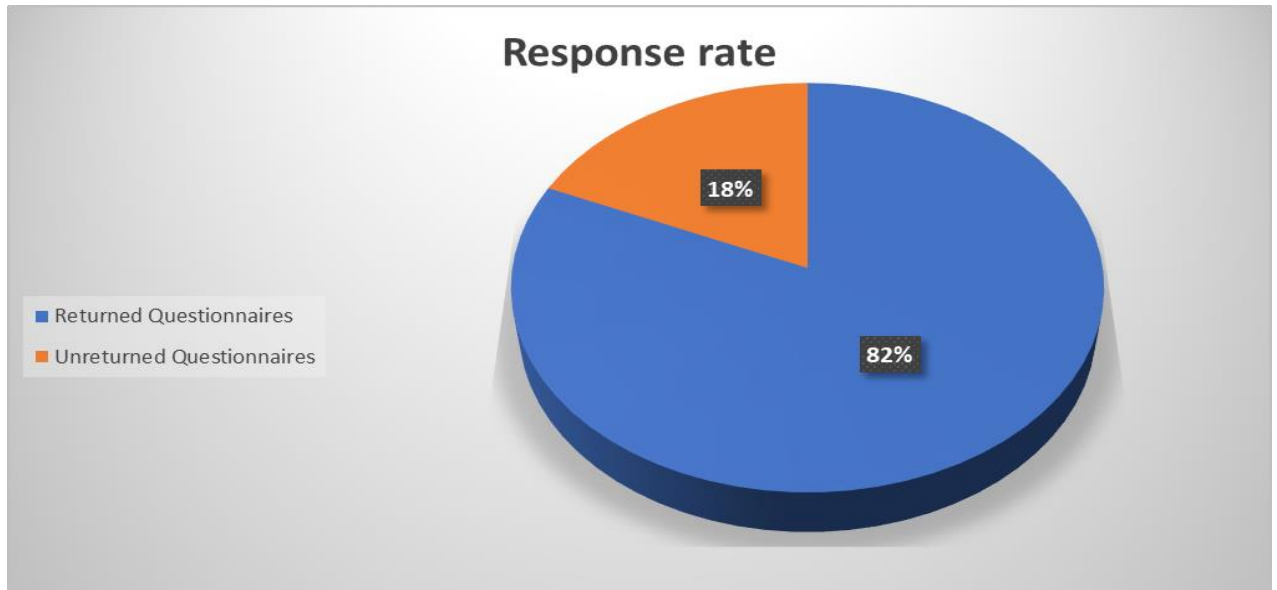
4.3 Sociodemographic Statistics

Sociodemographic statistics refer to characteristics of a population of the study such as age, race, sexual orientation, ethnicity, income, gender, education, and marital status. The importance of understanding Sociodemographic status of the study is to deduce important likely influence of the study results. The differences between male and female indicate the level of participation that will help align policies and strategies that affect decision on market segments.

The study sociodemographic characteristics provided basic features of the respondents in terms of gender balance, business registration and age of the enterprises. In terms of gender balance, the respondents comprised 51.4% male and 48.6% female. This proportionate imply male gender dominate business in Nairobi City County than women. The general business conditions in the capital are extremely competitive, technological and risky.

Data collected and evaluated in terms of gender for startups from ihub, Strathmore University, C4Dlab (University of Nairobi), Chandaria - BIIC (Kenyatta University) and Nairobi Industrial and Technological Park business incubators, majority (51.4%) of the business owners were male while the minority (48.6%) were female.

Table 4.2: Gender Balance of Respondents

Gender	Frequency	Percentage
Female	102	48.6
Male	108	51.4
Total	210	100.0

Source: Field Data (2022).

Figure 4.2: Gender Proportion
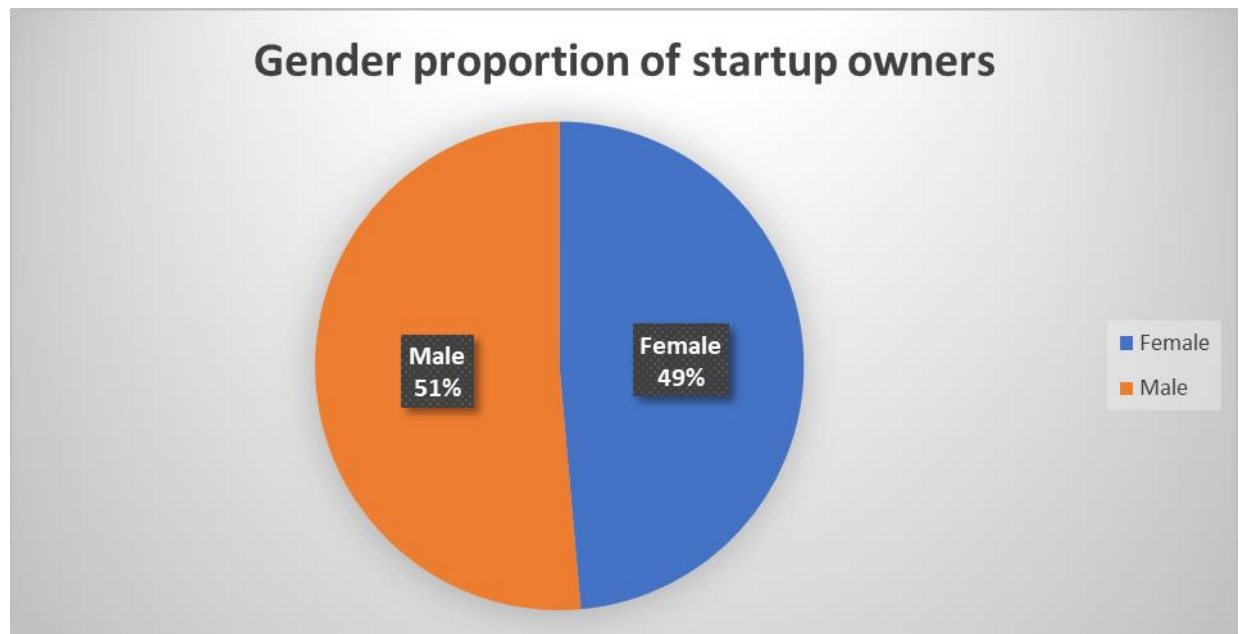
According to Nafukho and Muyia (2010) the characteristics of entrepreneurs together with micro and small-scale women-owned enterprises in Central and North Meru district in

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Kenya. In addition, Mwobobia (2012) while examining small-scale women entrepreneurs' challenges in Kenya, arrived at the same solution.

In terms of registered business startups from the business incubators, a huge percentage (94.3%) of them were registered, while a handful (5.7%) were not registered. In analysing prospects and problems of Small and medium enterprises (SMEs) in Nigeria, Onugu (2005) revealed that large manufacturing companies were more likely to be registered compared to SMEs. The registration status of business start-ups is as depicted in table 4.3 below.

Table 4.3: Status of Startup Registration

Registration Status	Frequency	Percentage
Not Registered	12	5.7
Registered	198	94.3
Total	**210**	**100.0**

Source: Field Data (2022).

While Ries, (2011) define startup as human institution designed to create new products and services under conditions of extreme uncertainty, a reputable institution such as the Ministry of Commerce and Industry of India's (2016) defines startup as an entity up to five years old from the date of incorporation and is involved in development, innovation, deployment, and commercialisation of new products, processes, or services driven by technology or intellectual property. This definition lays emphasis on age from the birth of startup and generally in agreement with European Startup Monitor (2015) who also lay their identification of startups by age of establishment (ESM, 2015) being less than 10 years (Steigertahl, et al., 2018).

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On the basis of age, the largest portion of startup who responded were in operation between 5 to 6 years being (35.2%) followed by 3-4 years old comprising of 31% and below 2 years comprised 21%. The smallest port of 12.9% have been in operation for between 7 to 8 years. According to a study by Naibei, Momanyi and Oginda (2012) on the relationship between income size, inspection and VAT compliance among the private firms in Kenya, also coincidently found that 35.2% of the businesses had been registered within the last five years. The distribution in terms of number of years in operation is as presented in table 4.4 and figure 4.3 below.

Table 4.4: Age of the Study Respondents

Years	frequency	%
Below 2 Year	44	21.0
3 to 4 Years	65	31.0
5 to 6 Years	74	35.2
7 to 8 Years	27	12.9
Total	**210**	**100.0**

Source: Field Data (2022).

Figure 4.3: Age of the Study Respondents

No of years in Business
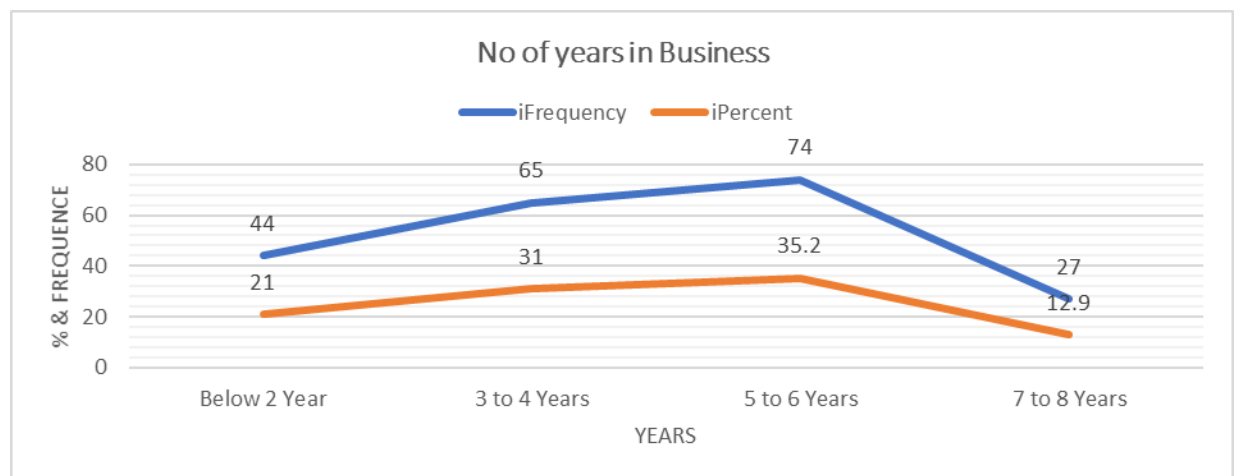
4.4 Diagnostic Tests

This section provides diagnostic test results that are the normality test, heteroscedasticity test, and multicollinearity test. The tests are to validate the estimates to be developed under linear regression.

4.4.1 Normality tests

Tests of normality are done to establish whether data set collected is modelled correctly and normally distributed so as to measure research variables well. Research variables that are not correctly distributed may lead to prejudiced relationship and test for significance may not be achieved. Normality tests are important because they provide a stand point to draw a reliable conclusion. Among the normality tests undertaken include Shapiro-Wilk test and Skewness/Kurtosis tests.

4.4.2 Shapiro-Wilk test

Shapiro–Wilk test is used for testing null hypotheses. It assures that data is independent and identically distributed and normal (Shapiro and Wilk, 1965). This test applies parameters such as t-tests to analysis the variance and it assumes that variables are normally distributed. The Kolmogorov-Smirnov test is an alternative to Shapiro-Wilk test. The Shapiro-Wilk test was performed to determine if the research variables were normally distributed. The Kolmogorov-Smirnov test is employed for large sample sizes, whereas the Shapiro-Wilk test is better suited for small sample sizes of fewer than 50, according to Collis and Hussey (2009).

The purpose of Shapiro-Wilk test is to check if data for continuous variable normally distributed. The null hypothesis (H0) stated that there is Entrepreneurial Orientation,

business incubation, business strategies singly and combined do not influence performance of startups. The alternative hypothesis (H1) states that, Entrepreneurial Orientation, business incubation, business strategies singly and combined influence performance of startups.

Table 4.5: Data Normality Test

Shapiro-Wilk W test	H₀: Normality	H₁: Non-Normality	
Variable	Observations	W	Prob>z
Entrepreneurial Orientation	210	0.92426	0.000
Business Incubation	210	0.91292	0.000
Business Strategies	210	0.97376	0.001
Performance of Start-ups	210	0.97364	0.001

Field Data (2022)

Under Shapiro-Wilk test, the significance of the normality evaluation is shown by Pvalues greater than 0.05 at 95% confidence level (Collis & Hussey, 2009; Ary et al., 2010). If the results are below the threshold, the data is said to deviate significantly from a normal distribution (Krishnan, 2006). As is indicated in table 4.5 above, the null hypothesis of normality was rejected because Pvalues of the respective constructs are less than 0.05. Further, the results depicted that entrepreneurial orientation, business incubation, business strategies and performance of start-ups had Pvalues of 0.000, 0.000, 0.001 and 0.001 respectively necessitates the rejection of all null hypothesis, implying that entrepreneurial orientation, business incubation, business strategies and performance of startups constructs are statistically following a non-normal distribution.

Sour Hence, entrepreneurial orientation, business incubation, business strategies, and performance of start-ups constructs are statistically non-normally distributed, so validate the adoption of SEM. The null-hypothesis of this test is that the population is normally

distributed. Thus, the Pvalue is less than the chosen alpha level and therefore null hypothesis is rejected and the alternative taken. There is evidence that the data tested are normally distributed.

4.4.3 Skewness and Kurtosis Test

Skewness is a descriptive statistic that is used in conjunction with the histogram and the normal quintile plot to provide characteristic of how the data is distributed see table 4.6 below. Skewness indicates the direction and relative magnitude of a distribution's deviation from the normal distribution.

Evaluating normality using skewness and kurtosis, the table below depict the respective variable's skewness and kurtosis probability values. Skewness is a measure of symmetry, or more precisely, the lack of symmetry. A distribution, or data set, is symmetric if it looks the same to the left and right of the centre point. Kurtosis is a measure of whether the data are heavy-tailed or light-tailed relative to a normal distribution.

Table 4.6: Skewness and Kurtosis Tests

```
                 Skewness/Kurtosis tests for Normality
                                                      ——— joint ———
     Variable  |      Obs  Pr(Skewness)  Pr(Kurtosis) adj chi2(2)   Prob>chi2
     ──────────┼────────────────────────────────────────────────────────────
           EO  |      210     0.0000        0.7708       19.09        0.0001
          BIN  |      210     0.0000        0.0031       35.09        0.0000
           BS  |      210     0.7579        0.0000       16.60        0.0002
           PS  |      210     0.2531        0.0000       25.47        0.0000
```

 Source: Field data, (2022).

In terms of skewness, the results from the table above depicted that entrepreneurial orientation, business incubation, business strategies and performance of start-ups had

P(Skewness) of 0.000, 0.000, 0.7579 and 0.2531. The P (Skewness) less than 0.05 indicates that entrepreneurial orientation and business incubation are non-normally distributed, as it necessitates the rejection of the null hypothesis. However, P (Skewness) greater than 0.05 indicates that business strategies and performance of start-ups are normally distributed, since the study fails to reject the null hypothesis of normality.

The results of kurtosis test depicted that entrepreneurial orientation, business incubation, business strategies and performance of start-ups had P (Kurtosis) of 0.7708, 0.0031, 0.000 and 0.000. The P (Skewness) greater than 0.05 indicates that entrepreneurial orientation is normally distributed, as it necessitates the failing to reject the null hypothesis. However, P(Skewness) less than 0.05 indicates that business incubation, business strategies and performance of start-ups are non-normally distributed, since the study rejects the null hypothesis of normality. The test result of probability values of both skewness and kurtosis were as follows; prob>chi2 (entrepreneurial orientation, 0.000, business incubation 0.000, business strategies 0.000 and performance of start-ups), 0.000) for the respective variables (and which were less than 0.05 implied that the null hypothesis be rejected. Thus, entrepreneurial orientation, business incubation, business strategies and performance of start-ups are non-normally distributed. Hence, entrepreneurial orientation, business incubation, business strategies, and performance of start-ups constructs are statistically non-normally distributed, validating the adoption of SEM.

4.4.4 Heteroscedasticity Test

The word "heteroscedasticity" comes from the Greek word 'hetero-skedasis' whose hetero means different and skedasis dispersion. When used in statistics it means different data

dispersion. Heteroscedasticity dispersion of data is the opposite of homoscedasticity. Homoscedasticity refer to same scatter of data while Heteroscedasticity refer to different scatter. Heteroscedasticity is tested via he Breusch-Pagan test which creates a statistic called chi-squared. For data to be correctly distributed Breush-Pagan test statistic should be =7.18 or p-value < 0.05. Heteroscedasticity test done yielded the following results as given in table 4.7 below.

Table 4.7: Heteroscedasticity Test

```
Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
        Ho: Constant variance
        Variables: fitted values of PSS

    chi2(1)      =     10.27
    Prob > chi2  =     0.0014
```

Source: Field Data (2022)

The test result revealed chi squared of 10.27 being greater than 7.18 and Pvalue of 0.0014 being less than 0.05. The study tested presence or absence of heteroscedasticity via the Breusch-Pagan test. From the findings, it was found not to exist since the pvalue was less than 5% level of significance. This finding is the same as that obtained by Munene (2018) who stated that a significant Pvalue implies homoscedasticity. In this case, the null hypothesis was homoscedasticity and was rejected.

4.4.5 Multicollinearity Test

Multicollinearity refer to the occurrence of inter-correlations among two or more latent variables in a multiple regression model. Where Multicollinearity exists, the relationship will be skewed and results misleading. Test for multicollinearity attempts to determine

how well each of independent variable may be applied effectively to predict or understand the dependent variable in a statistical model.

Multicollinearity test was undertaken to check if the latent variables of the study are correlated. The latent variables under consideration are the entrepreneurial orientation, business incubation and firm strategy. The purpose was to determine how well the study variables were configured to effectively predict the performance of start-ups in Nairobi city County. Multicollinearity tests where skewed results are obtained help the researcher to decide how well every factor was utilised to comprehend the viability of response in a statistical model. According to Young (2017) Pearson correlation coefficient value of 0.8 indicates the likelihood of existence of multicollinearity.

Table 4.8: Multicollinearity Test

Variable	VIF	1/VIF
BINN	2.07	0.483592
EOO	1.85	0.539263
FSS	1.50	0.665797
Mean VIF	1.81	

Source: Field Data (2022)

Key: VIF = Variance Inflation Factor

Variance inflation factor (VIF) was used to estimate the amount of variance of regression coefficient to be inflated if the independent variables are correlated. The study findings indicate VIF values less than 10 which was considered to be a threshold beyond which collinearity was to be reported. The test results are as depicted in Table 4.8 above. From the finding, there was no collinearity hence the researcher was bound to proceed.

According to Orayo and Mose (2016), a VIF value of less than 10 indicated no collinearity whereas a VIF value of more than 10 indicated presences of multicollinearity. The same notion was fronted earlier by Nachmias and Nachmias (2004).

4.5 Descriptive Statistics for the Study Variables

Descriptive statistics for the study variables were done so as to determine the scores met the threshold of goodness of fit criteria (Saunders et al., 2007). This study computed and analysed mean scores and standard deviation and the results were interpreted as provided for by Field (2006). According to field (2006) mean scores indicate the summary of the data collected and its standard deviation measure on estimation in the sampling distribution. The following section explains descriptive statistics for entrepreneurial orientation, business incubation, firm strategy, and performance of start-ups. This study evaluated iHub, Strathmore University, C4Dlab (University of Nairobi), Chandaria-BIIC (Kenyatta University) and Nairobi Industrial and Technological Park business incubators' level of agreement with the postulated statements under tables 4.9 to 4.14 below.

4.5.1 Descriptive Statistics for Entrepreneurial Orientation

The study considered descriptive statistics for entrepreneurial orientation using the characteristics identified by Miller's (1983) as observables. Millar opined that entrepreneurial orientation is observed through its Risk taking, innovative and pro-activeness. It is based on these characteristics that the measurement framework was developed. However, aggressiveness and autonomy were deemed to have close connectivity with pro-activeness and they are not included in the measurement model (Dess & Lumpken, 2005).

Innovativeness refer to entrepreneurial creativity in product or service delivery. Innovativeness may refer to new and better channels of distribution or use of technology. Risk-taking dimension of entrepreneurial orientation is demonstrated when a firm makes a bold decision to either take business into new territories or invest huge sums of money on ventures with unpredictable returns (Wiklund & Shepherd, 2005).

The entrepreneur demonstrates ability for risk-taking when his start-up makes a bold decision to either take the business into new territories or invest huge sums of money on ventures with unpredictable returns. Starting a new business is the best example where risk taking decisions are demonstrated. Persons with no business experience are unlikely to start a new business unless they have entrepreneurial orientation. Start-ups face unpredicted pressure from mature and more experienced firms across the world.

Proactiveness dimension of entrepreneurial orientation was considered as tendency to anticipate and act on future needs rather than reacting to events after they unfold. An organization is perceived to be proactive, hence entrepreneurial orientation, if it adopts an opportunity seeking behavior.

The purpose of this assessment was to establish the influence of entrepreneurial orientation on performance of start-ups in Nairobi City County using proactive dimension. The study applied a scale of 1-5 questionnaire where respondents were required to rate 1 to mean strongly disagree, 2, disagree, 3, Indifferent (neither agree nor disagree), 4, agree, and 5, strongly agree. The purpose of the assessment was to establish the influence of entrepreneurial orientation on performance of start-ups Nairobi City County. The result of responses is presented on table 4.9 below.

Table 4.9: Innovative Dimension

Characteristics	N	Mean	Std
Our firm/start-up performance on survival, finances and creation of employment is influenced by innovative characteristic of entrepreneurial orientation.	210	3.83	.39
Our firm/start-up performance on survival, finances and job creation is influenced by risking dimension of entrepreneurial orientation.	210	3.77	.31
Our firm/start-up performance on survival, finances and job creation is influenced by pro-activeness dimension of entrepreneurial orientation.	210	3.59	.27

Source: Field Data (2022)

This study sought to determine the influence of Innovative dimension of entrepreneurial orientation on performance of start-ups. Innovativeness dimension refer to entrepreneurial creativity in product or service delivery as well as new and better channels of distribution or use of technology. Three questions were supplied to each of the 210 respondents where each question contained three set of opinion on start-up performance variables of survival rate, financials and lastly creation of employment. The respondents were required to use a scale of 1 to 5 to state whether they agree with the statement where: 1 meant strongly disagree, 2, disagree, 3, Indifferent (neither agree nor disagree), 4, agree, and 5, strongly agree. The objective of the study was to establish the influence of entrepreneurial orientation on performance of start-ups in Nairobi City County.

Innovative dimension scored mean rate of 3.83 with standard deviation of 0.39, risk taking dimension scored mean of 3.77 with standard deviation of 0.31 and pro-activeness mean of 3.57 with standard deviation of 0.27. The start-ups created by graduates of iHub, Strathmore University, C4Dlab (University of Nairobi), Chandaria - BIIC (Kenyatta University) and Nairobi Industrial and Technological Park business incubators were in

concurrence that innovative dimension of entrepreneurial orientation explains more on performance of start-ups in Nairobi City County.

The result of the present study conformed with Robinson et al. (2014) who performed a causal effect relationship experiment for the performance of a business incubator and established significant influence of business incubation on entrepreneurial orientation, specifically linking strategy making and performance of start-ups to network value and absorptive capacity (Stubberrud, 2016).

4.5.2 Descriptive Statistics for Business Incubation

Business incubation is training given to interested incubatees normally at incubational centres for purpose nurturing the entrepreneurs' vision to start a business, grow existing ones or cushion them from perishing. Business incubation programs promote innovations and growth of new business and are designed to add value to incubatees in order to increase their absorption capacity. The programs activate internal linkages and sharing of knowledge between firms (Belitski, Caiazza, and Lehmann 2021). The programs help the incubatees to link external organisations and individuals making it possible to access information that is vital for the present and future periods. The knowledge and reputation acquired by the incubatees help them manage customers', suppliers, competitors, and institutions interest which would otherwise be hard and costly to attain in the market (Spithoven & Teirlinck, 2015). Business incubation has the ability to reduce risk by linking start-ups to other networks thus accessing valuable information including how and where to access affordable credit (Kitagawa et al., 2012). Salvador et al. (2011) claimed that firms associated with incubator programs have a better risk rating index.

The major activities of business incubation include Mentorship, Networking, and Absorption capacity. The purpose of assessing these three business incubation variables is determining the influence of business incubation on performance of start-ups Nairobi City County. The items for the respective sub constructs were explored in terms of their mean and the standard deviation to show the distribution. Each of the results for Mentorship, Networking and Absorption capacity business incubation activities are presented on tables and the interpretations thereafter.

Mentorship is an important tool in business incubation process where an assistance is provided and analyzed as one of the three ways aimed at helping develop entrepreneurial skills that will enhance start-up performances. Business incubation is perceived to deliver its services through mentorship. The main purpose of incubational service providers is to help start-up businesses grow and succeed by linking incubatees to other resources such as expertise, financials, customers and suppliers all at relatively cheaper costs. Bollingtoft and Ulhoi (2012) describe networking between incubatees and agents as mutual trust than formal contracts and it catalyses the formation of a relationship. This is supported by the findings of Cooper et al. (2012) about the relationship between motivations and obstacles of networking.

Absorptive in the study of performance of start-ups refer to the ability to recognise, assimilate, new technology or scenario in the market and apply (Birech, et al., 2018). It may also refer to the measure of the rate at which a start-up learn other important knowledge that exists outside their routine businesses itself. According to Gimenez-Fernandez, Sandulli and Bogers (2020), business incubation is an ideal intervention for the

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provision of start-up services which include managerial skills, use of technology, mentorship in innovations, strategy making, business networking, cost reduction through rental sharing, and expansion of absorption capacity.

The study applied a scale of 1-5 questionnaire to the respondents to evaluate the influence of mentorship performance, networking and absorption where 1, meant strongly disagree, 2, disagree, 3, Indifferent (neither agree nor disagree), 4, agree, and 5, strongly agree. The target respondents were start-ups created by graduates from iHub, Strathmore University, C4Dlab (University of Nairobi), Chandaria - BIIC (Kenyatta University) and Nairobi Industrial and Technological Park, The result is presented on table 4.10 below.

Table 4.10: Business Incubation

Business incubation observables measurements	N	Mean	Std
Our firm/start-up performance on survival, financials and job creation is influenced by Mentorship service during business incubation process.	210	3.27	0.53
Our firm/start-up performance on survival, financials and job creation is influenced by Networking service provided during business incubation process.	210	3.69	.46
Our firm/start-up performance on survival, financials and job creation is influenced by increasing of absorption capacity provided during business incubation process.	210	3.64	.48

Source: Field Data (2022)

The purpose of this assessment was to establish the influence of Business incubation on performance of start-ups in Nairobi City County. Among other things, business incubation supports the establishment of start-ups, increase financial performance and job creation.

The respondents generally concurred that business incubation supported the establishment of start-ups with mentorship mean of 3.27 with standard deviation of 0.53, network service

mean of 3.69 with standard deviation of 0.46 and absorption capacity building mean of 3.64 with standard deviation of 0.48. Networking service were accounted more than other services for the performance of start-ups created by graduates of iHub, Strathmore University, C4Dlab (University of Nairobi), Chandaria - BIIC (Kenyatta University) and Nairobi Industrial and Technological Park business incubators were in agreement that risk -taking dimension of entrepreneurial orientation influence performance of start-ups.

This study was underpinned on social network theory where performance of start-ups is deemed to be best explained by business incubation. Indeed, networking accounted highest among the services offered during business incubation. The findings agree with the findings of Al-Mubaraki et al. (2010) who indicated that business incubation programs are model tools for start-up acceleration and significantly influence entrepreneurial development. According to Tsai et al., (2009), lack of customers and reliable suppliers are the greatest cause of startup failures. Lack of perfect knowledge about sources of affordable credit in business forms another impediment to startup success. It is advised Al-Mubaraki and Busler (2013) that lessons learnt at the incubation process forms part of the business operations database.

The findings also conform to Birech, Karoney and Alang'o (2018) who asserted that Business incubation provides an interactive framework for young entrepreneurs to enhance their networking and expansion of absorption capacity while business strategies is precursor for skills for reorganisation of diversification and Market penetration to match Market and product development strategies for guaranteeing favourable performance of start-ups.

4.5.3 Descriptive Statistics for Business Strategies

Business strategies or Product Market Expansion Grid (PMEG), also called the Ansoff Matrix (AM) is a tool for investor choice when evaluating the alternative ways to enter the market or grow startups. The alternatives involve new and existing products, new and existing markets, and the risk associated with each possible choice. The matrix aids growth plans through the introduction of existing or new products, in existing or new markets. Although developed as early as 1957, business strategies developers use it as a rule of the thumb when deciding which strategy to adopt. According to Amatulli and Guido (2011), product market expansion grid is one of the best models applicable for to new business facing uncertain future in the market.

A business strategy (Product/Market Expansion Grid) is a plan or set plans which are competitive in nature. The moves and actions that a business entity takes to attract customers, compete successfully, influence performance, and achieve targets. Based on skill and knowledge, business strategies (Product/Market Expansion Grid) outlines alternatives options on use of business to reach the desired ends. According to Ansoff (1957) model, business strategy is discussed under four sub-constructs namely Product Diversification, Market penetration, Market development and product development.

The study considered descriptive statistics for business strategies construct under three dimensions or sub-constructs namely diversification, market penetration and product development. A business strategy is evaluated under the subheadings of diversification, market penetration as well as product development. This study considered and adopted the argument by Dulaney and Ziobro (2016) that product development and market

development have similar alternative application hence are used interchangeably in research. Based on the argument, the items for the respective sub-constructs of product diversification, market penetration and market development were assessed in terms of their descriptive statistics. Each of the results for assessment are presented on table 4.11 below and the interpretations discussed thereafter.

Product diversification strategy is a move employed by an enterprise intended to increase enterprise profitability and achieve higher sales from new products. Diversification may occur at the business level or corporate level. Thompson (1997) claim that good number of small enterprises suffer from lack of product diversification much needed to serve a wider market. Aichner and Coletti (2013) pointed out that new products on new markets will require diversification business strategies so that both the product and market are put to perspective. This basically means that data is not available for analysis on consumer preferences because all situations are new. It is therefore established through that diversification places new firms on competitive advantage on local markets (Aichner & Coletti, 2013).

Market penetration Strategy is applied when product is new, but the Market is old (Ansoff, 1957). Many small enterprises work towards higher market share using existing products in existing markets. The focus is to increase sales among people already in the market. Market penetration strategy faces internal and external constrains. The common internal constrains include funding for advertisement and skills necessary to diagnose and compete on the existing market. The external constrains include market changes, competition and unfavourable new government policy.

Market development strategy refer to a plan of action applied where old product is presented to new market. Entry to the new market strategy is a planned activity for either distribution of goods and services or delivery method of the said goods or services to a new target market. The Kenyan economy is a market-based economy with a few state enterprises. The present study set an objective to ascertain the influence of business strategies on performance of start-ups in Nairobi City County. Three questions were administered requiring the respondents' stated performance of start-up on survival, financials and creation of employment at Nairobi City County. The questionnaire applied a scale of 1-5 rated as 1 to meant strongly disagree, 2, disagree, 3, Indifferent (neither agree nor disagree), 4, agree, and 5, strongly agree. The result is presented on table 4.11

Table 4.11: Business Strategies (Product/Market Expansion Grid)

Product/market expansion grid	N	Mean	Std
Our firm/start-up performance on survival, Financial and employment is influenced by product diversification business strategies	210	3.66	.48
Our firm/start-up performance on survival, Financial and employment is influenced by Market Penetration Strategy	210	3.74	.45
Our firm/start-up performance on survival, Financial and employment is influenced by Market Development business Strategy	210	3.53	.43

Source: Field Data (2022).

Descriptive statistics shows that diversification business strategy had a mean score of 3.66 with standard deviation of 0.48 while Market Penetration business strategy had a mean score of 3.74 with standard deviation of 0.45 and Market Development Strategy mean score of 3.53 with standard deviation of 0.43. Descriptive statistics for start-ups created by graduates of iHub, Strathmore University, C4Dlab (University of Nairobi), Chandaria -

BIIC (Kenyatta University) and Nairobi Industrial and Technological Park business incubators rated market penetration business strategy as best explanatory for start-up performance on survival, finances and job creation.

4.5.4 Descriptive Statistics for Performance of Start-ups

This study considered performance of start-ups in Nairobi City County as an observable variable. The indicator for start-up performance was observed in terms of start-up survival, start-up financial performance and creation of employment. Descriptive statistics for performance of start-ups construct was assessed for by breaking it into its three dimensions or sub-constructs namely start-up survival, financial performance and creation of employment. Sampling adequacy was tested using Kaiser-Meyer-Olkin (KMO) test. The purpose is ascertaining the influence of entrepreneurial orientation, business incubation and corporate strategy on performance of start-ups in Nairobi County.

The concept of performance may as well be viewed from various perspectives. Gerschewski and Xiao (2015) view performance as an attainment of set objectives early than the time expected or an achievement of higher and better market share than normal is possible for new firms, or higher and superior profits than it is normally expected in the circumstances, better survival rate in unusual environment, employing more people than it usually is the case, or growing and expanding faster than usual.

Performance on start-up survival is measures the proportion of new business that is supported and are still operational since inception. Survival of start-up may also be referred in this study as longevity. The present study set an objective to establish the influence of entrepreneurial orientation, business incubation and corporate strategy on performance of

start-ups in Nairobi County. The performance of start-up firms is viewed as the capability of start-ups in meeting set objectives in an unfamiliar adventure.

Start-up financial performance is a measure of how well the start-ups utilises their financial assets for the generation of revenues. In essence, descriptive statistics for financial performance of start-ups is measure of the perception by the respondents themselves start-up liquidity, sales and profitability. The present study set an objective to ascertain the influence of entrepreneurial orientation, business incubation and firm strategy on performance of start-ups financials in terms of liquidity, sales and profitability. Creation of employment is a measure of the number of people the start-up absorbed since establishment. In essence, descriptive statistics for performance on creation of employment by the start-ups is the actual results from respondents on how each of the latent variables influenced Creation of employment.

This study purposed to ascertain the influence of entrepreneurial orientation, business incubation and firm strategy on performance of start-ups now being measured on creation of employment at Nairobi City County. The items for the respective sub-constructs were explored in terms of their mean and the standard deviation to show the sample distribution. Each of the results for assessment of survival rate, financial performance and Job creation are presented on tables 4.12 and the interpretations discussed thereafter.

Table 4.12: Start-up Survival Performance

Start-up performance (survival, Financials & Employment)	N	Mean	Std
Our firm/start-up performance on survival, Financials and employment is influenced by entrepreneurial orientation.	210	3.61	0.40
Our firm/start-up performance on survival, Financials and employment is influenced by Business Incubation	210	3.86	0.41
Our firm/start-up performance on survival, Financials and employment is influenced by Business Strategies (Product Market Expansion Grid)	210	3.32	0.47

Source: Field Data (2022)

Descriptive statistical results for performance of start-ups reveal that business incubation had the highest mean score of 3.86 with standard deviation of 0.41, followed by entrepreneurial orientation mean score of 3.61 with standard deviation of 0.40 and lastly product market expansion grid mean score of 3.32 with standard deviation of 0.47. The start-ups created by graduates of iHub, Strathmore University, C4Dlab (University of Nairobi), Chandaria - BIIC (Kenyatta University) and Nairobi Industrial and Technological Park business incubators rated business incubation has to have explained the performance of start-ups in Nairobi.

The results are in tandem with Wiklund et al. (2005) and Kusumawardhani (2013) who established that start-ups performed significantly well in growth and profitability. They forecast on the services of the incubator and not the incubatees performance.

4.6 Correlation Analysis

Correlation analysis is statistical technique used in research to determine the relationship between two variables and assess the relative strength. It is measure of linear correlation between two sets of data. It measures the ratio between the covariance of two

variables and the result when their standard deviations are multiplied. This is an essential measure of normality of the covariance whose result will always be a value between −1 and 1. If a value is exactly 1 it implies that the equation is linear and the relationship between X and Y is perfect with all data points lying on the line. The value of +1 will mean there is a inear relationship and value of 0 means that there is no linear relationship between the variables.

This section presents the findings on correlation analysis among study variables using Pearson correlation coefficient. The correlation matrix is as shown in table 4.13 below. Correlation is explained as the statistical measure to determine the extent to which two or more variables are associated linearly. That means that when one variable changes the other also changes on a constant rate. This tool is used to describe simple relationships without reference to cause and effect.

Correlations are explained using a unit-free measure explaining correlation coefficient which normally ranges between -1 to +1 and is referred to as r. The significance of the relationship is represented by a p-value. Therefore, correlations are typically written with two key numbers: r = and p = meaning the relationship may be either negative or positive and the closer r is to zero the weaker the relationship.

Table 4.13: Correlation Analysis

Correlations		Entrepreneurial Orientation	Business Incubation	Business Strategies	Performance of Startups
Entrepreneurial Orientation	Pearson Correlation	1			
	Sig. (2-tailed)				
	N	210			
Business Incubation	Pearson Correlation	.665**	1		
	Sig. (2-tailed)	.000			
	N	210	210		
Business Strategies	Pearson Correlation	.483**	.559**	1	
	Sig. (2-tailed)	.000	.000		
	N	210	210	210	
Performance of Start-ups	Pearson Correlation	**.413****	**.575****	**.737****	**1**
	Sig. (2-tailed)	**.000**	**.000**	**.000**	
	N	210	210	210	210

**. Correlation is significant at the 0.05 level (2-tailed).
Source: Field Data (2022)

The result of the analysis indicates an existence of weak but significant positive correlation between Entrepreneurial Orientation and performance of Start-ups (r=.413, pvalue= .000), an average but significant positive correlation exist between Business Incubation and Performance of Start-ups at (r=.575, pvalue= .000) and a strong significant positive correlation between business strategies and performance of Startups at (r= .737, pvalue= .000).

From the results above, there exists a weak but significant positive correlation between Entrepreneurial Orientation and Performance of Start-ups (r= .413, pvalue= .000), which will mean that entrepreneurial orientation moderately influences performance of start-ups.

Moderate but significant positive correlation between Business Incubation and Performance of Start-ups at (r=.575, pvalue= .000) suggest that business incubation influences performance of start-ups moderately while strong significant positive correlation between Business Strategies and performance of Start-ups at (r=.737, pvalue= .000) means business strategies strongly influence the performance of start-ups.

4.7 Summary of Descriptive Statistics for the Study Variables

The descriptive statistics for the entire study score for the all variables are presented on table 4.14 and figure 4.3. Noticeably, entrepreneurial innovative dimension generated the highest mean score of 3.83 followed by risk taking with a mean score value of 3.77 with a standard deviation of 0.31. This indicates that the respondent's belief entrepreneurial orientation has upper hand in explaining start-up performance through innovative and risk-taking dimensions.

Business incubation's mentorship and business strategies were rated lowest with a mean score value of 3.27 and 3.53, respectively. This means that the least influencer of start-up performance with a mean score of 3.27 is Business Incubation. The highest performance variable in start-up performance is on financials with a mean score of 3.86 with a standard deviation of 0.41.

Table 4.14: Study Variables' Descriptive Summary

Main construct	Sub-construct	Sample size	Mean Score	Std Deviation
Entrepreneurial Orientation	Innovative	210	**3.83**	**0.39**
	Risk-taking	210	**3.77**	**0.31**
	Pro-activeness	210	3.59	0.27
	Average		**3.73**	**0.32**
Business Incubation	Mentorship	210	**3.27**	**0.53**
	Networking	210	3.69	0.46
	Absorption capacity	210	3.64	0.48
	Average		**3.53**	**0.49**
Business Strategies	Diversification	210	3.66	0.48
	Market penetration	210	3.74	0.45
	Product development	210	**3.53**	**0.43**
	Average		**3.64**	**0.45**
Performance of Start-ups	Survival	210	3.61	0.40
	Financial performance	210	**3.86**	**0.41**
	Creation of employment	210	3.32	0.47

Source: Field data (2022)

Figure 4.4: Summary Distribution of the Study Variables
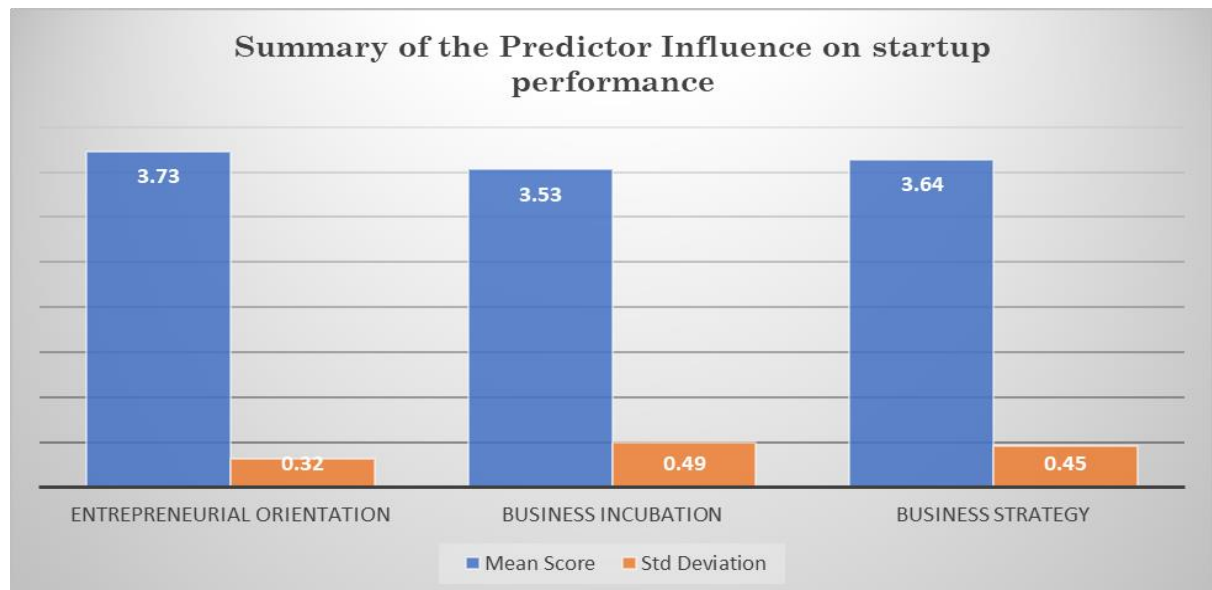
CHAPTER FIVE

HYPOTHESES TESTING AND DISCUSSION

5.1 Introduction

This section details the tests for the study hypothesis to ascertain the relationship between entrepreneurial orientation, business incubation and Business Strategies as independent variables and performance of start-ups as a depended variable. In order to substantively answer the research question, a conceptual framework and study hypothesis were made to integrate the four conceptualized study variables of entrepreneurial orientation, business incubation, Business Strategies and performance of start-ups in Nairobi City County.

The main test adopted for hypothesis is structural equation modelling (SEM) which has the attribute of providing direction of association. This was made possible after diagnostic tests of normality, multicollinearity, and heteroscedasticity tests and skewness. Analysis of Variance (ANOVA) for hypotheses testing and eventually relational association using Linear regression. On the succeeding discussion, the findings are critical evaluated in comparison to the empirical and theoretical literature review within the confines of this study and the new knowledge obtained.

5.2 Entrepreneurial Orientation and Performance of Start-ups in Nairobi City County

H01: The relationship between entrepreneurial orientation and performance of start-ups in Nairobi City County is not significant.

In order to test entrepreneurial orientation for hypothesis, the concept was broken down into its observable sub-constructs of innovativeness, risk-taking and proactiveness. Performance of start-ups was also conceptualized its observable sub-constructs as start-up survival, financial performance and creation of employment. The initial analysis was to ascertain the correlation between entrepreneurial orientation and performance of start-ups via path analysis in Structural Equation Model (SEM). After testing for the influence of entrepreneurial orientation on the three startup performance observables of survival, financial and creation of employment, the conclusion was made to reject the null hypothesis.

According to Byrne (2011), SEM has a set of multivariate procedures that are confirmatory and not explanatory in evaluating model goodness of fit. The advantages of SEM, according to Urbano (2013), are that SEM is clear on assessment of error measurements, is capable of measuring the predictor variable via observed variables and more importantly in imposing a structure and assessment model for goodness of fit. SEM also requires a minimum of 200 respondents (sample size) in order to examine a basic model, which fits well with the study's actual responses.

5.2.1 Data Model Fit for Entrepreneurial Orientation

Xia and Yang (2019) provides a measurement criterion for model performance that account for model complexity which combines Akaike Information Criterion (AIC) and Bayesian Information Criterion (BIC). Further, baseline comparison (Comparative Fit Index - CFI and Tucker-Lewis Index - TLI) provides a comparable fit of a hypothesised model with that of a baseline model. According to Hu and Bentler (1999) an RMSEA data fit should

be smaller than .05 and a CFI and TLI greater than .90 for a relatively good model–data fit. See table 5.1 below.

Table 5.1: Result of Fit Indices: Entrepreneurial Orientation and Performance of Start-ups

Fit statistic	Value	Description
Likelihood ratio		
chi2_ms(8)	28.747	model vs. saturated
p > chi2	0.000	
chi2_bs(15)	415.240	baseline vs. saturated
p > chi2	0.000	
Population error		
RMSEA	0.111	Root mean squared error of approximation
90% CI, lower bound	0.069	
upper bound	0.157	
pclose	0.011	Probability RMSEA <= 0.05
Information criteria		
AIC	3528.094	Akaike's information criterion
BIC	3591.598	Bayesian information criterion
Baseline comparison		
CFI	0.948	Comparative fit index
TLI	0.903	Tucker–Lewis index

Source: Field Data (2022).

Structural equation method results summarised in table 5.2 has clear indication that entrepreneurial orientation significantly influences performance of start-ups with p_{value} of 0.0004 being than 0.05 level of significance. The result further confirms that the model fit is appropriate for this data since the chi-square was 28.75 and overall pvalue of 0.0004 was less than 0.05 significant level.

Table 5.2: Structural Equation Model Summary I

Performance of Start-ups	Coefficients	Std error	z	p>z	Confidence Interval	
Entrepreneurial Orientation	0.7876	0.1381	5.70	0.000	.517	1.0583

LR test of model vs. saturated: Chi2(8) =   28.75, Prob > chi2 = 0.0004
Coefficient of determination (R squared) = 0.1706

Field Data (2022)

From table 5.2, Likelihood-ratio chi-squared statistic was 28.747 with a pvalue of 0.000 (model versus saturated) and 415.240 with a pvalue of 0.000 (baseline versus saturated), RMSEA statistic was 0.111 with pvalue of 0.011, AIC was 3528.094, BIC was 3591.598, CFI was 0.948 and TLI was 0.903. Since the likelihood ratio chi-square statistic was significant (pvalue =0.000), RMSEA pvalue was smaller than .05 and a CFI and TLI are greater than .90, then the structural equation model developed was a relatively good model that fitted the data used.

Figure 5.1: Influence of Entrepreneurial Orientation on Performance of Start-ups
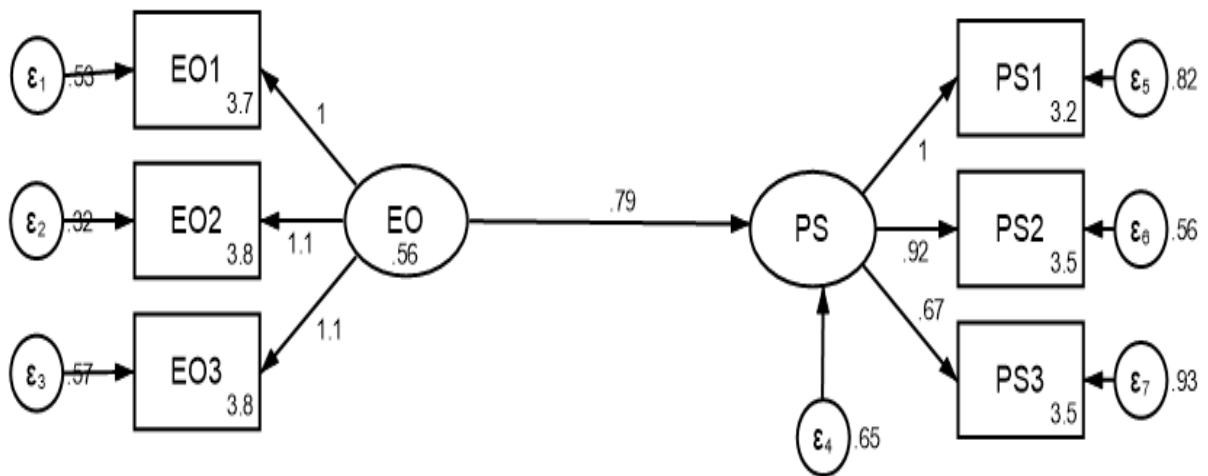
Source: Field Data (2022)

Figure 5.1 above indicates the findings of the link between entrepreneurial Orientation and Performance of start-ups in Nairobi City County. The study established a strong positive relationship with coefficient of 0.7876 between entrepreneurial Orientation and Performance of start-ups in Nairobi City County. From the fit indices computed, as depicted in table 5.1 and 5.2, Likelihood-ratio chi-squared statistic, Root Mean Squared

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Error of Approximation (RMSEA) statistic, information Criteria statistics and baseline comparison statistics were evaluated. Likelihood-ratio chi-squared test evaluates the best model between two models (nested models). RMSEA measures how far the hypothesised model is from a perfect model.

From the model, holding other factors constant, Entrepreneurial Orientation increases performance of start-ups in Nairobi City County at 5% level of significance by 0.7876. In general, it can therefore be inferred that entrepreneurial orientation explains significantly the performance of start-ups in Nairobi City County resulting in the rejection of the null hypothesis and hence adoption of the alternative hypothesis that there exists a significant influence of entrepreneurial orientation on performance of start-ups in Nairobi City County. Performance observables for entrepreneurial orientation – survival, Financials and employment were tested as follows.

5.2.2 Entrepreneurial Orientation and Start-ups Survival

The study explored the relationship between entrepreneurial orientation and Start-ups longevity which was measured through survival. The composite index for survival was developed from the sub-items. The findings are as indicated in 5.3 below.

Table 5.3: Entrepreneurial Orientation and Survival

```
   Source |       SS           df       MS           Number of obs   =       209
----------+----------------------------------        F(3, 205)       =     12.08
    Model |  56.9644734         3   18.9881578        Prob > F        =    0.0000
 Residual |  322.126436       205   1.57134847        R-squared       =    0.1503
----------+----------------------------------        Adj R-squared   =    0.1378
    Total |  379.090909       208   1.82255245        Root MSE        =    1.2535


      PS1 |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
----------+----------------------------------------------------------------
      EO1 |   .0055057   .1090645     0.05   0.960    -.2095262    .2205376
      EO2 |   .5083245   .1146463     4.43   0.000     .2822875    .7343615
      EO3 |    .02747    .1042828     0.26   0.792    -.1781343    .2330742
     _cons|   1.148627   .3783644     3.04   0.003     .4026427    1.894612
```

Source: Field Data (2022)

Based on the above analysis of entrepreneurial orientation and start-ups survival, the model in table 5.3 revealed a significant direct influence of entrepreneurial orientation and start-ups' survival. This implies that the influence was significant. The study found that there exists a significant relationship between entrepreneurial orientation (Innovation dimension, risk taking dimension and pro-activeness dimension) and start-ups' survival rate (pvalue =0.000).

Individually, innovation dimension (EO1) had a non-significant direct influence ($\beta1$=.0055, pvalue =0.960), risk taking dimension (EO2) had a significant direct influence ($\beta2$=.5083, pvalue =0.000) and pro-activeness dimension (EO3) had a non-significant direct influence ($\beta3$=.0275, pvalue=0.792) start-ups' survival rate. This finding is in line with those by Shan, Song & Ju (2016) who found a direct relationship between Entrepreneurial orientation and survival rate of firms in China. However, the study by Wolff, Pett and Ring (2015) depicted a contrary result.

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5.2.3 Entrepreneurial Orientation and Start-ups Financials

The study further explored how entrepreneurial orientation through its sub-constructs of innovation, risk taking and pro-activeness influence start-up financial performance in sales, liquidity and profitability. The composite index sub-constructs for start-up financial performance was developed. The respondents were required to cast their opinion on whether their firm/start-up financial performance was influenced by entrepreneurial orientation, business incubation or business strategies.

Table 5.4: Entrepreneurial Orientation and Start-Up Financials

Source	SS	df	MS		Number of obs	=	209
					F(3, 205)	=	24.30
Model	77.1056598	3	25.7018866		Prob > F	=	0.0000
Residual	216.798646	205	1.05755437		R-squared	=	0.2623
					Adj R-squared	=	0.2516
Total	293.904306	208	1.41300147		Root MSE	=	1.0284

PS2	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]	
EO1	.1403977	.0894743	1.57	0.118	-.0360102	.3168055
EO2	.5850796	.0940535	6.22	0.000	.3996434	.7705158
EO3	-.0964832	.0855515	-1.13	0.261	-.2651568	.0721904
_cons	1.195267	.3104026	3.85	0.000	.5832762	1.807258

Source: Field Data (2022)

Based on the results of the analysis, entrepreneurial orientation and start-ups' financials, the model in table 5.4 above was constructed thereby revealing significant direct influence of Entrepreneurial Orientation on start-ups' financial performance. Given these results, the study found that there exists a significant relationship between Entrepreneurial Orientation (Innovation dimension, risk taking dimension and proactiveness dimension) and Start-ups' financial performance (pvalue=0.000). Individually, innovation dimension (EO1) had a non-significant direct influence ($\beta 1$=.1404, pvalue = 0.118), risk taking dimension (EO2)

had a significant direct influence ($\beta 2$=.5851, pvalue = 0.000) and proactiveness dimension (EO3) had a non-significant inverse influence ($\beta 3$=-.0965, pvalue = 0.261) on start-ups' financial performance.

These findings are in tandem with those by Kantur (2016) who found the positive relationship between Entrepreneurial Orientation and financial and non-financial performance creating a link in the relationship. On the other hand, Arzubiaga et al. (2018) found an inverse relationship between entrepreneurial orientation and financial performance and survival of family SMEs.

5.2.4 Entrepreneurial Orientation on Start-ups Employment Creation

The study further explored how Entrepreneurial Orientation (Innovation dimension, risk taking dimension and proactiveness dimension) influence performance of start-ups which was measured through job creation. Based on the above analysis of Entrepreneurial Orientation and start-ups' job/employment creation, the model in table 5.4 revealed a significant influence of Entrepreneurial Orientation and start-ups' performance on creation of employment. This implies that the influence was significant. The composite index for job creation was developed from its sub-items. The findings are as indicated in table 5.5

Table 5.5: Entrepreneurial Orientation and Start-Up Employment Creation

Source	SS	df	MS			
				Number of obs	=	209
				F(3, 205)	=	7.59
Model	28.8033336	3	9.60111121	Prob > F	=	0.0001
Residual	259.30193	205	1.26488746	R-squared	=	0.1000
				Adj R-squared	=	0.0868
Total	288.105263	208	1.38512146	Root MSE	=	1.1247

PS3	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]	
EO1	-.1040341	.0978527	-1.06	0.289	-.2969609	.0888927
EO2	.3785267	.1028607	3.68	0.000	.1757261	.5813273
EO3	.0752318	.0935626	0.80	0.422	-.1092365	.2597001
_cons	2.147375	.3394689	6.33	0.000	1.478077	2.816673

Source: Field Data (2022)

From this result, the study observes that there exists a significant relationship between entrepreneurial orientation (innovative dimension, risk taking dimension and proactiveness dimension) and start-ups' creation of employment (pvalue =0.0001). Individually, Innovation dimension (EO1) had a non-significant inverse influence ($\beta1$=-.1040, pvalue =0.289), risk taking dimension (EO2) had a significant direct influence ($\beta2$=.3785, pvalue =0.000) and proactiveness dimension (EO3) had a non-significant inverse influence ($\beta3$=-.0752, pvalue=0.422) on start-ups' performance on creation of employment.

5.2.5 The Summary of the Results of Hypothesis Testing for Entrepreneurial Orientation

This study observed inverse low significant relationship between EO innovative dimension and creation of employment with $\beta1$=-.1040, and Pvalue =0.289. The inverse low significant was also observed between EO pro-activeness and start-up performance on finances and employment with ($\beta3$=-.0965, pvalue = 0.261) and ($\beta3$=-.0752, pvalue=0.422), respectively. See table 5.6 below.

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Table 5.6: Summary of Results of Hypothesis Testing

Construct	Sub-construct	Innovative	Risk-taking	Pro-activeness
EO	Survival	($\beta 1$=.0055, pvalue =0.960),	($\beta 2$=.5083, pvalue =0.000)	$\beta 3$=.0275, pvalue=0.792
		+ve non-significant	+ ve significant	+ve non-significant
	Finances	($\beta 1$=.1404, pvalue = 0.118),	($\beta 2$=.5851, pvalue = 0.000)	($\beta 3$=-.0965, pvalue = 0.261)
		+ve significant	+ ve significant	-ve significant
	Employment	($\beta 1$=-.1040, pvalue =0.289),	($\beta 2$=.3785, pvalue =0.000)	($\beta 3$=-.0752, pvalue=0.422)
		-ve significant	+ ve significant	-ve significant
	Risk taking dimension of EO leading explains significantly the Performance of startups IN Nairobi County			

Source: Field data, (2022)

These findings are in line with those by Koe (2016) which found the positive relationship between Individual entrepreneurial orientation and performance on job creation. Thus, proper Individual entrepreneurial orientation increased job creation by improving reactiveness and innovation hence job creation. On the contrary, a study by Rezaei and Ortt (2018) found an inverse relationship between Entrepreneurial Orientation and firm performance in terms of job creation and innovation.

The null hypothesis **H01** that the relationship between entrepreneurial orientation and performance of start-ups in Nairobi City County is not significant was rejected.

5.3 Business Incubation and Performance of Start-Ups

H02: The relationship between business incubation and performance of start-ups at the Nairobi City County is not significant.

Beckett and Dalrymple (2020) describe business incubation as supportive service given during the birth as well as growth of business; it is characterised by innovations and mentorship activities. Business incubation is a clinical concept applicable for nurturing entrepreneurial dreams with the objective to turn them into reality.

For the purpose of testing business incubation, the concept was broken down into sub-constructs of mentorship, networking and resources planning. Performance of start-ups was also conceptualized as down start-up survival, financial performance and job creation. The initial analysis was to ascertain the correlation between business incubation and performance of start-ups via path analysis in Structural Equation Model (SEM). After testing for the influence of business incubation on the three start-up performance observables of survival, financial and job creation, the conclusion was made to reject or uphold the null hypothesis.

5.3.1 Fit Indexes for Business Incubation and Performance of Start-ups

According to Byrne (2011), SEM has a set of multivariate procedures that are confirmatory and not explanatory in evaluating model goodness of fit. The advantages of SEM, according to Urbano (2013), are that SEM is clear on assessment of error measurements, is capable of measuring unobserved (latent) variable via observed variables and more importantly in imposing a structure and assess the model's goodness of fit, which the present study find very useful. SEM also requires a minimum of 200 respondents (sample size) in order to examine a basic model which fits well with the study's actual responses.

Table 5.7: Fit Indices II Business Incubation and Performance of Start-ups

Fit statistic	Value	Description
Likelihood ratio		
chi2_ms(8)	62.566	model vs. saturated
p > chi2	0.000	
chi2_bs(15)	357.453	baseline vs. saturated
p > chi2	0.000	
Population error		
RMSEA	0.180	Root mean squared error of approximation
90% CI, lower bound	0.140	
upper bound	0.223	
pclose	0.000	Probability RMSEA <= 0.05
Information criteria		
AIC	3716.354	Akaike's information criterion
BIC	3779.949	Bayesian information criterion
Baseline comparison		
CFI	0.841	Comparative fit index
TLI	0.701	Tucker-Lewis index

Source: Field Data (2022)

From table 5.7, Likelihood-ratio chi-squared statistic was 62.566 with a pvalue of 0.000

(model versus saturated) and 357.453 with a pvalue of 0.000 (baseline versus saturated),

RMSEA statistic was 0.180 with pvalue of 0.000, AIC was 3716.354, BIC was 3779.949,

CFI was 0.841 and TLI was 0.701. Since there is indicative ratio chi-square statistic was

significant (pvalue =0.000), RMSEA pvalue was smaller than .05, then the structural

equation model developed was a relatively good model that fitted the data used. These

results is summarised on table 4.30 which revealed that Business Incubation has a high

significant influence since the p_{value} of 0.000 was less than 0.05 level of significance.

Table 5.8: Structural Equation Model Summary II

Performance of Startups	Coefficients	Std error	z	p>z	Confidence Interval	
Business Incubation	1.8547	0.3731	4.97	0.000	1.1234	2.5859

LR test of model vs. saturated: chi2(8) =   62.57, Prob > chi2 = 0.000
Coefficient of determination (R squared) = 0.3311

Source: Field Data (2022)

The result further confirms that the model fit is appropriate for this data since the chi-square was 62.57 and overall p_{value} of 0.000 was less than 0.05 significant level. From the model, Business Incubation Increases Performance of start-ups in Nairobi City County at 5% level of significance by 1.8547 holding other factors constant.

In general, it is therefore infered that Business Incubation explains significantly performance of start-ups in Nairobi City County resulting in rejection of the null hypothesis and concluded that there exists significant influence exerted by business incubation on performance of start-ups in Nairobi City County. The respective Structural Equation Model (SEM) is as presented algebraically in figure 5.8 above. The dependent variable was performance of start-ups (PS), and the explanatory variable was Business Incubation (BI). Figure 5.2 presents the model results for the influence of Business Incubation on performance of start-ups in Nairobi City County.

Figure 5.2: Influence of Business Incubation on Performance of Start-ups
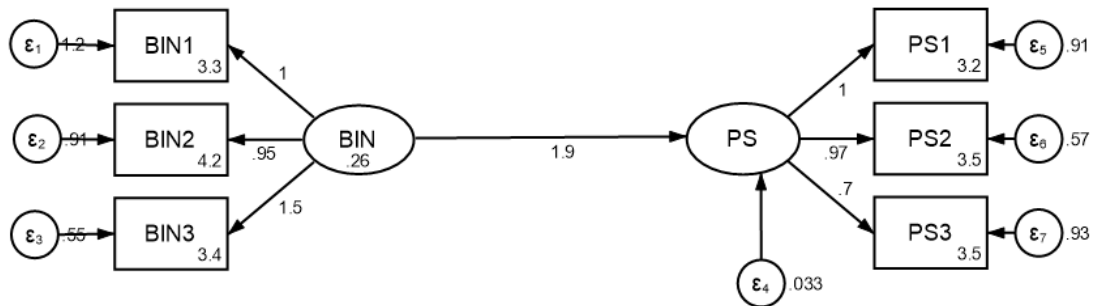
Source: Field Data (2022)

Figure 5.2 above indicates the findings of the link between Business Incubation and performance of start-ups in Nairobi City County. The study established a strong positive

relationship with a coefficient of 1.8547 between Business Incubation and Performance of start-ups in Nairobi City County. Again, the fit indices computed, as depicted in table 5.8, Likelihood-ratio chi-squared statistic, Root Mean Squared Error of Approximation (RMSEA) statistic, information Criteria statistics and baseline comparison statistics were evaluated. The observable variances for business incubation of Mentorship, networking and absorption capacity were tested as follows:

5.3.2 Business Incubation on Performance on Start-ups' Survival

The study explored the relationship between Business Incubation and Performance of start-ups which was measured on survival or longevity. It is claimed that enterprises survival from its inception is measured by its solvency, liquidity, profitability, ability to get credit, and paid higher salaries than those that did not survive (Blank, 2013). Although they were able to predict performance very easily, they were found to be more inefficient predicting bankruptcy than grown up companies (Blank, 2013). The composite index for survival was developed from its sub-items. The findings are as indicated in table 5.9 below

Table 5.9: Business Incubation and Start-up Survival

Source	SS	df	MS			
				Number of obs	=	210
				F(3, 206)	=	29.91
Model	116.023064	3	38.6743546	Prob > F	=	0.0000
Residual	266.357889	206	1.29299946	R-squared	=	0.3034
				Adj R-squared	=	0.2933
Total	382.380952	209	1.82957393	Root MSE	=	1.1371

PS1	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]	
BIN1	.3206091	.0745908	4.30	0.000	.1735499	.4676683
BIN2	-.1211213	.0877443	-1.38	0.169	-.2941133	.0518706
BIN3	.6062847	.0788926	7.68	0.000	.4507443	.7618252
_cons	.5713532	.3627969	1.57	0.117	-.1439178	1.286624

Source: Field Data (2022)

Based on the above analysis of Business Incubation and start-ups survival, the model in table 5.9 revealed a significant relationship between Business Incubation and start-ups' survival. The study found that there exists significant relationship between business incubation (mentorship, networking and absorption capacity) and start-ups' survival at (pvalue=0.000). Individually, Mentorship (BIN1) had a significant direct influence ($\beta1$=.3206, pvalue =0.000), Networking (BIN2) had a non-significant inverse influence ($\beta2$=-.1211, pvalue =0.169) and Absorption Capacity (BIN3) had a significant direct influence ($\beta3$=.6063, pvalue =0.000) Start-ups' survival rate.

These findings are in line with those by Mian, Lamine, and Fayolle (2016) which depicted a positive and significant relationship between firm incubation and survival of firms. Technology Business Incubation forms critical value-additional inputs that create development of innovative Technology-Based Firms thus increasing the survival rate of firms. However, the findings by Lukeš, Longo, and Zouhar (2019) depicted a negative relationship between business incubators and entrepreneurial growth among small firms in Italy. Implying that there was no significant and positive relationship between incubation and job or employment creation.

5.3.3 Business Incubation and Start-ups' Financial Performance

Start-ups' financial performance include increased sales, liquidity and profitability reduced costs and profitability. Start-up financial performance provides motivation for business owners and also enable them understand better how knowledge management facilitates achievement of better financial efficiency and business objectives. This study explored how Business Incubation under the sub-constructs of Mentorship, Networking and

Absorption Capacity influence performance of start-ups as observed through financial performance. The findings are as indicated in table 5.10 below.

Table 5.10: Business Incubation and Financials

Source	SS	df	MS		Number of obs	=	210
					F(3, 206)	=	43.58
Model	116.598979	3	38.8663263		Prob > F	=	0.0000
Residual	183.729592	206	.891891225		R-squared	=	0.3882
					Adj R-squared	=	0.3793
Total	300.328571	209	1.43697881		Root MSE	=	.9444

PS2	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
BIN1	.1523816	.0619501	2.46	0.015	.0302441	.2745191
BIN2	.0969178	.0728745	1.33	0.185	-.0467577	.2405933
BIN3	.60506	.0655229	9.23	0.000	.4758786	.7342415
_cons	.5558881	.3013147	1.84	0.066	-.0381679	1.149944

Source: Field Data (2022).

Based on the above analysis of Business Incubation and start-ups financial performance, the model in table 5.10 above revealed a significant relationship between Business Incubation and start-ups' performance on financials. This implies that the influence was significant. The study observes that there exists a significant relationship between business incubation (mentorship, networking and absorption capacity) and start-ups' financial performance (pvalue =0.000). Individually, Mentorship (BIN1) had a significant direct influence ($\beta1$=.1524, pvalue =0.015), Networking (BIN2) had a non-significant inverse influence ($\beta2$=.0969, pvalue =0.185) and Absorption Capacity (BIN3) had a significant direct influence ($\beta3$=.6051, pvalue=0.000) start-ups' financial performance.

These findings are in tandem with those by Ogutu and Kihonge (2016) which indicates that business incubation improved financial performance of SMEs in Kenya. The study recommended an improvement in business incubation for better financial performance. On the other hand, a study in Czech Republic by Dvouletý et al. (2018) found out that public funded incubators were negatively influencing financial performance of these firms.

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5.3.4 Business Incubation and Start-ups' on Employment Creation

Business incubation is a clinical concept applicable for nurturing entrepreneurial dreams with the objective to turn them into reality. Currently, business incubation construct is of great concern by all administrators because of the number and variety of practical services it guarantees. Lish (2012) argues that business incubation brings out untapped internal resources through mentorship where the incubatees are taught on how to set achievable business objectives. The best description of a business incubation is a business solution framework, social in nature and is capable of managing business right from infancy to maturity. Creation of employment refer to the process of providing new jobs, especially for people who are unemployed

This study conceptualized business incubation through its sub-constructs of Mentorship, Networking and absorption capacity. It explored how Business Incubation (Mentorship, Networking and Absorption Capacity) influence performance of start-ups which was measured through job creation. The respondents to the questionnaire, both start-up owners and their staff, indicated Business Incubation process influence job creation through composite index for job creation was developed from its sub-items. These are as indicated in table 5.11 below.

Table 5.11: Business Incubation and Start-up Performance on Employment Creation

Source	SS	df	MS			
				Number of obs	=	210
				F(3, 206)	=	18.55
Model	61.7819549	3	20.593985	Prob > F	=	0.0000
Residual	228.641855	206	1.10991192	R-squared	=	0.2127
				Adj R-squared	=	0.2013
Total	290.42381	209	1.38958761	Root MSE	=	1.0535

PS3	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]	
BIN1	.2863628	.0691083	4.14	0.000	.1501125	.422613
BIN2	-.0546864	.081295	-0.67	0.502	-.2149634	.1055905
BIN3	.3812358	.073094	5.22	0.000	.2371276	.5253439
_cons	1.463921	.3361311	4.36	0.000	.8012232	2.126619

Source: Field Data (2022)

Based on the above output for Business Incubation and Start-ups, performance on creation of employment, the model in table 5.10 above revealed a significant influence of business incubation and start-ups' job creation. This implies that the influence was significant. The study found that there exists a significant relationship between Business Incubation (Mentorship, Networking and Absorption Capacity) and Start-ups' job creation (pvalue =0.000). Individually, Mentorship (BIN1) had a significant direct influence ($\beta1$=.2864, pvalue =0.000), Networking (BIN2) had a non-significant inverse influence ($\beta2$=-.0547, pvalue =0.502) and Absorption Capacity (BIN3) had a significant direct influence ($\beta3$=.3812, pvalue=0.000) Start-ups' job creation.

The findings concurred with the findings by Al-Mubaraki et al., (2010) who contended that business incubation programs are model tools for start-ups acceleration and significantly influence entrepreneurial development. In addition, Ramsden and Bennett (2015) deduced that success of start-ups is dependent on business incubators and that lack of proper networks and maintenance of incubator records adversely influence performance of start-ups later.

5.3.5 Summary of Hypothesis Testing for the Influence of Business Incubation

The study explored how business incubation influenced the performance of start-ups as measured via survival rate, financial performance, and creation of employment. The composite indices for these indicators were developed. Based on the start-ups survival rate model, a significant influence of business incubation was revealed.

Table 5.12: Summary: Business Incubation and Performance of Statup

BI		Mentoring	Networking	Resource planning
	Survival	($\beta 1$=.3206, pvalue =0.000),	($\beta 2$=-.1211, pvalue =0.169)	($\beta 3$=.6063, pvalue =0.000)
		+ve significant	-ve non-significant	+ve significant
	Finances	$\beta 1$=.1524, pvalue =0.015),	($\beta 2$=.0969, pvalue =0.185)	($\beta 3$=.6051, pvalue=0.000)
		+ve low significant	+ve non-significant	+ve significant
	Employment	($\beta 1$=.2864, pvalue =0.000),	($\beta 2$=-.0547, pvalue =0.502)	($\beta 3$=.3812, pvalue=0.000)
		+ve significant	-ve non-significant	+ve significant

The findings concurred with the conclusions by Al-Mubaraki et al., (2010) who contended that business incubation programs are model tools for start-ups acceleration and significantly influence entrepreneurial development. In addition, Ramsden and Bennett (2015) deduced that success of start-ups is dependent on business incubators and that lack of proper networks and maintenance of incubator records adversely influence performance of start-ups later.

The null hypothesis **H02**: stated 'the is relationship between Business Incubation and performance of start-ups City County is not significant was rejected.

5.4 Business Strategies and Performance of Start-ups

H03: The relationship between business strategies and performance of start-ups at the Nairobi City County is not significant.

Testing the relationship between business strategies took the form as of Product Market Expansion Grid as proposed by Ansoff (1957) matrix on performance of start-ups was done. The model involved the three approaches start-ups business. The approaches involved existing product proposed into an existing market (known customer- known product scenario). Under this model, the business strategies suggested on the grid is Market Penetration. The objective of market penetration strategy is to increase market share and increase sales.

The next approach tested was Market development. Market development strategy is applied where an existing product is proposed to the new market (new product – unknown customer). Ansoff proposed market development business strategies. The objective of market development strategy is to introduce the product or service to the new market and ensure acceptability. The study sought to test significance of market development approach by start-ups on their performance as observed on survival, financials and employments.

The third and last approach was Diversification. Diversification strategy is applied where there is a new product proposed to the new markets (unknown product to unknown market).

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Product or service diversification strategy was suggested often where technology is being unpacked. This study conceptualized business Strategies through its sub-constructs of diversification, Market penetration and market development. The respondents to the questionnaire were owners of start-ups in Nairobi City County and are graduates from the sampled five business incubators.

5.4.1 Fit Indexes for Business Strategies

The initials tests were done by evaluating the data model fit and then Structural Equation Model (SEM), then the significance of the relationship between business strategies and performance of start-ups were analysed using Analysis of Variance (ANOVA). Analysis of variance (ANOVA) is an analysis tool used in statistics that splits an observed aggregate variability found inside a data set into two parts: systematic factors and random factors. The systematic factors have a statistical influence on the given data set, while the random factors do not. Analysts use the ANOVA test to determine the influence that independent variables have on the dependent variable in a regression study.

According to Byrne (2011) SEM has a set of multivariate procedures that are confirmatory and not explanatory in evaluating model goodness of fit. The advantages of SEM, according to Urbano (2013), are that SEM is clear on assessment of error measurements, is capable of measuring unobserved (latent) variable via observed variables and more importantly in imposing a structure and assess the model's goodness of fit, which this study find very useful. SEM also requires a minimum of 200 respondents (sample size) in order to examine a basic model which fits well with the study's actual responses.

Table 5.13: Fit Indices III: Business Strategies

Fit statistic	Value	Description
Likelihood ratio		
chi2_ms(8)	38.676	model vs. saturated
p > chi2	0.000	
chi2_bs(15)	506.914	baseline vs. saturated
p > chi2	0.000	
Population error		
RMSEA	0.135	Root mean squared error of approximation
90% CI, lower bound	0.094	
upper bound	0.179	
pclose	0.001	Probability RMSEA <= 0.05
Information criteria		
AIC	3671.177	Akaike's information criterion
BIC	3734.773	Bayesian information criterion
Baseline comparison		
CFI	0.938	Comparative fit index
TLI	0.883	Tucker-Lewis index

Source: Field Data (2022)

From table 5.13 above, Likelihood-ratio chi-squared statistic was 38.676 with a pvalue of 0.000 (model versus saturated) and 506.914 with a pvalue of 0.000 (baseline versus saturated), RMSEA statistic was 0.135 with pvalue of 0.001, AIC was 3671.177, BIC was 3734.773, CFI was 0.938 and TLI was 0.883. Since the indicative ratio chi-square statistic was significant (pvalue =0.000), RMSEA pvalue was smaller than .05 and a CFI was greater than .90, then the structural equation model developed was a relatively good model that fitted the data used.

Figure 5.3 below shows test results of relationship between Business Strategies and Performance of start-ups in Nairobi City County. The study established a strong positive relationship with coefficient of 2.1089 between Business Strategies and Performance of start-ups in Nairobi City County. From the fit indices computed, as depicted table 5.14 below Likelihood-ratio chi-squared statistic, Root Mean Squared Error of Approximation (RMSEA) statistic, information Criteria statistics and baseline comparison statistics were evaluated.

Table 5.14: Structural Equation Model Summary III

Performance of Start-ups	Coefficients	Std error	z	p>z	Confidence Interval	
Business Strategies	2.1089	0.4011	5.26	0.000	1.3228	2.8951
LR test of model vs. saturated: chi2(8) = 38.68, Prob > chi2 = 0.000 Coefficient of determination (R squared) = 0.5436						

Source: Field Data (2022)

The respective Structural Equation Model (SEM) is as presented algebraically in figure 4.7 below. The dependent variable was performance of start-ups (PS), and the explanatory variable was Business Strategies (BS). Figure 5.3 presents the model results for the influence of Business Strategies on performance of start-ups in Nairobi City County.

Figure 5.3: Business Strategies and Performance of Start-ups
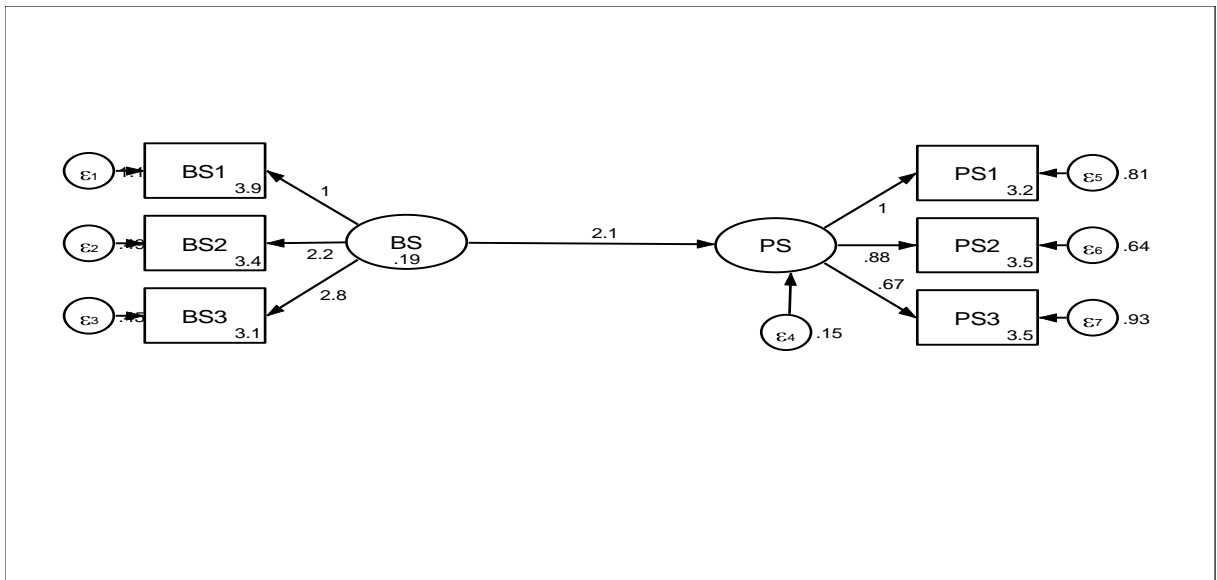
Source: Field Data (2022)

These results were summarised through table 5.13 above which revealed that Business Strategies has positive significant relationship at p_{value} of 0.000 was less than 0.05 level of significance. The result further confirms that the model fit is appropriate for this data

since the chi-square was 38.68 and overall pvalue of 0.000 was less than 0.05 significant level. From the model, business strategies increase performance of start-ups in Nairobi City County at 5% level of significance by 2.1089 holding other factors constant.

5.4.2 Business Strategies and Start-up Performance on Survival

Start-up survival performance refers to the commercial effectiveness and ability of a new business to transform from a mere vision to actual business and sustain in delivering of the product or service in a manner that meets the expectations of consumers. The term performance may also refer to successful management of strategic activities into action such as ability to survival difficult economic times, profitability and job creation (Hrebiniak, 2013). Start-ups across the globe face business challenges in their pursuit to attain excellence in performance. Startup survival may as well mean the ability of startups to stay in business even when economic and competitive activities in the sector are not favourable. ANOVA is also called the Fisher analysis of variance, and it is the extension of the t- and z-tests.

The study explored the relationship between business strategies and performance of Start-ups in Nairobi City County which was measured through survival rate. The findings are presented in table 5.15.

Table 5.15: Business Strategies and Start-up Survival

Source	SS	df	MS			
Model	155.764394	3	51.9214648			
Residual	226.616558	206	1.10008038			
Total	382.380952	209	1.82957393			

Number of obs = 210
F(3, 206) = 47.20
Prob > F = 0.0000
R-squared = 0.4074
Adj R-squared = 0.3987
Root MSE = 1.0488

PS1	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]	
BS1	.1962236	.0676601	2.90	0.004	.0628287	.3296186
BS2	.1298896	.0887834	1.46	0.145	-.0451509	.3049302
BS3	.467215	.0762399	6.13	0.000	.3169044	.6175256
_cons	.5471644	.3005978	1.82	0.070	-.0454782	1.139807

Source: Field Data (2022)

Based on the above analysis of business strategies and start-ups survival, the model in table 5.15 revealed existence of a significant relationship between business strategies and start-ups' survival. The study observes that there exists a significant relationship between business strategies (diversification, market penetration and market development) and start-ups' survival at (pvalue =0.000). Individually, diversification (BS1) was significant at (β1=.1962, pvalue =0.004), market penetration (BS2) was non-significant at (β2=.1299, pvalue =0.145) and product development (BS3) was significant at (β3=.5472, pvalue=0.000) on start-ups' survival.

5.4.3 Business Strategies and Startups Financials

Start-up Financial performance refers to the commercial effectiveness and ability of a new business to make profit from own sales of the product or service to the consumers. This study approached start-up financial performance outcome-based observation and considered it as leading indicator. Start-ups are known for not keeping financial records or publishing their financial outcomes. However, they understand better based on their daily activities. Other financial performance approaches may include measures such as market

share, introduction of new products, marketing effectiveness. The respondents' data helped to prepare composite index for start-up financial performance through its sub-constructs. The findings are shown on table below.

Table 5.16: Business Strategies and Start-up Financials

Source	SS	df	MS			Number of obs	=	210
						F(3, 206)	=	64.73
Model	145.729381	3	48.5764603			Prob > F	=	0.0000
Residual	154.59919	206	.750481507			R-squared	=	0.4852
						Adj R-squared	=	0.4777
Total	300.328571	209	1.43697881			Root MSE	=	.8663

PS2	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]	
BS1	.3287748	.0558843	5.88	0.000	.2185962	.4389534
BS2	.3787054	.0733313	5.16	0.000	.2341293	.5232814
BS3	.1770056	.062971	2.81	0.005	.0528554	.3011558
_cons	.424473	.2482811	1.71	0.089	-.0650247	.9139707

Source: Field Data (2022)

Based on the analysis of business strategies and start-ups' performance on financial, the model in table 5.16 revealed significant relationship.

The study observes that there exists a significant relationship between business strategies (diversification, market penetration and market development) and start-ups' financial performance (pvalue=0.000). Individually, diversification (BS1) was significant at ($\beta1$=.3288, pvalue=0.000), market penetration (BS2) was significant at ($\beta2$=.3787, pvalue =0.000) and product development (BS3) was significant at ($\beta3$=.1770, pvalue =0.000) on start-ups' performance on financials.

5.4.4 Business Strategies and Start-ups Employment

The study further explored how business strategies (diversification, market penetration and market development) and performance of start-ups on employment. The research objective was to ascertain the relationship between business strategies and performance of start-up on employment. The study methodology employed structural equation model. Results

revealed that application of business strategies increased job opportunities. The findings are as indicated in table 5.17.

Table 5.17: Business Strategies and Start-up Employment Creation

Source	SS	df	MS			
Model	68.4739311	3	22.8246437	Number of obs	=	210
Residual	221.949878	206	1.07742659	F(3, 206)	=	21.18
				Prob > F	=	0.0000
				R-squared	=	0.2358
				Adj R-squared	=	0.2246
Total	290.42381	209	1.38958761	Root MSE	=	1.038

PS3	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]	
BS1	.0911839	.0669598	1.36	0.175	-.0408305	.2231982
BS2	.0701975	.0878645	0.80	0.425	-.1030313	.2434264
BS3	.3367918	.0754509	4.46	0.000	.1880369	.4855467
_cons	1.85006	.2974866	6.22	0.000	1.263551	2.436569

Source: Field Data (2022)

Based on the analysis of business strategies and start-ups' employment creation, the model result in table 5.17 above revealed a significant influence of business strategies and start-ups' job creation. The study found that there exists a significant relationship between business strategies (diversification, market penetration and market development) and start-ups' job creation (Pvalue =0.000). Individually, diversification (BS1) was non-significant at (β1=.0912, Pvalue =0.175), market penetration (BS2) was also non-significant at (β2=.0702, Pvalue =0.425) product development (BS3) was significant at (β3=.3368, Pvalue=0.000) on start-ups' creation of employment.

5.4.5 Summary: Business Strategies and Start-up Performance

The study explored how business strategies influences what start-ups may realize from investments, which was measured through survival, financial performance and job creation. The indices for these variables were developed. The findings are summarized on table 5.18 below.

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Table 5.18: Business Strategies and Startups Survival, Financials, and Employment

BS/PMEG		Diversification	Market penetration	Market development
	Survival	(β1=.1962, pvalue =0.004),	(β2=.1299, pvalue =0.145)	(β3=.5472, pvalue=0.000)
		+ve significant	+ve non-significant	+ve significant
	Finances	(β1=.3288, pvalue=0.000),	(β2=.3787, pvalue =0.000)	(β3=.1770, pvalue =0.000)
		+ve significant	+ve significant	+ve significant
	Employment	(β1=.0912, pvalue =0.175),	(β2=.0702, pvalue =0.425)	(β3=.3368, pvalue=0.000)
		+ve non-significant	+ve non-significant	+ve significant

Source: Field Data (2022)

In general, it is inferred that business strategies explains significantly Performance of start-ups in Nairobi City County resulting in the rejection of their null hypothesis; hence adoption of the alternative hypothesis that there exists a significant influence of business strategies on performance of start-ups in Nairobi City County. Given the fact that business strategies/PMEG has relationship with start-ups' survival, financials and creation of employment to conclusion was made to;

rejected the null hypothesis **H03**: that there is no significant relationship between business strategies and performance of startups at the Nairobi City County is not significant.

5.5 Entrepreneurial Orientation, Business Incubation, Business Strategies and Performance of Start-ups

H04: The Joint influence of Entrepreneurial Orientation, Business Incubation, Business strategies jointly on performance of start-ups in Nairobi City County is not significant.

The final study was to ascertain whether the relationship between entrepreneurial orientation, business incubation and business strategies jointly as well as that of performance of start-ups in Nairobi City County is significant. This was tested by first evaluating the presence data correlation between the study latent variables. The hypothesised statistical test model presented in figure 5.6 depicts key latent variables entrepreneurial orientation (EO) business incubation (BIN) and business strategies (BS) and explanatory variable - performance of start-ups (PS).

According to Maruyama (1998), SEM is the most preferred method when using multivariate data. It was developed to cater for what ordinary least squares (OLS) could not do, especially when the latent constructs are complex. The measurement of latent constructs models was validated using CFA procedure. The researcher then proceeded to use SEM to analyse the structural model for causation and correlation effects.

Further, advantages of SEM, according to Urbano (2013) include clear assessment of error measurements, measuring unobserved (latent) variable via observed variables, assessment of the test model for goodness of fit, and lastly, it considers a large sample (Greater than 200 respondents) in order to examine a basic model which fits well with the study's actual responses.

Structural-equation model is an extension of factor analysis whose methodology is designed primarily to test theoretical underpinnings from empirical data. Structural-equation model (SEM) is a system of linear equations among several unobservable constructs and observed variables. It a composite model containing structural section linking the constructs to each other (usually, this part expresses the endogenous or

dependant constructs as linear functions of the exogenous or independent constructs), and a measurement part, linking the constructs to observed measurements.

5.5.1 Fit Indexes for Joint Hypothesis Tests

The model was tested for fitness for the data which was corrected. The purpose of this test was to ensure the purpose of measurement on how well the model agrees with observed data. From table 5.19 above, Likelihood-ratio chi-squared statistic was 455.941 with a pvalue of 0.000 (model versus saturated) and 1236.752 with a pvalue of 0.000 (baseline versus saturated), RMSEA statistic was 0.195 with pvalue of 0.000, AIC was 7106.277, BIC was 7236.628, CFI was 0.654 and TLI was 0.552. Since the ratio was significant for chi-square statistic at (pvalue =0.000), RMSEA pvalue was smaller than .05, then the structural equation model developed for the joint effect was a relatively good model that fitted the data used. See table 5.19 below.

Table 5.19: Fit Indices IV: Joint Evaluation of All Variables

Fit statistic	Value	Description
Likelihood ratio		
chi2_ms(51)	455.941	model vs. saturated
p > chi2	0.000	
chi2_bs(66)	1236.752	baseline vs. saturated
p > chi2	0.000	
Population error		
RMSEA	0.195	Root mean squared error of approximation
90% CI, lower bound	0.179	
upper bound	0.212	
pclose	0.000	Probability RMSEA <= 0.05
Information criteria		
AIC	7106.277	Akaike's information criterion
BIC	7236.628	Bayesian information criterion
Baseline comparison		
CFI	0.654	Comparative fit index
TLI	0.552	Tucker-Lewis index

Source: Field Data (2022)

The test result confirmed that the model fit was appropriate for this data since the chi-square was 455.94 and overall Pvalue of 0.000 was less than 0.05 significant level. This means that Entrepreneurial Orientation singly increases Performance of start-ups in Nairobi City County by 0.1261 holding other factors constant. Business Incubation Increases Performance of start-ups in by 0.4199 and Business Strategies increases Performance of start-ups by 1.9697 holding other factors constant. See table 5.20 below.

Table 5.20: Structural Equation Model Summary IV

Performance of Start-ups	Coefficients	Std error	z	p>z	Confidence Interval	
Entrepreneurial Orientation	0.1261	0.1022	1.23	0.217	-0.0742	0.3264
Business Incubation	0.4199	0.1402	3.00	0.003	0.1451	0.6946
Business Strategies/PMEG	1.9697	0.4224	4.66	0.000	1.1418	2.7976
LR test of model vs. saturated: chi2(51) = 455.94, Prob > chi2 = 0.000 Coefficient of determination (R squared) = 0.5850						

Source: Field Data (2022)

These results can be summarised in table 5.40 which revealed that Entrepreneurial Orientation, Business Incubation and Business Strategies were found to jointly and significantly explaining performance of start-ups since the pvalue of 0.000 was less than 0.05 level of significance.

Figure 5.4: Combined Influence Entrepreneurial Orientation, Business Incubation Business Strategies
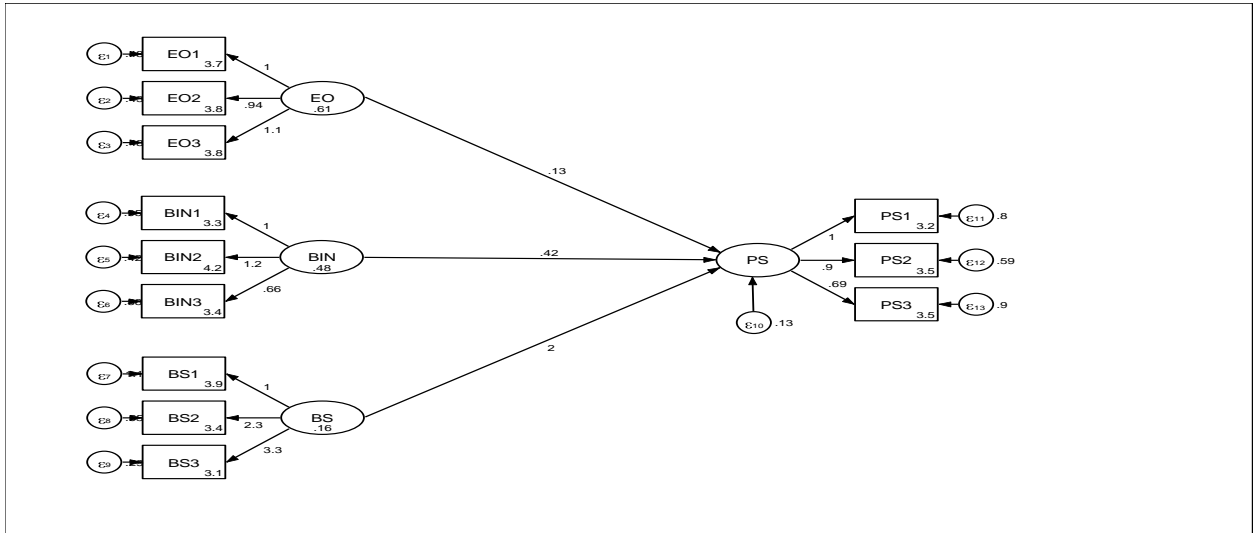
Source: Field Data (2022)

Figure 5.4 indicates the findings of the joint link between Entrepreneurial Orientation, Business Incubation and Business Strategies and Performance of start-ups in Nairobi City County. The study established positive relationships having coefficients of 0.1261, 0.4199 and 1.9697 for entrepreneurial orientation, business incubation and business strategies, respectively, with performance of start-ups in Nairobi City County. Also, the fit indices computed, as depicted in table 5.19, Likelihood-ratio chi-squared statistic, Root Mean Squared Error of Approximation statistic, information Criteria statistics and baseline comparison statistics were evaluated.

In general, it can therefore be inferred that Entrepreneurial Orientation, Business Incubation and Business Strategies explains significantly the Performance of start-ups in Nairobi City County resulting in the rejection of the null hypothesis and hence adoption of the alternative hypothesis that there exists a significant joint influence of Entrepreneurial

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Orientation, Business Incubation and Business Strategies on performance of start-ups in Nairobi City County.

5.5.2 Summary of Joint Influence

The study further explored how entrepreneurial orientation, business incubation and business strategies jointly influenced Start-ups' survival rate, financial performance and employment creation. The study concluded to reject the null hypothesis H03 that no significant relationship between business strategies and performance of start-ups and uphold the alternative hypothesis Ha3: that there is a significant relationship between business strategies and performance of start-ups.

The study explored how entrepreneurial orientation, business incubation, and business strategies jointly influenced start-ups' survival, financial performance and job creation. The composite indices for the study variables were developed from its sub-items. Based on the start-ups' survival rate model, a significant joint influence of entrepreneurial orientation, business incubation, and business strategies influenced start-ups' survival rate.

The study also explored how entrepreneurial orientation, business incubation, and business strategies jointly influenced start-ups' financial performance. Based on the results, the model revealed a significant joint influence of entrepreneurial orientation, business incubation, and business strategies on start-ups' financial performance. In addition, the study explored how entrepreneurial orientation, business incubation, and business strategies jointly influenced start-ups' job creation. The findings revealed a significant joint influence of entrepreneurial orientation, business incubation, and business strategies on start-ups' job creation.

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5.6 Discussion of Findings

The main purpose of this research was to establish whether entrepreneurial orientation, business incubation and business strategies influence performance of start-ups in Nairobi City County, Kenya. In order to get the answer, a theoretical model was developed with four hypotheses. The four latent variables include entrepreneurial orientation, business incubation, business strategies and performance of start-ups. The research relied on the reviewed literature to operationalize the constructs. Entrepreneurial orientation performances of start-ups were linked to the theory of entrepreneurship to the extent of establishment of new ventures as explained by Schumpeter (1991). Start-ups comprised a great concern by administrative units due to their role in social and economic stability and therefore linked to the endogenous growth theory. Business incubation was linked to social network theory due to its role in nature of mentoring, capacity build and networking services to new enterprises.

Before the analysis of collected data, reliability and validity of instruments were done through exploratory factor analysis. This was followed by diagnostic tests and correlation analysis of which all met the threshold for further analysis. The descriptive statistics were done to illustrate the extent to which entrepreneurial orientation, business incubation, business strategies influence performance of start-ups in Nairobi City County, Kenya.

5.6.1 Entrepreneurial Orientation on Performance of Start-ups in Nairobi City County

The specific objective of the study was to establish the relationship between of entrepreneurial orientation and performance of start-ups Nairobi City County. Scrutiny of

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literature (e.g. Wiklund et al., 2011) helped conceptualize entrepreneurial orientation as a predictor variable to startup performance observed on survival, financials and employment. The most attractive features for start-up performance was given by Schumpeter (1991) in his authoritative assertion that start-ups are at the centre in the process of evolution inside the capitalist set up by creatively introducing changes within the economic in destroying the former order and constructing the new one, thus the phrase creative destruction. Start-ups differ from small and medium enterprises on one thing, small and medium enterprises may choose to remain so for long time while start-ups have the potential to go beyond small. Olaolu and Obaji, 2020 asserts that entrepreneurial orientation is observed on its characteristics are innovativeness, risk-taking, and proactiveness. Previous literature linked entrepreneurial orientation to performance of start-ups under entrepreneurship theory which state that entrepreneurship is able to mobilise resources and mitigate the risk in undertaking new business (Leach, Stirling & Scoones, 2010).

Since the likelihood ratio chi-square statistic was significant at (Pvalue =0.000), RMSEA Pvalue was smaller than .05 and a CFI and TLI are greater than .90, which formed the basis to conclude that structural equation model developed was a relatively good model that fitted the data used. Performance of start-ups is the degree of success as observed in terms of survival, financials and creation of employment (Gerschewski & Xiao, 2015). The first null and alternatives hypothesis was set thus;

H01; The relationship between entrepreneurial orientation and performance of start-ups in Nairobi City County is not significant

The main test adopted for hypothesis is structural equation modelling (SEM) which has the attribute of providing direction of association. After diagnostic tests of normality, multicollinearity, and heteroscedasticity tests and skewness, the structural equation method test results indicate a strong relationship between entrepreneur orientation and performance of start-ups with pvalue of 0.0004 being than 0.05 level of significance. The result further confirms that the model fit is appropriate for the data since the chi-square was 28.75 and overall pvalue of 0.0004 was less than 0.05 significant level. It is therefore noted that at 5% level of significance, entrepreneurial orientation increases performance of start-ups in Nairobii City County by path coefficient of 0.7876 holding other factors constant.

Entrepreneurial orientation was measured on three out of four sub-constructs of innovativeness, risk-taking and pro-activeness while start-up performance was observed through survival, financial and creation of employment.

On innovativeness characteristic, the study results revealed significant relationship at $\beta_1=.0055$ with pvalue $=0.960$ on start-up survival, $\beta_1=.1404$ with Pvalue $= 0.118$ on start-up finances and $\beta_1=-.1040$ with Pvalue $=0.289$ on creation of employment.

On Risk taking characteristic, the study the relationship revealed level of significance at $\beta_2=.5083$ with Pvalue $=0.000$ on survival, $\beta_2=.5851$ with Pvalue $= 0.000$ on finances and lastly $\beta_2=.3785$ with Pvalue $=0.000$ on creation of employment.

On Pro-activeness characteristic, the study the relationship revealed level of significance at $\beta_3=.0275$, pvalue$=0.792$ on survival, ($\beta_3=-.0965$, pvalue $= 0.261$) on finances and lastly ($\beta_3=-.0752$, pvalue$=0.422$) on creation of employment.

In general, Risk-taking characteristic of entrepreneurial orientation explains more than other innovative and pro-activeness on performance of start-ups in Nairobi City County. Risk taking is highlighted in the entrepreneurship literature as a great contributor to entrepreneurship. This result help in recognizing risk-taking as fundamental part of entrepreneurship especially when developing new businesses.

Further analysis was done for entrepreneurial orientation and start-ups survival rate, the findings revealed a significant direct influence of entrepreneurial orientation and start-ups' survival. This finding is in line with those by Shan, Song and Ju (2016) who found a direct relationship between entrepreneurial and survival rate of firms in China. However, the study by Wolff, Pett and Ring (2015) depicted a contrary result.

Linton and Kask (2017) describe risk taking as an important factor in the development of entrepreneurial orientation. As early as 1921, Keynes differentiated risk-taking in business by defining risk as a situation where probabilities of outcomes are known or can be estimated from past data, and ambiguity as a situation where probabilities of outcomes are themselves uncertain or unknown. Start-ups who engage on risk simply have data within themselves and decide to take the risk (Knight, 1921).

The influence of entrepreneurial orientation fulfils the pronouncements of the theory of entrepreneurship. The theory of entrepreneurship tends to suggest that entrepreneurship has a rare ability to mobilise resources and therefore mitigates the risk element in undertaking new business. Since entrepreneurs undertake socially economic engagements that are outside their routine tasks and sometimes resisted by environmental dynamics there is an urgent need to encourage and protect them by reducing the risks they take (Leach,

Stirling & Scoones, 2010). Entrepreneurial risk and uncertainty are reduced through training, planning and improved performance.

The study confirms that, the theory of entrepreneurship focuses on creating value and employs a two-level framework to validate the internal entrepreneurial process. From the first stage of enterprise implementation, the entrepreneur, motivated by an entrepreneurial behaviour or an aspiration for entrepreneurial reward, identifies an external opportunity which is then leveraged by the entrepreneur's current resources through an effectuation mechanism (Oftedal, Iakovleva & Foss, 2017). The entrepreneurial opportunity is redesigned in order to cultivate entrepreneurship among the business industry players.

Based on the findings entrepreneurial orientation (EO) is confirmed to have positive relationship with start-up performance in Nairobi City County. However, the degree of the association relies on certain factors. This study applied the theory of entrepreneurship and resource dependence theory to develop and test on how start-ups are enhanced to promote entrepreneurial orientation. Entrepreneurial concept is attributed to contain desirable dynamics and capabilities to energize creation of new enterprise. Innovative capability and risk taking aspect play a significant role in catalysing EO to yield the best performance outcomes. It is therefore important to note that only when start-ups combine their existing resources with innovative and risk taking attributes of entrepreneurial orientation are key in making enterprise strategic decisions capable of achieving desired objectives. The research model is empirically validated by 210 start-ups of five business. Our research evidence prove that ACAP improves the relationship between EO and performance in incubator environments. Further, we discuss implications for theory and practice.

5.6.2 Business Incubation and Performance of Start-ups

The study explored the relationship between business incubation and performance of start-ups. Start-up performance was observed in survival, financials, and creation of employment. Business incubation was conceptualized as an enabling and stimulating environment for learning entrepreneurship (United Nations Economic Commission for Europe, 2002). Hackett and Dilts (2004) identified business incubation as not just an office building but also a place where variety of networks and services that function inside and outside are provided. Sillitoe and Chakrabarti (2010) provided a more functional definition which brought out its key observable activities including mentorship and coaching, capacity building and networking (linking of startups to important resourceful entities) which are capable of altering the direction and speed at which firms grow.

The literature review anchored this study on two theories namely; the resource dependence theory and the social network theory. Resource dependence theory presupposes that an enterprise aligns itself with entities that control major resources and are important to its operations but the entity itself has no control over those resources (Davis & Cobb 2010). Business incubation is a process which help start-up make important decisions such as physical positioning of new business. The Social network theory by Bollingtoft and Ulhoi (2012) provides valuable pronouncements that 'entities link to each other by use agents. Business incubation plays the role of agent for start-ups.

Granovetter (1982) demonstrated that social networks two levels; namely, strong tie and weak tie. Network ties are strong when the association between an individual and his kinship are close, and they interact with or without a role. The linkage between the

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individuals is strong and connection is close too. One of the key features of strong ties is the frequency of interaction between the individuals, the amount of information shared. Strong relationships are characterized by traits such as regular contact, mutual trust, and a high degree of information sharing, among others.

This study set the hypothesis thus;

H02: The relationship between business incubation and performance of start-ups at the Nairobi City County is not significant and the alternative hypothesis;

The study tested the hypothesis using structural equation method where the structural model provides the coefficient for the path analysis and measurement model provided the bita results for observable sub-constructs.

The dependent variable was performance of start-ups (PS), and the explanatory variable was business incubation. The results indicate a link between business incubation and performance of start-ups in Nairobi City County. The result further confirms that the model was appropriate for the data which was collected. On the structural model, SEM results indicate coefficient of 1.9 which means that for every 1 unit of business incubation, explains 1.9 unit of performance of start-ups. It is therefore inferred that business incubation significantly explains performance of start-ups resulting in the rejection of the nulli hypothesis and the adoption of the alternativei hypothesis that there exists significant influence of business incubation on the performance of start-ups in Nairobi City County.

The study concluded that there exists a significant relationship between business incubation and start-ups' survival.

This finding is in line with those by Mian, Lamine and Fayolle (2016) which depicted a positive and significant relationship between business incubation and survival rate of firms. Technology business incubation forms critical value-added inputs that creates development of innovative Technology-Based firms thus increasing the survival rate of firms. However, the findings by Lukeš, Longo and Zouhar (2019) depicted a negative relationship between business incubators and entrepreneurial growth among small firms in Italy.

Empirical evidence (Robinson et al., 2014) indicated performed a causal effect relationship experiment for the performance of a business incubator service for 20 Norwegian start-up firms between year 2008 and 2010 on network value and absorptive capacity and established a significant influence of business incubation on entrepreneurial orientation, specifically linking strategy making and performance of start-ups to network value and absorptive capacity (Stubberud, 2016). Network value attributed to business incubation is a resource whose contribution to the performance of start-ups has not been fully explored.

This study sought to bridge the gap of knowledge on the impact of business incubation and business strategies on the performance of start-ups, underpinning it on social network theory and resource dependence theory.

Theoretically, the results of this study will contribute to advancing knowledge on how incubation best suits advancement of network resources involving suppliers and customers at the start-up stage. The underpinning of entrepreneurship theory brought new understanding of the knowledge-based view on starting new performing ventures being supported by endogenous growth theory. Further, knowledge was acquired on the application of resource dependence theory for young entrepreneurs making the best

advantage of the environmental resources. Davis and Cobb (2010) claim that the theory presupposes that an enterprise aligns itself with entities that control major resources which in itself does not have. For the best performance of start-ups, the entrepreneur must consider other resources in the environment other than materials, customers and labour.

The study examined how business incubation influenced performance of start-ups as measured through financial performance. Based on the findings, the model revealed a significant influence on start-ups' financial performance. This finding is in tandem with those by Ogutu and Kihonge (2016) who indicate that business incubation improved financial performance of SMEs in Kenya. The study recommended improvement in business incubation for better financial performance. On the other and, a study in Czech by Dvouletý, et al. (2018) found that public funded incubators were negatively influencing financial performance of these firms. In addition, the study investigated how business incubation affects the performance of start-ups, which was measured through job creation.

Based on the findings of business incubation and startups' job creation, the model revealed a significant influence of business incubation on start-ups' job creation. The findings concurred with the findings by Al-Mubaraki (2010) who contended that business incubation programs are model tools for start-up acceleration and significantly influence entrepreneurial development. In addition, Ramsden and Bennett (2015) deduced that success of start-ups was dependent on business incubation and hence lack of proper networks and maintenance of incubation services records adverse performance. Overall, to

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determine the influence of business incubation on the performance of start-ups, the Structural Equation Model (SEM) was examined.

These findings were supported by Mian, Lamine and Fayolle (2016) who examined the link between small firms, incubation and rate of survival. From the findings, the results depicted positive and significant relationship between business incubation and survival rate of firms. Technology business incubation forms critical value-added inputs that create development of innovative technology-based firm's thus increasing survival rate of firms.

The Configuration of entrepreneurial orientation, business incubation and business strategies as latent variables and performance of start-ups as observable variables fulfils the network properties (Greve & Foss, 1990). Hindle and Klyver (2011) pinned their study of successful start-ups on social network theory and concluded that successful start-ups were attributed to a tie between start-ups, markets and consumers and failures were attributed to lack of influencing and intervention mechanisms. Conceptually, this study configuration is based on the thinking of Scott (2011), who alludes to the business incubation process to social networks linking entrepreneurial orientation, firm strategy and performance of start-ups. Their assertion is supported by Goldman and Cornwell (2015). who argue that social networks theory breaks the boundaries of formal and new enterprise with other resourceful entities thereby creating informal cost-free links that lead to ease access of information which could otherwise have been costly to start-ups. These informal links overcome time and money resource challenges which are very scarce for start-ups.

5.6.3 Business Strategies and Performance of Start-ups

The third objective of this study sought to ascertain the relationship between business strategies and performance of start-ups in Nairobi City County. In order to get the relationship, the structural model was constructed comprising the predictor variable of business strategies as explanatory variable and performance of start-ups as observed through survival, financials and employment. This is demonstrated from which a null hypothesis H03 was extracted from; presenting the path between Business Strategies and Performance of start-ups.

H03: The relationship between Business Strategies and performance of start-ups in Nairobi City County is not significant and alternative;

The study explored the relationship between business strategies and performance of start-ups as observed through survival, financials and job creation. The business strategies evaluated were Diversification, Market penetration and Market development. The composite indices for these variables were developed.

Structural equation model result indicates a path coefficient of 2.1 between business strategies and performance of start-ups. The result depicts that for every increment of one unit of business strategies, there is corresponding increment of 2.1 unit of performance of start-ups in Nairobi City County. Further measurements were done on the business on the observable constructs of business strategies namely; Diversification, Market penetration and market development. Each were mapped to start-up performance on its sub-constructs of survival, Financials and employment.

Diversification related to start-up performance as follows; Survival – ($\beta 1$=.1962, Pvalue =0.004), Financials – ($\beta 1$=.3288, Pvalue=0.000), and Employment-($\beta 1$=.0912, Pvalue =0.175). The results indicate a positive and significant relationship between Diversification and performance of start-ups.

Diversification strategy performed better than other strategies. This is consistent with other studies such as Nyangiri and Ogollah (2015). Nonetheless, the justifications for diversification as well as results vary, with some findings found to be inconclusive (Asrarhaghighiet, 2013). Organizations may choose to diversify to survive the dynamics of business start-ups. The Effect of diversification strategy was to foster start-up survival, liquidity and employments.

Theoretically, diversification became more popular for start-up survival basically to outpace competitors (Haug & Ultich, 2013). Whether in related form or not, diversification is a strategic option used by more and more managers to improve sales. Organizations have chosen from among several available strategic alternatives to make the best use of the available resources to reach predetermined goals regarding increased performance

Resource dependency theory allows new enterprises to leverage on its internal resources to achieve competitive edge over other competitors. The theory states that new organizations may have in their possession a good number of untapped resources with potential that makes them superior over competitors and also enables increased performance when properly combined. The theory also provides for small organizations to utilize locational advantage to leverage on environmental advantages.

Market penetration was found related to start-up performance as follows; Survival – ($\beta 2$=.1299, pvalue =0.145), Financials – ($\beta 2$=.3787, pvalue =0.000) and Employment ($\beta 2$=.0702, pvalue =0.425). The result indicates a lower but significant relationship between market penetration strategy and performance of start-ups.

Market penetration strategy is one of the four growth strategies explained in the product/market expansion grid known as Ansoff Matrix. Market penetration allows start-ups to compete with old market players. Every market comprises many players, and they offer different products/services to attract what could be customers for a start-up. This reduces chances for survival, finances and employments. Market development was found be related to start-up performance as follows; Survival – ($\beta 3$=.5472, pvalue=0.000), Financials – ($\beta 3$=.1770, pvalue =0.000) and Employment ($\beta 3$=.3368, pvalue=0.000). The result indicates a high and significant relationship between market development strategy and performance of start-ups.

Market development strategy is also a growth strategy that focuses on existing products to new markets. Start-ups will use market development strategy when targeting new opportunities to sell their products in previously unexplored markets. It can therefore be inferred that business strategies significantly explains the performance of start-ups in Nairobi City County, resulting in the rejection of the null hypothesis and the adoption of the alternative hypothesis. There exist significant relationship between business strategies and start-ups at the Nairobi City County.

It can be concluded that skills in business are needed for the start and acceleration of enterprises by reducing material and time resource wastages but could not identify the most crucial skills. These findings were found to conform with the findings of Al-Abdallah et al. (2021) who investigated the relationship between business strategies and start-ups innovation performance. The study found out that there was a positive and continuous relationship between business strategies and start-ups innovation performance.

Similarly, a study by Heugens et al. (2015) that assessed whether publicly traded family businesses (FFs) outperform other types of corporations is a contentious and significant study question in the management literature agreed with the findings of this study. Results revealed that the weight of evidence shows that (US) FFs outperform other types of public corporations in terms of financial performance. The study discovered that the performance of (US) FFs deteriorates drastically after the first generation and demonstrates that this negative performance disparity can be attributed to the significantly more conservative patterns of strategic decision making adopted by succeeding generations.

5.6.4 Entrepreneurial Orientation, Business Incubation, Business Strategies and Performance of Start-ups

The last and basically the research objective sought to establish the combined effect of entrepreneurial orientation, business incubation and business strategies on performance of start-ups in Nairobi City County. This objective was meant to address the research question. The research question stated thus; to what extent does entrepreneurial orientation, business incubation and business strategies influence performance of start-ups in Nairobi

City County? The research question was answered first by constructing a structural model for the combined effect of the influence. The model comprised of entrepreneurial orientation, business incubation and business strategies as predictor variables and performance of start-ups as explanatory variable as presented on the hypothesised structural model.

H04: The Combined effect of entrepreneurial orientation, business incubation, business strategies on performance of start-ups in Nairobi City County is not significant

Objective four predicted that the combined effect of entrepreneurial orientation, business incubation, and business strategies will significantly influence Start-ups' performance in Nairobi City County. Structural Equation Model was used to measure the prediction. The results in table 5.40 indicate joint coefficient of 0.42 on the path between joint constructs and performance of start-ups. Entrepreneurial orientation alone accounted for 0.1261, Business Incubation 0.4199, Business strategies 1.9697. The findings revealed a significant joint relationship between entrepreneurial orientation, business incubation, and business strategies and start-ups' survival, Finances and job creation.

It can therefore be inferred that entrepreneurial orientation, business incubation, and business strategies explain significantly the performance of start-ups in Nairobi City County, leading to the rejection of the null hypothesis. The findings obtained in this study were in line with the Wiklund et al., (2011) who identified entrepreneurial orientation as a predictor to business performance. As part of the incubation programs, mentorship of young entrepreneurs on strategic making is part of the lessons. The findings were also in line with the findings of Burgess (2015) who researched on the entrepreneurial orientation-

performance relationship. They assessed innovativeness by inquiring about the ability to discover new ways of doing things, the inventiveness with which operations are conducted, and the proactive introduction of innovations into the firm. The relative success of the firm's goods in generating revenue and capturing market share increased product performance. In addition, Sedita et al. (2019) supported the findings where the incubation effect was extremely important in determining the innovation performance of new ventures in the early stages. Furthermore, business incubation depicted a positive impact on the internal technical capabilities as well as the adoption of a limited portfolio of collaborations for innovation that are implemented. A study by Linton (2015) examined the number of small businesses that would last in a rapidly changing trade environment by using long-term surveys and focusing on the role of entrepreneurship. Entrepreneurial skills and business management skills were found to be the best predictors of small business survival, according to the findings.

On the contrary, the findings differed with those of Rua, França and Ortiz (2018) who investigated whether organised creativity really resulted in innovation. Further, Hillemane et al. (2019) assessed whether entrepreneurial orientation and firm strategy jointly influenced firm's performance. It was revealed that entrepreneurial orientation and Business Strategies jointly and greatly enhance firm's performance through job creation. These studies concluded that firms' management should embrace the firm's internal strategy and entrepreneurial orientation jointly for improved performance in terms of job creation. It could thus be noted that, when business models don't work as well as they did before, entrepreneurs need to be able to change them to stay alive in more competitive economic environments (Ligthelm, 2015).

5.6.5 Conceptual Model Developed

From hypotheses testing, the study developed a conceptual model which quantified the influence of the variables as presented in figure 5. The model illustrates that entrepreneurial orientation (EO) on H01 at B1 = 0.126 Pvalue = 0.000 and business incubation (BI) on H02 with B1 = 1.855 Pvalue =0.000 both had a direct positive influence on the performance of start-ups in Nairobi City County. Business strategies (BS) also had a direct positive influence at H03 with B1= 2.109 Pvalue = 0.000 on the performance of start-ups in Nairobi City County.

When evaluating the combined effect entrepreneurial orientation (EO) explains performance of start-ups at, H04: B1 = 0.126 Pvalue 0.000, business incubation (BI) at H04: B2 = 0.42 Pvalue 0.000, and business strategies (BS) at H04: B3 = 1.97 Pvalue 0.000.

Figure 5.5: SEM Results Summary Graph
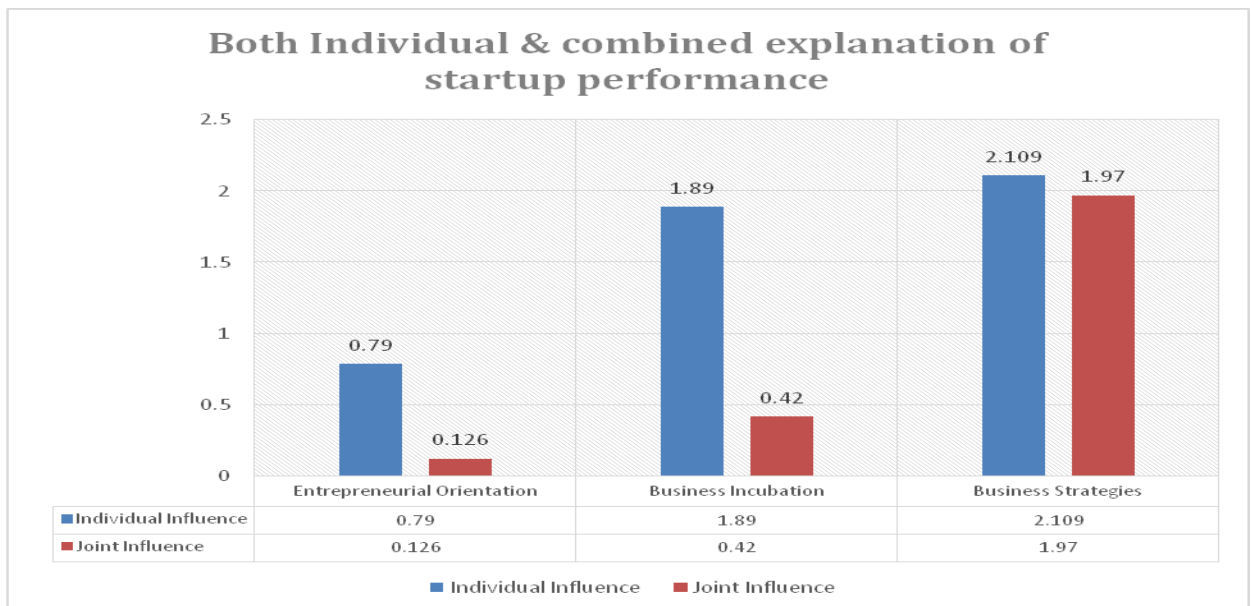
The analysis of path coefficient tests for individual and combined effects of entrepreneurial orientation, business incubation and business strategies revealed differences in favour of individual performance. See figure 5.6 above. Entrepreneurial orientation (EO) individually accounted 0.79 coefficients for a direct path to performance of start-ups in Nairobi City County. When combined with other variables EO explains 0.126 performances of start-ups.

Figure 5.6: Empirical Model
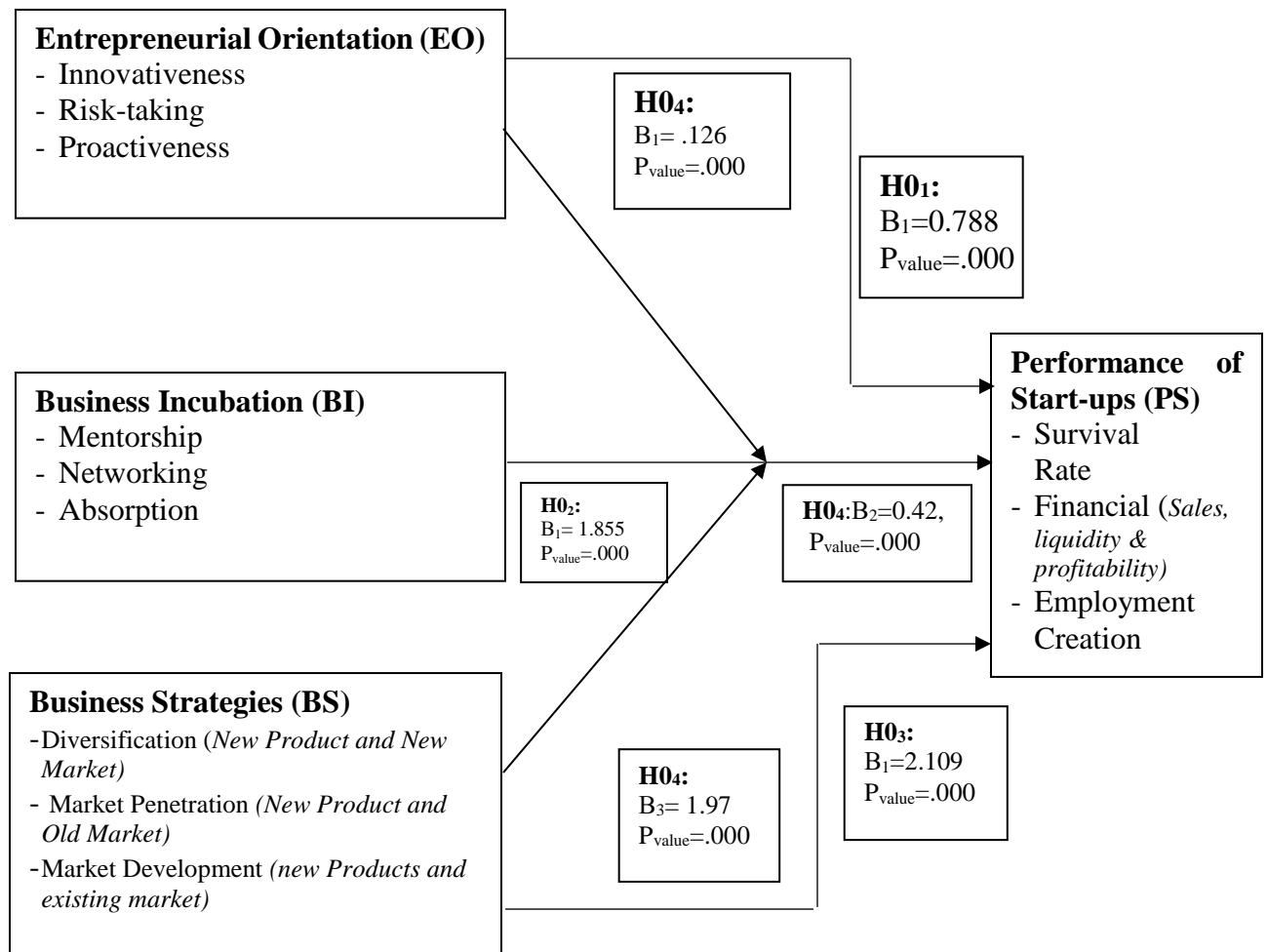
Source: Field Data (2022).

CHAPTER SIX

SUMMARY, CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS

6.1 Introduction

This chapter provides the summary of study findings. Additionally, the chapter presents the conclusions, implications and recommendations drawn from the research. The contextual and theoretical contributions achieved are also discussed especially on how they will influence policy, practice and methods. Finally, this chapter cautions on the study limitations experienced and suggests areas where further studies will provide desirable insights.

6.2 Summary of the Study Findings

The overall objective of this study was to establish whether the relationship between entrepreneurial orientation, business incubation, business strategies and performance of startups in Nairobi City County, Kenya is significant. In addition, the study also investigated whether the joint relationship between entrepreneurial orientation, business incubation, business strategies and performance of startups in Nairobi City County is significant. Both the individual and the joint association were systematically conceptualised in a conceptual framework. Adopting a positivism research philosophy, and following a cross-sectional survey design, which was adopted for primary data was collection from 210 incubatees that have used the services of ihub, Strathmore University, C4Dlab (University of Nairobi), Chandaria - BIIC (Kenyatta University), Nairobi Industrial and Technological Park Incubation centres. Data collected was cleaned, sorted, edited, and analysed. Correlation analysis, Structural Equation Model (SEMs) descriptive statistics and variance analysis were utilised for analysis.

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The results from correlation analysis indicated Entrepreneurial Orientation and Performance of startups are rated at with r= 0.413 and Pvalue = 0.000, implying weak but significant positive correlation. The analysis for the association between business incubation and performance of Startups variables indicated r=0.575 and Pvalue=0.000, which implies moderate but significant positively correlated and the correlation result between business strategies and performance of Startups in Nairobi City County was strong positive significantly correlated at r=0.737 and Pvalue = 0.000. Based on the results of these tests, all the three hypotheses were rejected as summarized on Table 6. 1 and upheld the alternative hypothesis.

Table 6.1: Summary of Hypothesis Testing

Study Objectives	Hypotheses	Decision
Establish whether there is relationship between entrepreneurial orientation and performance of startups Nairobi City County.	The relationship between entrepreneurial orientation and performance of startups at Nairobi City County is not significant	Null hypothesis was rejected
Determine whether there is relationship between business incubation and performance of startups Nairobi City County.	The relationship between business incubation and performance of start-ups at Nairobi City County is not significant	Null hypothesis was rejected
Ascertain whether there is relationship between business strategies and performance of startups Nairobi City County.	The relationship between business strategies and performance of startups at Nairobi City County is not significant	Null hypothesis was rejected
Establish the combined effect between entrepreneurial orientation, business incubation and business strategies on performance of start-ups in Nairobi City County.	The joint relationship between entrepreneurial orientation, business incubation, business strategies on performance of startups at Nairobi City County is not significant	Null hypothesis was rejected

The SEM results in Table 6. 1 show a summary of the analysis estimating the relationship between Entrepreneurial Orientation with path coefficient of 0.79, Business Incubation with path coefficient of 1.9, and business strategies with path coefficient of 2.1 all to performance of startups in Nairobi City County. On Entrepreneurial Orientation, and performance of start-ups, the study results indicated that the null hypothesis is rejected, since the overall was significant at 5% level. The rejection of the null hypothesis that there is no relationship between entrepreneurial orientation and performance of startups, implies that there exists a significant influence of entrepreneurial orientation on performance of start-ups in Nairobi City County.

In terms of the indicators of Entrepreneurial Orientation, on the specific indicators for performance of start-ups in Nairobi City County, the study concluded that there exists a significant relationship between entrepreneurial orientation (Innovation dimension, risk taking dimension and proactiveness dimension), and Start-ups' survival rate. In relation to start-ups' financial performance, there existed a significant relationship between entrepreneurial orientation (Innovation dimension, risk taking dimension and proactiveness dimension) and Start-ups' financial performance. Further, in relation to job creation, there exists a significant relationship between entrepreneurial orientation (Innovation dimension, risk taking dimension and proactiveness dimension) and Start-ups' job creation.

On business incubation and performance of start-ups, the study results indicated that the null hypothesis is rejected, since the overall was significant at 5% level. The rejection of the null hypothesis that there is no relationship between Business Incubation and

performance of start-ups, implies that there exists a significant influence of Business Incubation on performance of start-ups in Nairobi City County.

In terms of the indicators of Business Incubation on the specific indicators for performance of start-ups in Nairobi City County, the study concluded that there exists a significant relationship between business incubation (mentorship, networking and absorption capacity) and Start-ups' survival rate. In relation to start-ups' financial performance, there existed a significant relationship between Business Incubation (mentorship, networking and absorption capacity) and Start-ups' financial performance. Further, in relation to job creation, there exists a significant relationship between business incubation (mentorship, networking and absorption capacity) and Start-ups' job creation.

On business strategies and performance of start-ups, the study results indicated that the null hypothesis is rejected, since the overall model was significant at 5% level. The rejection of the null hypothesis that there is no relationship between business strategies and performance of start-ups, implies that there exists a significant influence of business strategies on performance of start-ups in Nairobi City County.

In terms of the indicators of business strategies on the specific indicators for performance of start-ups in Nairobi City County, the study concluded that there exists a significant relationship between business strategies (diversification, market penetration and market development) and start-ups' survival rate. In relation to start-ups financial performance, there existed a significant relationship between business strategies (diversification, market penetration and market development) and start-ups' financial performance. Further, in

relation to job creation, there exists a significant relationship between business strategies (diversification, market penetration and market development) and start-ups' job creation.

6.3 Conclusion of the Study

The study drew quite a number of conclusions all based on the objectives. Beginning with the first objective, which sought to establish the significance of relationship between entrepreneurial orientation and performance of startups in Nairobi City County, it was established that indeed entrepreneurial orientation positively and significantly influence performance of startups in Nairobi City County. As far as performance indicators for startups in Nairobi City County are concerned, comparing with the indicators for entrepreneurial orientation, innovation and proactiveness have no significant influence while risk-taking significant influence performance of startups on survival, financials and creation of employment.

The study also sought to determine the influence of business incubation on performance of start-ups in Nairobi City County. The study concluded that business incubation positively and significantly influences performance of start-ups in Nairobi City County. On the respective indicators for entrepreneurial orientation on the indicators for performance of start-ups in Nairobi City County, mentorship and absorption capacity had a significant influence. In contrast, networking did not have a significant influence on start-up survival rate, financial performance and job creation.

The objective number three intended to ascertain the relationship between business strategies and performance of start-ups is significant. It is concluded that business strategies not only positively related to performance of startups in Nairobi City County, but also the

relationship is very significant. On the respective indicators for business strategies on the indicators for performance of start-ups in Nairobi City County, diversification led significantly on startup performance on survival and finances but was less significant on job creation. Market penetration was remarkably significant startup performance on financials but less significant on survival and job creation.

The fourth objective purposed to establish the joint relationship between entrepreneurial orientation, business incubation and business strategies on performance of startups in Nairobi City County. The study concludes that jointly, entrepreneurial orientation, business incubation and business strategies are significantly are related to performance of startups in Nairobi City County. The joint association on the respective indicators for performance of startups in Nairobi City County, entrepreneurial orientation was significant on startup survival, but less significant on financials and job creation, business incubation was significant on startup survival, financials and job creation. Lastly, business strategies was significantly related to startup survival, financials and job creation.

In order to realize the best performance for startups, prospective investor must be prepared to take the risk, strategizes according to the startup objective, and ensure the business is incubated.

6.4 Implications of the Study Findings

The sub-section explores the contribution of the findings in terms of knowledge, policy, practice, theory and methodology. The overall purpose of this study was to establish whether the relationship between entrepreneurial orientation, business incubation and business strategies and performance of startups in Nairobi City County, Kenya was

significant. The intention of the study is to create a basis for systematic performance improvement of startup performance and provide evidence for reference.

6.4.1 Contribution to Knowledge

Both practitioners and academics have gained invaluable information due to this research in particular, and the study has significantly contributed to theory by elaborating on the importance of entrepreneurship theory, resource dependence theory, endogenous growth theory and social network theory in the practice and performance of startups. There are four areas in which the results of this study contribute to the existing knowledge.

First, the findings demonstrate that although all the three characteristics discussed of entrepreneurial orientation, namely, innovativeness, risk-taking and proactiveness, substantially explain performance of startups in Nairobi City County, risk-taking is the most outstanding. Risk was defined as obstacles perceived or real on the way to achieving the objectives. Anyone who wants to succeed in starting business in Nairobi must be prepared to take risks.

Second, Business incubation under network theory links suppliers and customers to startups best at 2nd tie than 1st tie. It is trues as Granovetter (1982) puts it that network theory is demonstrated at two levels namely: strong tie and weak tie. Network ties are strong when the association between an individual and his kinship are close and they interact with or without a role. The linkage between the individuals is strong and connection is close too. One of the key features of strong ties is the frequency of interaction between the individuals, the amount of information shared. Relatives play the second role

to startups after customers. This theoretical assertion were made clear by this study findings.

The thirdly, business strategies (Diversification, market development and market penetration) had significant effect between entrepreneurial orientation and start-up performance in Nairobi City County. Business strategies explained most the performance of start-ups in Nairobi City County among the three conceptualized constructs of entrepreneurial orientation, business incubation and business strategies. For startups to ensure survival, good sales and creation employment in Nairobi City County, decide between Diversification, Market and product development approaches. On startup survival and financials, diversification, and on job creation market and product development. Therefore, it means that any business that ignores or fails to consider business strategies within its area of operation does so at its peril.

Finally, the study result indicated that there exist significant joint effects of entrepreneurial orientation, business incubation, business strategies on performance of startups in Nairobi city County. This implies that proper entrepreneurial orientation is not the only thing that explains startups performance, but it should also be understood that other variables have a contribution. In particular, the combined influence of entrepreneurial orientation, business incubation and business strategies significantly impact performance of startups performance.

6.4.2 Contributions to Policy

Entrepreneurial orientation connotes a situation where a person or an enterprise inclines itself towards entrepreneurship. This inclination was tested through risk-taking, pro-

activity and innovativeness and found to be influencing start-ups very significantly. New entrants especially those graduating from academic institutions should be encouraged to obtain an incubation certificate to acquire funding.

Start-ups are by nature located in between a good idea and the actual business. A good business idea is not business until it is put into practice and tested over time. This research revealed that entrepreneurial orientation, business incubation, and business strategies together and singly significantly influence the performance of startups in Nairobi City County. It is in the interest of national and county Governments to actively create necessary legislation to salvage good business ideas into actual businesses. Unless good business ideas are incubated, the level of innovation may go down significantly hence reflecting on the performance of the economy. The main difference between innovation and entrepreneurship is that innovation is the process of coming up with great ideas and implementing them to make new products, services, and processes while entrepreneurship is the process of starting and building businesses using innovative ideas that solve problems.

6.4.3 Contributions to Management Practice

In practice, startups are encouraged to take advantage of mentorship programs organised by government entities, NGOs and FBO since mentorship was found to significantly influencing performance on startup survival, financials and job creation. On diversification, startups should conscious and apply of Ansoff (1957) model on the status of the product and the market since it is associated with the eventual outcome on performance of the startups in terms of survival, financials and employment.

6.4.4 Contributions to Theory

This study provided credence to social network theory as experienced within the business incubation framework. The proponents of social network theory argue that networks are patterns of lasting social associations between people referenced to each other. The study confirmed that business incubation as constituted, significantly the framework for startup performance. It was also established that the second tie network is what mattered most for new enterprises.

The theory of entrepreneurship focuses on creating value and employs a two-level framework to validate the internal entrepreneurial process. From the first stage of enterprise implementation, the entrepreneur, motivated by an entrepreneurial behavior or an aspiration for entrepreneurial reward, identifies an external opportunity, which is then leveraged by the entrepreneur's current resources through an effectuation mechanism (Oftedal, Iakovleva & Foss, 2017). The entrepreneurial opportunity is redesigned in order to cultivate entrepreneurial ability, hence creating an asymmetric benefit for the entrepreneur's startups.

Entrepreneurship is not just the act of establishing a new business, but also the specified addition of value and resource allocation in an unpredictable environment (Mishra & Zachary, 2014). The system is guided by the aim of the entrepreneur to collect compensation. The entrepreneurial process entails the entrepreneur defining an external opportunity, matching the available entrepreneurial resources to the opportunity in order to demonstrate entrepreneurial competence, acquiring resources available, if necessary,

creating sustained value, and utilizing the entrepreneurial reward. The reward becomes bigger if the competences are higher.

The configuration of entrepreneurial orientation, business incubation and business strategies as latent variables and performance of start-ups as observable variables fulfils the network properties (Greve & Foss, 1990). Hindle and Klyver (2011) underpinned their study of successful startups on social network theory, and concluded that successful start-ups were attributed to a tie between startups, markets and consumers. Conceptually, this study configuration is based on the thinking of Scott (2011), who alludes business incubation process as a social network that links entrepreneurial orientation, business strategies and performance of startups. Their assertion was similar Goldman, et al., (2015). who argue that social network theory breaks the boundaries of formal and new enterprise with other resourceful entities thereby creating informal cost-free links that lead to ease access of information, which could otherwise have been costly to start-ups. These informal links overcome time and money resource challenges, which are very scarce for start-ups.

6.4.5 Contributions to Methodology

The study employed a multivariate model in the analyses and testing of hypotheses. Structural equation modelling was used to examine the contribution of entrepreneurial orientation, business incubation, business strategies and performance of start-ups. This is an advanced version of a model that used data without any manipulation. The study confirmed that business incubation as constituted, significantly influenced performance of startups. Indeed Structural Equation Method was found to work well and produce

dependable results. The study addressed all assumptions of SEM before the actual tests implying that the findings were scientifically grounded.

6.5 Recommendations

This study identified entrepreneurial orientation as key to the development of business starting with new enterprises. The importance of entrepreneurial orientation is observed in the innovative, risk-taking and pro-active characteristics (Lumpken & Dess 2005). For any training aimed at fostering entrepreneurship and ultimate start-up longevity, the content must have innovative, risk taking and proactive techniques.

It was also observed that, business incubation occupies a conspicuous position to nurture and mid-wife new businesses (Remedios & Cornelius 2003). Upcoming entrepreneurs require not only finances to start business but also space, associated protocols to start-off, network with other resourceful entities and critical assurances and mentorship. Business incubation is a basic internship which must be made compulsory for any funding to new enterprises through legislation. Graduates from business incubation centres should be certified as requirement for sponsorship.

The study findings revealed that planning was unavoidable ingredient to start-ups. There is a tendency for new business to ignore the application of Ansoff matrix as a guide to new businesses. The Government should develop guidelines thereby providing for minimum lessons required at the business incubation programs. Business strategic making must form part and parcel at the internship.

6.6 Limitations of the Study

This study mainly examined relationships between entrepreneurial orientation, business incubation, business strategies and performance of Startups in Nairobi City County. Cross-sectional data was collected from startups owners, who were also graduates from five business incubations at Nairobi City County. This study was done during the pick of COVID-19, and the data collection methods were online.

6.7 Further Areas of the Study

The study concentrated on establishing the link between entrepreneurial orientation, business incubation, business strategies and performance of Start-ups in Nairobi City County. Each of the three variables was measured using three sub-constructs although literature provided more than the three. Entrepreneurial orientation was measured through innovativeness, risk-taking and pro-activeness leaving out autonomy dimension. Business incubation was measured through Mentorship, networking and absorption capacity leaving out other including use of technology. Business strategies was measured through diversification, market penetration and market development strategies leaving out other Ansoff (1957) model strategy called product development. The unexplored dimensions should as well be studied.

There is a need to do another study focusing on other counties in Kenya. This is because of inter-county variations. Further, there is a need to do a similar study using a longitudinal approach. The study suggests additional studies incorporating firms in other fields including the service industry. More studies are required using other factors such as government policies, political effects, gender specific factors among others. Also, studies should be done examining the link between entrepreneurial orientation, business incubation, business strategies and performance of start-ups

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APPENDICES

Appendix I: Introductory Letter for Research

UNIVERSITY OF NAIROBI
COLLEGE OF HUMANITIES AND SOCIAL SCIENCES
SCHOOL OF BUSINESS

Telephone: 254-724-200311
Telegrams: "Varsity" Nairobi
Telex: 22095 Varsity
E-Mail: dean-business@uonbi.ac.ke

P.O. Box 30197
Nairobi, KENYA

26th March, 2021

TO WHOM IT MAY CONCERN

INTRODUCTORY LETTER FOR RESEARCH
JOSEPH SEGERA MOMANYI – REGISTRATION NO. D80/50280/2015

The above named is a registered PhD candidate at the University of Nairobi, School of Business. He is conducting research on *"Entrepreneurial Orientation, Business Incubation, Firm Strategy and Performance of Start-up Firms in Nairobi County, Kenya"*.

The purpose of this letter is to kindly request you to assist and facilitate the student with necessary data which forms an integral part of the research project. The information and data required is needed for academic purposes only and will be treated in **Strict Confidence.**

Your co-operation will be highly appreciated.

Thank you.

Prof. Mary Kinoti
Associate Dean, Graduate Business Studies
SCHOOL OF BUSINESS

Appendix II: Questionnaire

1.0 Basic Information about the Enterprise

a)   Name of the firm…..(Optional)

b)   Year of establishment............................ Number of years in this business……….

Below 2	3 to 4	5 to 6	7 to 8	Above 9

c)   Gender of business owner Male …………….. Female………………..

d)   Is your business registered Yes ……. No………

1.1 Information about Enterprise performance.

The following questionnaire is classified into four sections namely: **Entrepreneurial orientation, Business incubation, Firm strategy and Performance of your start-up**. You are required to indicate in front of each question the extent to which you agree or disagree with the suggestion regarding your firm.

The rating of your answer is guided by Likert scale of 1-5 where: 1= strongly disagree, 2= disagree, 3= Indifferent (neither agree nor disagree), 4 = agree, and 5= strongly agree.

SECTION I: ENTREPRENEURIAL ORIENTATION

Innovative dimension	1	2	3	4	5
E1 Our firm/startup survival performance is influenced by innovative characteristic of entrepreneurial orientation.					
E2 Our firm/startup Financial performance is influenced by Innovative characteristic of Entrepreneurial Orientation.					
E3 Our firm/startup performance on job creation is influenced by Innovative characteristic of Entrepreneurial Orientation.					
Risk taking dimension	1	2	3	4	5
E4 Our firm/startup survival performance is influenced by risking dimension of Entrepreneurial Orientation.					

		1	2	3	4	5
E5	Our firm/startup Financial performance is influenced by risking dimension of Entrepreneurial Orientation.					
E6	Our firm/startup performance on job creation is influenced by risking dimension of Entrepreneurial Orientation.					
Pro-activeness dimension		**1**	**2**	**3**	**4**	**5**
E7	Our firm/startup survival performance is influenced by pro-active dimension of Entrepreneurial Orientation.					
E8	Our firm/startup financial performance is influenced by pro-active dimension of Entrepreneurial Orientation.					
E9	Our firm/startup performance on job creation/creation of employment is influenced by pro-active dimension of Entrepreneurial Orientation.					

SECTION II: BUSINESS INCUBATION

		1	2	3	4	5
Mentorship		**1**	**2**	**3**	**4**	**5**
B10	Our firm/startup survival performance is influenced by Mentorship offered during Business Incubation process.					
B11	Our firm/startup Financial performance is influenced by Mentorship offered during Business Incubation process.					
B12	Our firm/startup performance on job creation is influenced by Mentorship offered during Business Incubation process.					
Networking		1	2	3	4	5
B13	Our firm/startup survival performance is influenced by Networking links obtained during Business Incubation process.					
B14	Our firm/startup financial performance is influenced by Networking links obtained during Business Incubation process.					
B15	Our firm/startup performance on job creation is influenced by Networking links obtained during Business Incubation process.					
Absorption capacity		1	2	3	4	5

		1	2	3	4	5
B16	Our firm/startup survival performance is influenced by increase on absorption capacity obtained during Business Incubation process.					
B17	Our firm/startup finacial performance is influenced by increase on absorption capacity obtained during Business Incubation process.					
B18	Our firm/startup performance on job creation is influenced by increase on absorption capacity obtained during Business Incubation process.					

SECTION III: Business Strategies

		1	2	3	4	5
Diversification (Product diversification is applied where product is new and Market is also new)		1	2	3	4	5
F19	Our firm or startup survival performance is influenced by new product diversification.					
F20	Our firm or startup financial performance is influenced by diversification.					
F21	Our firm or startup performance on job creation is influenced by new diversification					
Market penetration (Strategy applied when product is new but the Market is existing)		1	2	3	4	5
F22	Our firm or start-up survival performance is influence by Market penetration					
F23	Our firm or start-up financial performance is influenced by market penetration					
F24	Our firm or start-up performance on job creation is influenced by Market Penetration.					
Market Development (Strategy is applied where Product is old and Market is new)		1	2	3	4	5

F25	Our firm or start-up survival performance Mm is influence by Market development.					
F26	Our firm or start-up financial performance is influence by Market Development.					
F27	Our firm or start-up performance on job creation is influence by Market Development					

SECTION IV: PERFORMANCE OF STARTUPS

Survival rate		1	2	3	4	5
P28	Our firm/startup performance on survival rate is influenced by Entrepreneurial orientation.					
P29	Our firm/startup performance on survival rate is influenced by Business incubation.					
P30	Our firm/startup performance survival rate is influenced by business strategies					
Financial performance		1	2	3	4	5
P31	Our firm/startup Financial performance is influenced by Entrepreneurial Orientation					
P32	Our firm/startup financial performance is influenced by Business incubation.					
P33	Our firm/startup financial performance is influenced by Business strategies.					
Job creation		1	2	3	4	5
J34	Our firm/startup performance on job creation is influenced by Entrepreneurial Orientation					
J35	Our firm/startup performance on job creation is influenced by Business incubation					
J36	Our firm/startup performance on job creation is influenced by Business strategies					

Appendix III: Postgraduate Studies Admission Letter

UNIVERSITY OF NAIROBI
GRADUATE SCHOOL

Telephone: 020 491-0000/3129
Email: gs@uonbi.ac.ke
Our Ref: D80/50280/2015

P. O. Box 30197 00100
NAIROBI, KENYA
18th March 2021

Mr. Joseph Segera Momanyi
C/o Dean,
School of Business

Dear Mr. Momanyi,

FULL ADMISSION TO POSTGRADUATE STUDIES (DOCTORATE)

Following your application for a higher degree at this University, I am pleased to inform you that the Director, Graduate School has approved your application for full registration for the degree of Doctor of Philosophy in Business Administration in the School of Business. She has also approved **Prof. Bitange Ndemo, Prof. Jackson Maalu** and **Dr. Joseph Owino** as the supervisors of your thesis entitled; "**Entrepreneurial Orientation, Business Incubation, Firm Strategy and Performance of Start-Up Firms in Nairobi County, Kenya.**" The Guidelines on Postgraduate Supervision can be accessed on our website (www.gs.uonbi.ac.ke) while the Research Notebook is available at the University Bookstore.

The degree for which you are registered will be offered by coursework, research and thesis.

Your registration is governed by the common regulations for Doctorate degrees in all Faculties and the School of Business. **You will be expected to carry out supervised thesis research in your chosen area of study for a minimum period of four (4) semesters,** with effect from the date of this letter, culminating in a doctoral thesis. **You shall be required to file quarterly progress reports to Graduate School to confirm the progress in your research work.**

Please note that all fees and other charges due shall be paid by **Direct Cash Deposits, EFT (Swift Code is "BARCKENX) or RTGS transfer to UON CESSP Collection Account No. 2032771362 at Barclays Bank, Barclays Plaza Nairobi, Kenya or at any Barclays Bank Branch countrywide using the Reference Number quoted above.** Personal Cheques, Bankers Cheques or Institutional Cheques are NOT acceptable. The student account will be updated the next working day after payment and can be accessed through the student online portal (http://smis.uonbi.ac.ke) available in the University website (www.uonbi.ac.ke).

You will also be required to provide evidence of 2 publications or 2 letters of acceptance from peer reviewed journals from your PhD work before the oral defence. The publication should be co-authored with the supervisors.

Details regarding payment of fees and other charges remain as outlined in the attached fees structure.

Yours sincerely,

CATHERINE NJUE (MS)
FOR: DIRECTOR, GRADUATE SCHOOL

c.c.   Dean, School of Business
         Associate Dean, Graduate Business School
         Chairman, Department of Business Administration
         Prof. Bitange Ndemo (Supervisor) – Department of Business Administration
         Prof. Jackson Maalu (Supervisor) – Department of Business Administration
         Dr. Joseph Owino (Supervisor) – Department of Business Administration

Encl.   Fees structure
CN/mv

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Appendix IV: NACOSTI Permit

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR
SCIENCE,TECHNOLOGY & INNOVATION

Ref No: 682454

Date of Issue: 26/April/2021

RESEARCH LICENSE
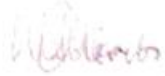
This is to Certify that Mr.. JOSEPH MOMANYI of University of Nairobi, has been licensed to conduct research in Nairobi on the topic: ENTREPRENEURIAL ORIENTATION, BUSINESS INCUBATION, FIRM STRATEGY AND PERFORMANCE OF START-UP FIRMS IN NAIROBI COUNTY, KENYA for the period ending : 26/April/2022.

License No: NACOSTI/P/21/10472

682454

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR
SCIENCE,TECHNOLOGY &
INNOVATION

NF	NYB	GBO	E1	E2	E3	EO1	E4	E5	E6	EO2	E7	E8	E9	EO3	EO	B10	B11	B12	BIN1	B13	B14	B15	BIN2	B16	B17	B18	BIN3	BIN	F19	F20	F21	FS1	F22	F23	F24	FS2	F25	F26	F27	FS3	FS	P28	P29	P30	PS1	P31	P32	P33	PS2	J34	J35	J36	PS3	PS
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