THE EFFECTS OF BUSINESS INCUBATION ON ACCESS TO FINANCE BY SMALL AND MEDIUM-SIZED ENTERPRISES (SMES) IN KENYA

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DECLARATION

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

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ABSTRACT

The purpose of this study was to investigate the effects of incubation on access to finance by Small and Medium-sized Enterprises (SMEs). SMEs contribute significantly to economic growth and innovation. The growth of the sector has been significantly constrained by lack of access to finance. Business incubation is a proven tool that has been used to bridge the information asymmetry between financiers and SMEs. This study investigates the effects of incubation processes on SME access to finance. This study's research objectives sought to analyze the effect of incubator processes of selection performance (ISP), Monitoring and business assistance Intensity (M&BAI) and resource munificence (RM) on access to finance for SMEs. The study adopted a positivism philosophy and a descriptive – correlational research design. The target population of the study consisted of a sample of incubatees drawn from 30 public and private incubators. Research quality was assessed using diagnostic tests to verify validity and reliability of the study. Primary data was collected from the incubatees using a questionnaire. Descriptive and logistic regression analyses were employed to examine the data. The study found that incubation processes had a positive on access to finance among Kenyan SMEs. Incubator selection performance and business assistance quality and intensity had positive effects. SMEs incubated for 1–3 years had a negative effect on access to finance while industry type had no effect. The study recommends implementing a structured, performance-based selection criteria and improving incubatee engagement through tailored mentorship, strategic planning support, and fundraising coaching. The study also noted the need to improve linkages to external capital providers such as banks, angels and VCs through curated introductions and partnerships.

Key words: SME, Incubators, Access to finance, Incubation Process

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DEFINITION OF TERMS

Business Incubation	A structured support process that provides early-stage firms with resources, mentorship, networks, and services to increase their chances of success.
Business Incubation Process	The value-adding activities conducted by incubators including selection, monitoring, business assistance, and provision of resources.
Selection Performance (SP)	The effectiveness of an incubator in identifying and selecting high-potential firms based on factors such as market, product, financials, and management.
Monitoring and Business Assistance Intensity (MBAI)	The frequency, quality, and comprehensiveness of support services—such as strategic advice, training, and mentorship—provided by incubator staff.
Resource Munificence (RM)	The relative abundance, quality, and utilization of internal and external resources (financial, human, technological) provided by the incubator.
Incubatee	A firm that is currently receiving incubation services within a business incubator.
Virtual Incubator	An incubator that offers business support services remotely without the need for a physical workspace.
Innovation Ecosystem	The interconnected system of incubators, accelerators, funders, research institutions, and startups that collectively foster innovation.
Incubator Typology	The classification of incubators based on their ownership, objectives, target firms, or service delivery model (e.g., university-based, private).

LIST OF ACRONYMS

SME	Small and Medium-sized Enterprise
SP	Selection Performance
MBAI	Monitoring and Business Assistance Intensity
RM	Resource Munificence
VC	Venture Capital
GDP	Gross Domestic Product
IFC	International Finance Corporation
KIE	Kenya Industrial Estate
ICDC	Industrial and Commercial Development Corporation
KMAP	Kenya Management Assistance Program
KIRDI	Kenya Industrial Research and Development Institute
ASSEK	Association of Startup and SME Enablers of Kenya
UNDP	United Nations Development Programme
NGO	Non-Governmental Organization
M-PESA	Mobile Payment System by Safaricom
IP	Intellectual Property

CHAPTER 1: INTRODUCTION TO THE STUDY

1.1 Background to the study

1.1.1 Business Incubation

Market failure argument has been put forward as a rationale for business incubators, the inefficient resource allocation arising from information asymmetry necessitates the incubation for new and small firms (Phan, Siegel, & Wright, 2005; Hackett & Dilts, 2004a). Business incubators were first introduced in the late 1950s with the establishment of the Batavia Industrial Center in 1959 with the objective of job creation in New York given high unemployment experienced at the time (Dee, Livesey, Gill, & Minshall, 2011). Incubators and research into incubation gained momentum in the 1980s with commercialization of research following increased protection of intellectual property rights (Hackett & Dilts, 2004b). Business Incubation is described as a strategic value addition intervention system of monitoring and providing business support services, Hackett and Dilts (2004a), with the aim of enterprise development through knowledge sharing and growth acceleration (Paoloni & Modaffari, 2022). The incubator network plays a key role in facilitating the development of incubatees, increasing company visibility and credibility resulting in enhanced legitimacy with external actors such as investors, regulators and financial institutions (Hackett & Dilts, 2004a; Bergek & Norrman , 2008; Ssekiziyivu, Mwesigwa , Kabahinda, Lakareber , & Nakajubi, 2021).

Incubators mitigate the SME liability of smallness and newness by fostering entrepreneurial culture, accelerating growth and stabilizing financial & business operations (Aaboen & Löfsten, 2011; Salvador & Rolfo, 2011; Ayatse, Kwahar, & Iyortsuun, 2017). Incubators remedy the SME challenge of smallness by availing business support resources. This intervention mechanism draws from the Resource Based View (RBV) Theory, proposed by Wernerfelt (1984) which asserts that unique resources of a firm give it competitive advantage allowing it to outperform its competitors, implying that resources availed through incubation (knowledge accumulation, enhanced technical capacity, access to financiers (Creditors and Investors), access to networks and credibility) results in competitive advantage enhancing performance of incubated companies (Eveleens , Rijnsoever, & Niesten , 2017).

Business incubators objectives can generally be defined as either, public policy oriented with objectives of promotion of entrepreneurial activity, fostering development of a specific sector, job

creation and commercialization of technology or private entities with the aim of fostering high growth of new firms (Hackett & Dilts, 2004b; Moreira & Carvalho, 2012). This delineation of objectives leads to the categorization of incubators as public or private incubators. The main goal of public incubators such as technology parks, university based incubators and innovation centers is to reduce costs of doing business and consequentially spur innovation and economic development. Funding for this type of incubator is mainly obtained from public or not-for-profit entities. Private incubators on the other hand are created with a profit objective and financed from fees or equity stake in incubatees (Grimaldi & Grandi, 2005). The evolution of incubation services has moved from the passive provision of shared working facilities to focusing on provision business assistance services and presently to mediating incubatee interaction with external environment (networking) (Eveleens , Rijnsoever , & Niesten , 2017; Bergek & Norrman , 2008). Incubator typology has expanded to include emerging types of incubators such as social incubators and virtual incubators. Social incubators' main objective is solving specific social issues. They incubate firms whose goals are to create a positive social impact (Sohail , Belitski, & Christiansen, 2023).Virtual Incubators have emerged where the incubator does not have a physical space but rather incubation services are provided on an online platform (Kenney , Rouvinen, & Sepp , 2019).

1.1.2 Business Incubation in Kenya

Incubators in Kenya were first introduced as part of government policy intervention to provide financial and business support services to foster industrial development. The Industrial and Commercial Development Corporation (ICDC), a government agency, established the Kenya Industrial Estate (KIE) with the mandate of provision of business development services and physical working space to Small and Medium-sized Enterprises (SMEs) (Ikiara, 1988). In the period 1991 to 1998 Kenya management Assistance Program (KMAP) offered business development services to over 1,000 SMEs, providing technical assistance, training and product development services (Kibuchi, 2016). Business Incubators with physical infrastructure emerged in 2005 with the establishment of Kenya Kountry Business Incubator (Kekobi), a private incubator (Kiraka, 2015) and the Kenya Industrial Research and Development Institute (KIRDI) a government initiative (Meru & Struwig, 2011)**.** In the 2010s in the advent of M-Pesa, technology led incubators were established to support the technology start-ups key among them were iHub Nailab, Strathmore University's iBizAfrica, Chandaria business innovation and incubation center, and University of Nairobi's C4DLab (Tiren, 2020).

Mapping of the Kenyan innovation ecosystem undertaken by identifies 186 innovation centers country wide inclusive of Innovation hubs, Accelerators, Incubators, and co-working spaces, 70% of these innovation centers are publicly funded or managed by Non-Governmental Organizations (NGOs) (UNDP, 2022). Public/ not for Profit ownership nature of majority of innovation centers in Kenya has enhanced access to training and skills development and other services fostering innovation countrywide.

Nairobi's flourishing incubation ecosystem referred to as the "Silicon Savannah" due to its established start-up environment (Muathe & Otieno, 2022) boasts of raising $1,281,918,200 in debt and equity financing since 2015. Financing sources of the ecosystem is however largely skewed to international funds (Cherunya & Ahlborg, 2020). However, there has been an increase in funding from local sources, with some early start-up successes becoming angel investors themselves - an example being Ken Njoroge from Cellulant, who invested in Market force. Secondly, there has been a notable increase of local entrepreneurs raising financing examples include: cellulant, market force, and pezesha among others (Muathe, et al., 2022). Local initiatives by financial institutions to collaborate with incubators in provision of financing to SMEs include Standard Chartered Bank's partnership with iBizAfrica, to provide grant funding to female-founded startups (Disrupt Africa, 2022).

The Incubator ecosystem in 2022 comprised of 30 public and private incubators (Disrupt Africa, 2022; UNDP, 2022), incubator types include university based technology & business incubators, corporate incubators, private incubators, and government owned or supported incubators (Ogutu & Kihonge , 2016). The Kenyan ecosystem is found to be disjointed with high levels of replication indicating inefficiencies where duplication of programs results in diversion of funds from incubatees to setting up of new programs (Muathe, et al., 2022). Findings of (Muathe, et al., 2022) paper on the Kenyan innovation ecosystem finds that key challenges faced by Start-Ups are lack of access to financing and inadequate risk capital, further gender disparity in financing is observed with women founded Start-ups receiving significantly low amounts of financing where men-led start-ups received Ksh4.794 billion in financing while women-led start-ups received only Ksh 58.12 million.

1.1.3 Business Incubation Process

Business incubation process is defined as the value adding activities undertaken by incubators with

the aim of increasing the survival rates of new and small firms (Sohail, Belitski, & Christiansen, 2023; Moreira & Carvalho, 2012; Ayatse, Kwahar, & Iyortsuun, 2017). Business incubation process adopted by different incubators influence the type and intensity of activities by incubator managers and incubatees further it impacts incubate outcomes (Aaboen & Löfsten, 2011; Posza, 2019). Several models have been developed to explain the phenomenon of business incubation process; however, Bergek and Norrman (2008) note that these models are primarily results-oriented while interrelationships between value adding activities remain largely neglected.

Business Incubation Process as first developed by Campbell, Kendrick, and Samuelson (1985), is defined as the value adding activities employed by incubators to facilitate SME development. The model processes include: the diagnosis of business needs, firm selection and monitoring of the business support services, investment of capital and access to the expert networks. The model is however criticized for its assumption that incubation interventions are always successful (Hackett & Dilts, 2004a). Secondly, the model is deficient in its assessment of the impact of environmental barriers and it fails to adequately define a selection criterion (Posza, 2019; Moreira & Carvalho, 2012). The business incubation process model is further extended by Smilor (1987) who defines incubation as a system that provides incubatees with structure and credibility while controlling a set of resources. Internal support structures are identified as critical to the incubation process (Smilor, 1987).

The real options real options-driven theory of business incubation conceptualizes business incubation as a black box, within which are the incubation processes applied to incubatees, with five possible outcome states comprising of a combination of profitability levels and survival rates (Hackett & Dilts, 2004a). Business incubation process comprises of three value addition activities including: selection of weak but promising firms, monitoring and provision of business support services and provision of adequate resources (Hackett & Dilts, 2008). Venture capital-like Selection performance, higher intensity of monitoring and the business assistance and high resource munificence is associated with positive incubatee outcomes (Hackett & Dilts, 2004a). Resource munificence is defined as ability to provide incubatee with quality and variety of resources (Hackett & Dilts, 2004a). The model proposes that central to the business incubation process is ‘entrepreneur’ and ‘idea’ based selection, provision of business support services and the incubator mediation role between incubatees and other external actors (Bergek & Norrman, 2008; Moreira & Carvalho, 2012). In recent times, business incubation process models have been thematic

focusing on specific incubator types (Sohail, Belitski, & Christiansen, 2023; Chandra & Chao, 2011). Other researchers have analyzed the different stages of business incubation process namely; pre-incubation, incubation and post-incubation (Gerlach & Brem, 2015; Posza, 2019).

Extant literature on business incubation process can be divided thematically into four areas of focus: incubator typology, impact of incubation process, incubator resources and performance (Sohail , Belitski, & Christiansen, 2023). Literature focusing on incubator typology argues that incubator type informs the strategies and objectives of incubation (Hackett & Dilts, 2004a). University-Based (Murage, 2018; Ensley & Hmieleski, 2005), technology incubators (Kumar, 2017; Mian & Lamine, 2020), corporate incubators (Kotting, 2020) and science parks (Diez-Vial & Fernández-Olmos, 2017; Lindelof & Lofsten, 2003) greatly differ in their objectives and strategies and subsequently apply different business incubation processes that impact the performance of both the incubator and incubatee. The characteristics of the incubator, such as its size, age, and location, can additionally influence the resources and support available to incubatees (Mian & Lamine, 2020). Large and established incubator may have more resources and expertise to support SMEs than a small and newly established one.

Studies on impact of incubation process focuses on the stages and activities involved in business incubation and how they impact the internal (incubator manager, incubatees) and external (government, universities) incubation environment (Sohail , Belitski, & Christiansen, 2023). Impact is measured with respect to the incubator, incubatees and most recently the innovation ecosystem (Audretsch & Belitski, 2017). Most Impact oriented studies are conducted at the entrepreneur level (Colombo & Grilli, 2010; Diez-Vial & Fernández-Olmos, 2017; Iyortsuun, 2017) and are cross-sectional with few exceptions conducting longitudinal studies (Radko, Belitski, & Kalyuzhnova, 2022).

Resource-based view literature opines that incubator resources, such as physical, human, technological and social resources, significantly impact the economic performance of incubators and incubatees. Resources provided through the incubation process enable incubatees to develop their competitive advantage (Wernerfelt, 1984). Resources provided by incubators are scarce, and thus the competitive selection of incubatees ensures the efficient allocation of physical, human, technological, and social form of capital (Bacalan, et al., 2019; Eveleens, Rijnsoever, & Niesten , 2017).

The performance literature focuses on the outcomes and impact of business incubation process on startups, such as their survival, growth, and innovation. Studies have identified various factors that contribute to the performance of startups in business incubation contexts, such as the quality of the incubation process (Mian & Lamine, 2020) and the resources and support available to startups (Hackett & Dilts, 2004). Empirical research on the performance of incubated firms is however mixed, a majority of studies report the strong positive impact of incubation on sales growth and employment (Lindelof & Lofsten, 2003, 2004; Eveleens, Rijnsoever, & Niesten, 2017; Diez-Vial & Fernández-Olmos, 2017; Wanyoko, 2013), while post-graduation performance is observed to be diminishing (Schwartz, 2011). However, a few studies have shown a negative impact of incubation on firm performance (Ensley & Hmieleski, 2005; Dvouletý, Longo, Blažková, Lukeš , & Andera, 2018). An empirical review by (Ayatse, Kwahar, & Iyortsuun, 2017) on the impact of business incubation processes on firm performance finds that incubatee firms greatly benefit from the business advisory services with improved performance in revenue and firm growth, areas of sales and firm growth, patents application, increased access to finance (Rothaermel & Thursby, 2005; Cumming & Fischer, 2012), and an enhanced network.

Drawing from the models and extant literature examined, this study identifies three value adding activities carried out by incubators that constitute the incubation process: Selection Performance, Monitoring and Business Assistance Intensity and Resource Munificence.

1.1.3.1 Selection Performance

Incubators define their selection criteria based on specific factors aligned to the incubator type, strategy and objectives (Sohail , Belitski, & Christiansen, 2023). The selection process ensures the efficient allocation of incubator resources. Value is created by the selection of firms with higher probability of success. Selection performance denotes the extent to which an incubator operates like a venture capitalist with assessment of four key elements: management, financials, markets and product viability (Iyortsuun, 2017). The presence of a selection criterion enhances the self-correction and preparation of potential incubatees in the pre-incubation stage (Hackett & Dilts, 2004a).

1.1.3.2 Monitoring and Business Assistance Intensity

Monitoring and business assistance intensity assesses the effectiveness of the incubator's observation and support interventions in development of incubated firms. Time intensity,

comprehensiveness and quality of assistance provided are analyzed. Time intensity refers to the amount of time the incubator manager allocates to monitoring and assisting incubated firms. Comprehensiveness of assistance refers to whether the business advisory services provided meet the operational, technical, strategic and administrative needs of the incubatee. Quality of assistance refers to the value of the provided support (Hackett & Dilts, 2004a).

1.1.3.3 Resource Munificence

Resource munificence refers to relative abundance of incubator resources. Resources are defined as assets, organizational processes, knowledge, information and capabilities controlled by the incubator that facilitate the implementation of strategies that enhance its efficiency and effectiveness (Daft, 2015). Resources are categorized as either internal or external. Internal resources are developed and available within the incubator while external resources refer to the incubators network of funders, advisors and innovation communities. Resource availability, quality and utilization are assessed to inform the impact of the business process on incubatee performance. Resource availability describes the incubator's ability to provide incubatees with access to resources. Resource quality refers to the value of the provided resources to the incubatees. Resource utilization refers to the incubatees' absorption of availed resources (Rothaermel & Thursby, 2005; Hackett & Dilts, 2004a).

1.1.4 Performance measure

Research on business incubation shows a lack of consensus on appropriate performance measures (Phan, Siegel, & Wright, 2005) with different studies applying different performance indicators (Ayatse, Kwahar, & Iyortsuun, 2017) resulting in debate over what indicators constitute the best performance measures of incubation (Hausberg & Korreck, 2020).

Some studies approach incubator impact on incubatee firm by assessing the graduation rates, this measure is however found to be ineffective as successful graduation does not guarantee firm survival in the post-incubation period (Schwartz, 2011; Rothaermel & Thursby, 2005). Most studies on incubation evaluate performance using firm survival rate as an indicator of successful incubation (Colombo & Delmastro, 2002; Aerts, Matthyssens, & Vandenbempt, 2007; Peña, 2004; Iyortsuun, 2017; Hackett & Dilts, 2008; Khalid, Gilbert, & Huq, 2012) while (Schwartz, 2011) investigates the long term survival of incubatees. Survival as a measure of performance is found to be an ineffective measure as it lacks construct validity given that the objective of incubation is to prevent firm failure (Phan, Siegel, & Wright, 2005). Firm growth as a measure of performance

has been applied in various studies as follows: Profitability (Tiren, 2020; Lindelof & Lofsten, 2004), revenue growth (Murage, 2018; Rothaermel & Thursby, 2005), employment growth (Mole, Hard, Roper, & Saal, 2008; Lindelof & Lofsten, 2003; Murage, 2018). Some studies have investigated innovativeness of incubated firms using measure of patent activity, research and development intensity and expenditure (Lindelof & Lofsten, 2004; Cumming & Fischer, 2012; Colombo & Delmastro, 2002). Financing has been used as a performance measure of business incubation in extant incubation literature, (Cumming & Fischer, 2012), (Rothaermel & Thursby, 2005) analyze total financing, VC funding and angel investing, (Colombo & Delmastro, 2002; Colombo & Grilli, 2010) evaluate public subsidies while (Bone, Gonzalez- Uribe, & Haley, 2019) assess investment raised over the incubation period.

1.1.4.1 Access to Finance

Small and Medium Enterprises (SMEs) play a crucial role in economic growth, job creation and poverty reduction (IFC, 2017; Karadag, 2016) as evidenced by Formal MSMEs' 40% contribution to GDP in emerging economies (ASEA, 2020). Extant literature on SME financing finds that availability and access to finance is a major constraint to the growth of SMEs and consequentially their impact on economic growth (Gbandi & Amissah, 2014; Quartey, Turksona, Abor, & Iddrisua, 2017). Constraints in the supply of financing, arising due to market imperfections often resulting in misallocation of resources, where SMEs with financing needs and profitable projects cannot access funding due to information asymmetry. Agency theory (Stiglitz & Weiss, 1981) asserts that uncertainty arising due to information asymmetry has an impact on access to financing, leading to pricing out of SMEs. Opacity of the SMEs financials makes it difficult for financial intermediaries to provide financing and results in higher interest rates or collateral requirements (Facundo & Schmukler, 2017). Demand side factors are internal issues arising from the firm's creditworthiness, managerial factors or poor financial performance that excludes them from financing. Critical to prevention of business failure arising from lack of financing is the solution of demand side challenges facing SMEs by improving their managerial competences and financial performance. Business Incubators have emerged with the aim of catalyzing firm development through the provision of business support services and networking opportunities.

Incubator processes aimed at providing access to external finance include general financing and specified financing activities (Aaboen & Löfsten, 2011). General activities facilitate external financing by providing business advisory services, facilitation of management training of

incubatees and networking mediation by incubators. Specific activities assist the incubatee firm with financing application procedures, establishment of need for capital and making contacts with investors and financiers (Aaboen & Löfsten, 2011).

This study applies financing obtained by incubatees as a measure of the efficiency and effectiveness of the incubation process. This informed by studies that identify lack of financing as a key challenge for incubated firms in the Kenyan ecosystem, (Tiren, 2020; Kibuchi, 2016). Other studies identify lack of access to risk capital as a factor impacting business failure (Bollingtoft & Ulhoi, 2005; Smilor, 1987). Incubators play a critical mediation role in connecting investors and financiers to incubatees who meet their investment or financing criteria. Incubators facilitate the relationship between the investor or financing institution with incubatee by being a primary point of contact given their established relationship with investors or financiers. Secondly the incubator prepares incubatees for funding meetings by assisting them in preparation of fundraising documents and pitching presentations (Bjercke, 2015). These activities are part of the resource provision and business assistance activities provided by the incubator. Incubation earns the incubatee credibility and legitimacy with external actors building its reputation and is often regarded as a signal for investment readiness (Rannikko, Buffart, Isaksson, Löfsten, & Tornikoski, 2022). Incubated firms are found to have higher success at receiving external financing (Aaboen & Löfsten, 2011).

1.2 Problem Statement

Business incubators are a proven tool of improving firms' internal capabilities by enhancing knowledge accumulation and technical capacity through provision of business advisory services. They play a key mediation role in enhancing access to funding and increasing opportunities for networking with other stakeholders resulting in enhanced legitimacy and credibility. Incubation as an intervention mechanism has been proven to have significant impact on improving firm performance and promoting its development (Iyortsuun, 2017; Lindelof & Lofsten, 2004; Tiren, 2020; Njau , 2022;Eveleens , Rijnsoever , & Niesten , 2017;Wanyoko, 2013; Diez- Vial & Fernández-Olmos, 2017). There are however some studies that dispute this finding (Ensley & Hmieleski, 2005) (Schwartz, 2011). The lack of congruence in empirical evidence on impact of incubation informs part of this study's interrogation of business incubation processes; however the main motivation for this study was to identify how the business incubation processes of selection performance, intensity of monitoring and business assistance and resource munificence contribute

to increased access to finance for incubated firms.

By opening the black box of incubation this study sought to analyze the different attributes of the incubation process and evaluate their effect on access to finance with the objective of gaining insights into how financing obtained is attributable to each individual aspect of the incubation process. Despite evidence of the impact of incubation on access to finance (Aaboen & Löfsten, 2011; Bone, Gonzalez-Uribe, & Haley, 2019; Vincent & Zakkariya, 2021; Rothaermel & Thursby, 2005), local studies indicate identify lack of access to finance as a key Challenge. (Njau, Mwenda, & Wachira, 2019) in their study on network support provided by business in Kenya find that incubatees identify lack of access to private equity and debt finance as a key challenge. Inadequate risk capital, gender-disparity in start-up financing and lack of access to financing are cited as key challenges in the Kenyan innovation ecosystem (Muathe, et al., 2022). Similarly (Tiren, 2020) recommends the enrichment of incubator management programs that support business training services, ease incubate access to finance and improve firm competences. Findings of this study shed more light into the effect of the business incubation process on access to finance in the Kenyan context, what aspects of business incubation process have significant impact of access to finance and how incubator programs can be enhanced to increase their efficiency and effectiveness in securing financing for incubatees. This study analyzes the impact of incubator selection performance (ISP), Monitoring and business assistance Intensity (M&BAI) and resource munificence (RM) (Hackett & Dilts, 2004a) on access to finance for SMEs.

1.3 Research Objectives

1.3.1 General Research Objective

This study aimed to assess the effects of business incubation on access to finance by SMEs.

1.3.2 Specific Research Objectives

I. To examine the effect of incubator selection performance on SME access to finance.
II. To investigate the impact of monitoring and business assistance on SME access to finance.
III. To establish the effect of resource munificence on SME access to finance.

1.4 Research questions

The study sought to answer the following research questions

I. Does expert incubator selection performance affect SME access to finance?
II. Does monitoring and business assistance impact access to finance?
III. Does resource munificence impact SME access to finance?

1.5 Scope of the study

The study was focused on assessing the impact of business incubation processes on access to finance by SMEs. The study engaged a research sample of 364 incubatees, drawn from 30 public and private business incubators in Kenya (UNDP, 2022).

Conceptual Scope

The study is anchored on the Real Options Theory, which conceptualizes incubation as a strategic process that enhances the survival and performance of startups through structured interventions. The conceptual framework includes Selection Performance (SP), Monitoring and Business Assistance Intensity (MBAI), and Resource Munificence (RM) as the core incubation processes evaluated for their effect on access to finance.

Contextual Scope

The research was conducted within the Kenyan business incubation ecosystem, covering both public and private incubators that offer support to SMEs across diverse sectors including technology, agribusiness, and financial services.

Time Scope

Data collection was carried out between August 2024 and April 2025, with the findings reflecting incubation practices and financing conditions relevant to this period.

1.6 Significance of the study

Small and Medium Enterprises

This study will equip SMEs with information on incubation processes and their associated benefits; secondly it will offer valuable insights into the impact of specific aspects of the business incubation processes on access to financing. SMEs will be able to assess suitability of business incubation program to expand its financing options and catalyze growth, aiding them in selection of a potential incubator. The study's findings will be made available to SMEs using the business incubators' communication channels specifically email or website. A concise summary of the study findings along with key insights and recommendations will be distributed this via email to the managers of each business incubator, requesting them to disseminate it among their respective incubatees. Links will be provided to enable the SMEs to access the full study report and any supplementary materials.

Business Incubators

This study will benefit business incubators by providing evidence of the efficacy of the business incubation processes in catalyzing SME access to finance, specifically what processes have a significant impact on SME access to finance. Secondly the study will inform future policies on incubation processes and models employed to ensure the financial sustainability of incubatees. The study results will be shared through direct engagement with incubator/program managers facilitating in-depth discussions, presentations, and interactive sessions to ensure comprehensive understanding and effective utilization of the findings.

Financial Institutions & Investors

This study aims to inform future collaborative efforts between financial institution/investors and business incubators in supporting growth of SMEs through increased access to finance. Dissemination of study results will be done through collaborative Partnerships with business incubators and industry associations such as the Association of Startup and SME Enablers of Kenya (ASSEK) and the Association of Countrywide Innovation Hubs to amplify dissemination

efforts and reach wider audiences in particular financial institutions and investors.

Scholars

This study will add on to literature on Incubation processes specifically contributing to new knowledge on the impact business incubation processes on SME access to finance, giving useful insights on which processes have significant impact on incubatee access to finance. Academic dissemination will include publication in peer-reviewed journals, conference presentations, and participation in academic symposiums and workshops. Additionally, open-access repositories and academic networks will be utilized to ensure broad dissemination among scholars and researchers globally.

1.7 Chapter Summary

This chapter first discussed the background of the study by examining business incubation and the effect of business incubation processes. The chapter examined the role of access to finance in prevention of failure of Small and Medium Enterprises' (SMEs), gave a brief history of business incubation in Kenya and examined the current state of the Kenyan incubation ecosystem. The study is conceptually anchored in Real Options Theory which identifies incubation processes—Selection Performance (SP), Monitoring and Business Assistance Intensity (MBAI), and Resource Munificence (RM). The problem statement highlighted a lack of consensus in empirical literature regarding the effectiveness of incubation, and the challenge of limited access to finance among Kenyan incubated SMEs. The research objectives and questions were formulated to evaluate the effect of each incubation process on SME access to finance. The study targeted a sample of 364 incubated SMEs drawn from 30 business incubators in Kenya, with data collected between August 2024 and April 2025.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

This chapter examines extant literature on incubation processes and performance measures. First a theoretical review is undertaken to examine the theoretical framework underpinning this study, secondly the study embarks on an empirical review of studies on incubation processes and their effect on access to finance with a focus on incubation processes of selection performance, monitoring and Business assistance intensity, resource munificence. Finally the study embarks on a critical review of literature and determines existent research gaps, develops a conceptual framework informed by literature reviewed and discusses how each identified construct shall be measured.

2.2 Theoretical Review

The study is informed by two theories: Real Option Theory of Incubation and Resource Based View Theory.

2.2.1 Real Options Theory of Incubation

The real options theory of incubation as put forward by (Hackett & Dilts, 2004a) is derived from the options theory. Options Theory was developed in the 1970s in the creation of the Black Scholes Merton model of option contract pricing where options are defined as a right but not an obligation to buy or sell an underlying asset at a specified future time and cost (Black & Scholes, 1973). This definition describes a key feature of options theory, the fundamental decision asymmetry, where the option holder can choose to exercise the option only when it is beneficial enabling maximization of profits and limiting of losses (Trigeorgis & Reuer, 2017). Fundamental decision asymmetry is applied in strategic management through 'Real Options' as introduced by (Myers, 1977). Real options describe options that enable the firm to purchase real assets in favorable conditions (Posza, 2019; Trigeorgis & Reuer, 2017). An initial decision to invest creates a real option and the consequent investment decisions are dependent on favorability of future conditions with real options exercised in the event of a valuable upside and with the aim of downside risk minimization (Hackett & Dilts, 2004a). Real options allow for enhanced management of uncertainty where real options increase with an increase in uncertainty, options to delay or change investment decisions allow for containment of losses (Trigeorgis, 1996).

Real Options theory is applied in business incubation where incubatee outcomes are uncertain and the incubation process applied by incubators is sequential through the different development stages of a firm (Posza, 2019). Real option theory of business incubation as developed by (Hackett & Dilts, 2004a), states that a real option is created upon selection of a weak but promising firm with subsequent exercising of options by the provision of resources and business assistance to enhance its growth and prevent business failure. The theory postulates that incubation outcomes are positively related to incubation processes of selection performance, monitoring and business assistance intensity and resource munificence. Five outcome states are defined where the incubatee is : surviving and growing profitably, surviving and growing on a path toward profitability, surviving but not growing and either not profitable or marginally profitable, and terminated with minimized losses, terminated with large losses (Hackett & Dilts, 2004a). The function described in real options theory of incubation above is expressed as follows:

$$BIP = f(SP + MBAI + RM)$$

Where: **BIP** is business incubation performance; **SP** is selection performance; **M&BAI** is monitoring and business assistance intensity; and **RM** is resource munificence.

In the Kenyan context, SMEs face the persistent challenge of limited access to finance. Real Options theory provides a valuable framework for understanding how incubation processes enhance SME ability to access financing.

Selection performance (SP) ensures the efficient allocation of incubator resources. Value is created by the selection of firms with higher probability of success. Selection performance is especially critical in the Kenyan context due to a high number of early stage SMEs, requiring incubators to apply a venture capital like screening approach (Njau, 2022).

Monitoring and Business Assistance Intensity (M&BAI) evaluates how effectively incubators support incubated firms through ongoing observation and advisory services.

Resource Munificence refers to the relative abundance of incubator resources—both internal (developed within the incubator) and external (networks of funders, advisors, and innovation communities).

Critics of the real options theory of incubation argue the proposition excludes not-for- profit incubators such as university or publicly funded incubators where objectives of the incubator are not venture –capital like, Ahmad (2014) argues that such incubators violate the arbitrage free

market assumption proposed under the Black-Scholes-Merton model Further, Ahmad (2014) argues that the five outcome states are inadequate as they only describe one measure of business performance, (Bergek & Norrman , 2008) in development of their business incubation process framework argue that incubation performance measure should be assessed with reference to the incubator goal there no single measure is universally applicable to all incubators.

2.2.2 Resource Based View Theory

The resource-based view of the firm as developed by (Wernerfelt, 1984) defines resources as things attributable to the firm, either strengths or weaknesses that are categorized as either tangible or intangible assets. This definition is expanded to include assets, organizational processes, knowledge, information and capabilities controlled by the firm that facilitate the implementation of strategies that enhance the firms efficiency and effectiveness (Barney, 1991; Daft, 2015; Wernerfelt, 1984). The resources are classified as physical, human or organizational capital resources. Physical capital resources include proprietary software and Property, Plant and Equipment (PPE); organizational capital resources include organizational structure, processes and networks; human capital resources include knowledge, experience and skills of employees (Barney, 1991). The theory assumes that firms are heterogeneous across an industry given the non-uniformity of resources they control and secondly that resources are immobile. The firm employs its resources in creation of a value adding strategy that bears a sustained competitive advantage for as long as it is not duplicable. This is achieved when resources are rare, valuable and expensive to imitate and non-substitutable (Barney, 1991; Barney , 2001).

Proponents of the application of the theory in business incubation argue that business incubators' role is in the identification of firm resource needs and the adequate provision of the resource to facilitate firm growth and sustainability (Murage, 2018; Ahmad, 2014). The incubator resources are availed through the business incubation process also described as the set of value adding activities undertaken by incubators to improve incubatee outcomes.

In the Kenyan context different incubation programs apply different incubation processes resulting in differences in performance between incubatees in different incubation programs (Murage, 2018; Tiren, 2020). These variations reflect how different incubators apply core incubation processes—Selection Performance (SP), Monitoring and Business Assistance Intensity (MBAI), and Resource Munificence (RM)—as mechanisms to deploy and develop critical resources.

The provision of resources leads to accumulation of knowledge and development of networks that accelerate firm growth (Ahmad, 2014). RBV gives insight into incubator objective as informed by its incubatees selection criteria (Hackett & Dilts, 2004a). Critics of the RBV find that the incubation process is largely unaddressed by the theory (Hackett & Dilts, 2004a), further Ahmad (2014) argues that the theory ignores the incubators internal environment.

2.3 Empirical Review

2.3.1 Selection Process and access to finance

Selection processes adopted by incubators identifies firms that are seen to have potential by analyzing the potential incubatee's business model, product viability and technology. Selection of a firm into an incubator program enhances its legitimacy and credibility with external financing parties owing to the venture-capital like rigor of the selection process and signals investment readiness (Rannikko, Buffart, Isaksson, Löfsten, & Tornikoski, 2022). The incubation selection process is found to have a positive impact on access to finance as denoted by total funds raised (Bone, Gonzalez-Uribe, & Haley, 2019) and access to venture capital funding (Aaboen & Löfsten, 2011).

Research finds the selection process of business incubators to be critical for effective resource allocation (Lumpkin & Ireland, 1988; Colombo & Delmastro, 2002) however there is divergent opinion on the appropriate selection criterion. A four pronged approach is proposed by (Lumpkin & Ireland, 1988) comprising of: Management team experience, financial strength market and personal factors. (Bergek & Norrman , 2008) identify two approaches based on either the idea or the entrepreneur or team adding that the strictness of the application of the selection criteria leads to an incubator either acting like a venture capitalist by picking winners (Hackett & Dilts, 2004a) or on boarding many firms in a survival for the fittest strategy.

In a study on 16 Swedish incubators, (Bergek & Norrman , 2008) find a preference for the picking winner approach in application of the selection criterion with 15 incubators having on average an 80% rejection rate. Screening practices of European business incubators are assessed by (Aerts, Matthyssens, & Vandenbempt, 2007) finding that 97% of incubators examined apply a screening criterion and considered three factors: market factors 61%, team factors 27% and financial factors (6%). The study further finds that emphasis on one factor was associated with high incubatee failure rate and recommends the use of balanced screening criteria.

Business incubation processes of 12 Technology Incubators (TI) and Non Technology Business Incubators (NTBI) in North Western Europe were studied by (Ratinho, Harms, & Groen, 2009) finding a significant difference the selection process of TIs and NTBIs. TIs behave more like Venture capitalist with stricter and more comprehensive selection criteria. The study finds a direct positive relationship between Technological Incubators' business incubation processes and their incubate success rate.

In the Kenyan context, (Njau J. , 2022) assessed the impact of incubation selection process on new venture creation finding a positive relationship. Incubatees from 9 business incubators were engaged for the study finding that the selection criteria considered the following factors: technical experience (66.6%), product characteristics (77.1%), team experience (56%), ability to attract investment from funding (61.4%), financial capability (81.6%) and long term strategic objective (85.1%).

Extant research on the impact of selection process on incubated companies examine different performance measures such as graduation rates (Khalid, Gilbert, & Huq, 2012), hard and soft measures of incubate performance (Vincent & Zakkariya, 2021) and survival rates (Iyortsuun, 2017).

Studies on the impact of Incubation Selection Performance on Incubatee performance find conflicting results. Investigation of the business incubation processes applied by Malaysian incubators found a statistically significant relationship between selection performance and incubatee outcomes (Khalid, Gilbert, & Huq, 2012), similarly (Vincent & Zakkariya, 2021) in their study on technology business incubators in India, find that Selection Performance has a positive impact on start-up performance. In contrast (Iyortsuun, 2017) finds that selection performance has no significant impact on firm performance in their study on Nigerian incubation ecosystem.

2.3.2 Monitoring & Business Assistance and access to finance

Extant empirical studies emphasize the importance and impact of business assistance or advisory services on incubatee performance, showing a significant positive relationship (Bollingtoft & Ulhoi, 2005) (Chan & Lau, 2005). The real options theory of business incubation assesses the intensity, quality and comprehensiveness of monitoring and business assistance on incubatee outcomes, this approach is holistic as it recognizes the critical importance of the nature of business assistance (Bergek & Norrman , 2008). In the development of their framework of incubation processes (Bergek & Norrman , 2008)propose two types of incubators based on the intensity of

their assistance to incubatees: Laissez-faire and strong interventionist. The real options theory of business incubation asserts that higher intensity of assistance and monitoring results in enhanced firm performance (Hackett & Dilts, 2004a).

Extant studies on the impact of monitoring and intensity of business assistance on access to finance find an overwhelming positive association. Empirical assessment of 101 incubated firms in Ontario, Canada finds that an increase in business advisory hours is positively associated with angel financing, this outcome was significant at both the 5% and 1% levels (Cumming & Fischer, 2012). Similarly a Swedish study on access to external financing by incubated companies finds that availing of general and specific business assistance activities is positively associated with an increase in VC funding and access to external financing (Aaboen & Löfsten, 2011).

Prior Studies assessing effect of incubator support services mainly approach its measurement from incubatee perception of its importance while others quantify its effect by analyzing outcome measures such as sales, financing and employment growth (Cumming & Fischer, 2012). A study on the impact of incubation processes of incubators in the US and Finland on new technology-based firms by (Scillitoe & Chakrabarti, 2010) finds that higher intensity of monitored business assistance results in positive incubate outcomes and a strengthened relationship between the incubatee and incubator management. Further the study finds that the nature of the intervention applied in assisting the incubatees leads to divergence in average performances (Scillitoe & Chakrabarti, 2010). Similarly, (Khalid, Gilbert, & Huq, 2012; Vincent & Zakkariya, 2021) and (Iyortsuun, 2017) find that monitoring and business assistance intensity is significantly positively correlated with start-up performance in India and Nigeria, furthermore it is found to better predictor of firm performance compared to selection performance and resource munificence. In a study on the impact of intensity of business advisory services, denoted by advisory hours, (Cumming & Fischer, 2012) find a positive correlation with Incubatee performance measures of sales growth and financing. In contrast, (Mole, Hard, Roper, & Saal, 2008) find an enhancement of employment growth with an increase in intensity of advising services, however they find intensity of business advisory services to have no impact on sales growth.

In the Kenyan context, a study on incubation process of Ihub, an incubator, finds evidence of intensive monitoring of incubatees in the incubation period and continued support in the post incubation period. Business assistance was provided in product development, development of marketing strategies and management training (Kibuchi, 2016). Business assistance services are

found to have a significant positive effect on sales growth, employment growth and innovation on incubatees in University Based technology incubators (Murage, 2018).

2.3.3 Resource Munificence and access to finance

The incubator management of resources is critical to enhance incubatee and incubator performance, (Hausberg & Korreck, 2020) in their empirical literature review of business incubation note the importance of mediation role of incubators in facilitating access to external resources and fostering incubatee relationships. Network mediation is defined as matching incubatees with external actors that can provide knowledge and expertise, financing and market information (Bergek & Norrman , 2008). Secondly, building of internal capabilities by enhancing incubator administrative processes is critical to enable the provision of quality resources to incubatees (Hackett & Dilts, 2004a). The internal functioning of the incubator is found to significantly enhance incubatee firm performance and survival rate in Technology incubators (Ratinho, Harms, & Groen, 2009). Resource munificence dimensions as put forward by (Hackett & Dilts, 2004a) are assessed in various studies as discussed in the following sections. (Bollingtoft & Ulhoi, 2005) in their study on networked business incubator, identify partnership and collaboration between incubatees as key benefit of internal networking within the incubator. Secondly, they find that the organization of the shared facilities impacts the collaboration process and a dense internal network encourages higher interaction between incubatees. Finally, the values of the incubator largely influence the building of trust and creating of a nurturing environment.

The resource comprehensiveness and quality is assessed by (McAdam & McAdam, 2008) in their study on two University based Incubators in the Republic of Ireland and the United Kingdom find that association with the incubator significantly enhanced incubate legitimacy, secondly the provision of access to professional networks fostered incubatee learning and knowledge accumulation and finally the study established that the incubator played a key role in incubatee access to funding by providing access to Venture Capital companies and assisting in the preparation of technical fundraising presentation and documents.

In the local context, (Njau , Mwenda, & Wachira, 2019) find that access to professional networks supports entrepreneurial learning and highlight the importance of provision of access to financiers with incubatees surveyed identifying the lack of debt and equity financing as a key challenge to firm growth. A case study on the Ihub incubation program finds that the incubator played a key

role in linking incubatees with mentors, providing access to financiers, assisted in in preparation of pitching presentations. The study highlights the incubators internal capabilities stating that incubatees earned legitimacy with external actors specifically in securing credit facilities and the incubator had established a strong network of VC and Angel investors who frequently visited the incubator (Kibuchi, 2016).

Studies on the impact of business incubator process on incubatee performance find conflicting evidence on the impact of resource munificence. A strong positive relationship is established in studies on Indian start-ups, (Vincent & Zakkariya, 2021) find access to funding, professional experts and technology laboratories to be a significant predictor of start-up performance while (Kumar, 2017) highlights the importance of incubator networking events in facilitating access to financing and fostering collaboration among incubatees. In contrast, (Iyortsuun, 2017) find an insignificant positive correlation of resource munificence and incubatee performance. This minimal contribution to firm performance is attributed to the incubators' inability to provide sufficiently provide quality resources.

2.3.4 Moderating Effects of Industry Type and Incubation Duration on Access to Finance

Industry type and time in incubator is found to have a moderating effect on access to finance by incubatees. The effectiveness of incubators in facilitating access to finance may vary across different industries. Industry type is found to play a crucial role in determining the effectiveness of business incubators in facilitating access to finance (Bhatia & Arora, 2016) (Cumming & Fischer, 2012). Access to finance is higher for startups operating in high-tech industries than those operating in low-tech industries. The Software industry is found to be positively related to both amount of financing obtained and probability of VC funding (Aaboen & Löfsten, 2011; Rothaermel & Thursby, 2005). The length of time spent by firms in an incubator affects their access to finance. The relationship between the time spent in an incubator and the access to finance for incubated companies is found to be negative (Bone, Gonzalez-Uribe, & Haley, 2019; Rothaermel & Thursby, 2005).In the Kenyan context (Njau , Mwenda, & Wachira, 2025) find that technology based startups have better access to finance with higher investor interest while extended time spent in incubation may signal dependency and negatively impact access to financing (Njau , Mwenda, & Wachira, 2025; Muathe, et al., 2022; Tiren, 2020).

2.4 Gaps in research

	Research Gap	Source	How This Study Addresses It
1	Lack of a holistic assessment of the incubation process (selection, support, resources) in impact studies	Moreira & Carvalho (2012); Bergek & Norrman (2008)	Applies the Hackett & Dilts model, which integrates all three incubation components for holistic analysis.
2	Limited empirical application of the real options theory in incubation research	Hackett & Dilts (2004a); Vincent & Zakkariya (2021); Iyortsuun (2017); Kumar (2017); Khalid et al. (2012)	Empirically tests the real options framework using data from incubated SMEs in Kenya.
3	Few studies measure access to finance as a performance indicator of incubation	Rothaermel & Thursby (2005); Cumming & Fischer (2012); Bone et al. (2019)	Uses access to finance as the main performance outcome of incubation.
4	Only one Kenyan study partially applies the Hackett & Dilts model (focuses only on selection)	Njau (2022)	First Kenyan study to apply the full Hackett & Dilts framework: selection, support, and resource munificence.
5	No Kenyan empirical studies link incubation support factors to financial outcomes (e.g., funding obtained)	Literature reviewed	Fills this local gap by exploring how incubation processes influence actual financial access among incubatees.

2.5 Conceptual Framework

Figure 2 illustrates the conceptual framework that defines the relationship between the independent and dependent variables. This study defined the independent variables as selection performance (SP), Monitoring and business assistance Intensity (M&BAI) and resource munificence (RM) (Hackett & Dilts, 2004a). The dependent variables include: Financing obtained and VC funding obtained. This study models financing obtained and venture capital (VC) funding as binary dependent variables, consistent with prior research by Rothaermel and Thursby (2005) and Cumming and Fischer (2012). These studies used binary indicators (1 =funding received; 0 = no funding) to assess the likelihood of startups securing VC through logistic and probit models. A binary approach simplifies analysis, especially in contexts like Kenya where funding amounts may be unreliable or unavailable, while access can be more accurately reported. It also aligns with the study's objective of evaluating whether incubator processes influence the likelihood—not the magnitude—of accessing finance.

Control variables identified for the study include: incubatee industry, time in incubator. Industry effects are controlled for informed by the significant impact of industry type on amount and type of financing obtained (Rothaermel & Thursby, 2005). Time in incubator is added as a control variable. The amount of time spent in the incubator is found to be negatively associated with VC funding and total funding (Rothaermel & Thursby, 2005).

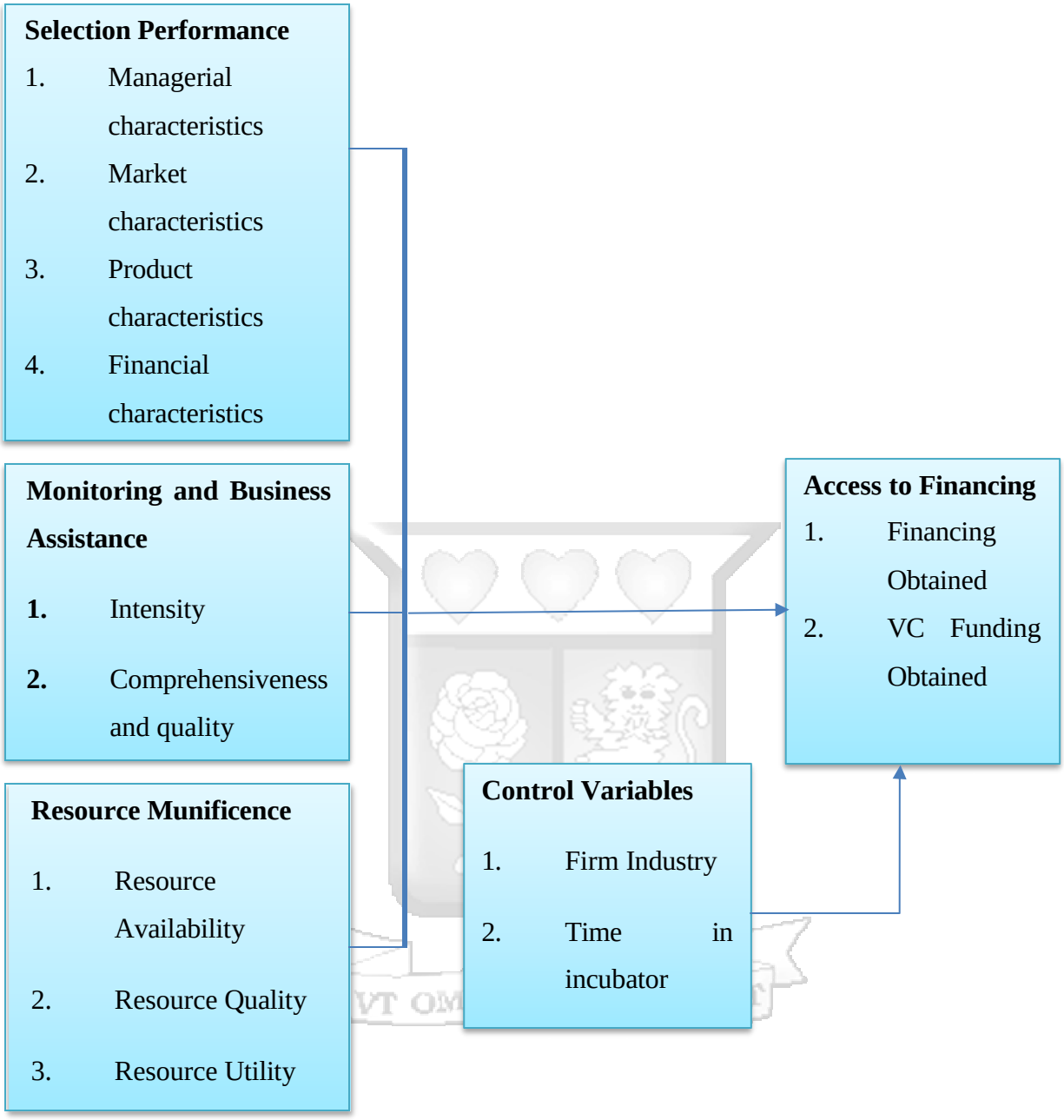


Figure 1.1 Conceptual Framework

2.6 Operationalization of variables

Table 1.1 defines how the variables identified in the conceptual framework will be measured.

Table 1.1 Operationalization of variables

Variable	Construct	Operationalization	Measurement	References
Selection performance	Selection based on managerial characteristics	Level of likelihood	5 point Likert scale (extremely unimportant – extremely important)	(Hackett & Dilts, 2008)
	Selection based on market characteristics			
	Selection based on product characteristics			
	Selection based on financial characteristics			
Monitoring & business assistance intensity	Degree of time intensity with which the Incubator monitors and assists the incubatees	Level of agreement	5 point Likert scale (Strongly disagree – strongly agree)	(Hackett & Dilts, 2008)
	Degree of comprehensiveness & quality with which the Incubator assists the incubatees			
Resource Munificence	Degree of resource availability	Level of likelihood	5 point Likert scale (Extremely bad – extremely good)	(Hackett & Dilts, 2008)
	Resource quality	Level of agreement	5 point Likert scale (Strongly disagree – strongly agree)	
	Resource utilization			
Financing Obtained (Dependent variable)	Financing obtained	Whether or not funding was obtained	Binary (1 – funding obtained, 0 – Funding not obtained	(Rothaermel & Thursby, 2005) (Cumming & Fischer, 2012)

VC funding obtained (Dependent variable)	VC funding obtained	Whether or not VC funding was obtained	Binary (1 – VC funding obtained, 0 – VC Funding not obtained	(Rothaermel & Thursby, 2005)
Incubatee Industry (Control variable)	Technology financial service and other	Industry of incubatee is determined	Binary for each industry category (1, 0)	(Rothaermel & Thursby, 2005)
Time in Incubator (Control variable)	Time in incubator	Period of time in incubation	A close-ended question on period of incubation	(Rothaermel & Thursby, 2005) (Cumming & Fischer, 2012)

2.7 Chapter Summary

This chapter examines extant literature on incubation processes and performance measures. The theoretical review undertaken examines the theoretical framework underpinning this study identifying real options theory of business incubation and Resource Based View Theory as theories underpinning the study. Secondly an empirical review of studies on incubation processes and their effect on access to finance is undertaken with a focus on incubation processes of selection performance, monitoring and Business assistance intensity, resource munificence. Critical review of literature is conducted to determine existent research gaps and a conceptual framework informed by literature reviewed is developed. The Operationalization of variables discusses how each identified construct was measured.

CHAPTER 3: RESEARCH METHODOLOGY

3.1 Introduction

This chapter discusses the methodology that was used in conducting the study. The following sections describe the research philosophy, research design, target population, sampling techniques and data collection methods that were employed in the study. The chapter also discusses how the study assessed research quality, conducted data analysis and upheld ethical considerations.

3.2 Research Philosophy

According to Saunders, Lewis, and Thornhill (2016), research philosophies provide the foundation for how knowledge is developed and understood. The main research philosophies include positivism, interpretivism, realism, and pragmatism. Interpretivism focuses on understanding human behavior and the subjective meanings individuals attach to social phenomena, making it more suitable for qualitative, in-depth studies. Realism acknowledges both observable and unobservable realities but distinguishes between direct and critical realism. Pragmatism emphasizes the research question as central and allows for methodological flexibility. This study, however adopted a positivism philosophy. The positivism approach seeks to collect data on an observable social reality, explore it for correlation or causal relationship with the aim of generalization (Saunders, Lewis, & Thornhill, 2016). This study adopted the objectivism ontological assumption that social phenomenon exists independent of social actors. Positivism approach holds the epistemological assumption that only observable phenomenon constitutes acceptable knowledge. This study upheld the axiological assumption of the researcher's value neutrality ensuring that researcher maintains an objective stance and is independent of the data collected (Crotty, 1998). This research explored the correlation between business incubation processes and incubatee access to financing. A deductive research approach was undertaken where extant literature was used to deduce a testable proposition based on a theory, collecting appropriate data and analyzing it to prove or disprove the aforementioned theory (Saunders, Lewis, & Thornhill, 2016). Data collected was subjected to hypothesis testing informed by the Hackett Dilts Business Incubation Process model developed from the real options theory (Hackett & Dilts, 2008).

The study aimed to further the development of real options theory by testing its applicability in the Kenyan context. The study employed structured methodology in collection of data by using

questionnaires. Structured methodology is undertaken to facilitate replication (Gill & Johnson, 2010).

3.3 Research Design

The study adopted a descriptive correlational research design as it describes the current state of a phenomenon and explores the relationship between variables using statistical analyses. Descriptive research design aims at giving an accurate depiction of the event under study (Saunders, Lewis, & Thornhill, 2016). Correlational research design is a subcategory of descriptive research design that seeks to discover associations between variables (Cooper & Schindler, 2014). This study aimed to describe how incubation processes of Selection performance, monitoring and business assistance intensity and resource munificence are related to incubatee performance measure of access to finance.

The study adopted a quantitative research design. Quantitative research design is usually applied when employing a structured methodology of data collection and where the underpinning research philosophy is positivism (Saunders, Lewis, & Thornhill, 2016). The study applied a deductive approach in the testing of the hypotheses as informed by the real options theory of incubation. Survey research strategy was employed through the use of a close-ended questionnaire. The time horizon for the study is cross-sectional as the study analyzed the effect of incubation processes on access to financing at the time of study.

3.4 Target Population

Population is defined as the full set of cases that the study seeks to examine (Saunders, Lewis, & Thornhill, 2016). The target population of this study was incubatee firms hosted by public and private incubators in Kenya. Mapping of the Kenyan innovation ecosystem undertaken by the United Nations Development Programme (UNDP) Kenya in partnership with the Konza Technopolis Development Authority (KoTDA), the African Center for Technology Studies (ACTS) and the Association of Countrywide Innovation Hubs, identifies 30 incubators that meet the strict definitions of an incubator differentiating them from other SME enablers such as accelerator, incubator, co-working spaces, marker spaces and innovation labs (UNDP, 2022). Number of incubatees was sourced from their respective incubator managers to determine the target population as 6970 incubatee firms.

3.5 Sampling Design

The study applied the sampling method of collecting data informed by the large number of incubatees in the Kenyan incubator ecosystem. A sample is defined as a representative subset of the population (Saunders, Lewis, & Thornhill, 2016). Sampling allows for greater accuracy of information collected and is associated with larger populations under study (Cooper & Schindler, 2014). The study identified the sampling frame using a stratified random sampling procedure, where elements from each individual stratum (homogeneous subgroups) are compiled in a list to create a sampling frame from which the sample is drawn (Cooper & Schindler, 2014).

Each incubator is identified as stratum informed by the internal homogeneity of incubation process applied to incubatees within an incubator. The study applied a random sampling technique to draw a sample from the generated list of incubatees that constitute the sampling frame. The study's sample was comprised of incubated SMEs in different incubators allowing for generalizability of study outcomes to population under study. Stratification ensured that all types of incubators were proportionately represented, while random sampling within each stratum minimized selection bias.

The sample size was determined using Cochran's Modified formula for finite populations (Cochran, 1977).

Where; $n = \frac{n_\theta}{1+\frac{n_\theta - 1}{N}}$

N: 6970(known population size)

n_θ: 385 Cochran ideal sample size for unknown populations

n: 364 Sample size

The targeted population size was 6970 incubatees drawn from 30 incubators in Kenya, the sample size is calculated using the Cochran formula to be 364 incubatees.

Target respondents included the incubatee owners or founders. SME/Start-up founders are defined as important population for studying the effectiveness of incubation programs owing to their understanding of the incubation process, its challenges and benefits (Kim & Lee, 2019) (Morris, Kuratko, & Schindehutte, 2001).

3.6 Data Collection

The study obtained data from primary sources. Survey method was used in data collection where primary data was collected from incubatee owner/executive director using structured

questionnaires. Survey method was adopted due to its short-turnaround time and enhanced accessibility to specific respondents whose position limits their accessibility such as company founders and executives (Cooper & Schindler, 2014). The questionnaires used a five- point Likert scale and close-ended questions to obtain information on incubation processes and financing received during the incubation period. Approval to seek information from Incubatees was sought from incubation managers through a letter detailing the aim of the study and the associated benefits of participation followed by a phone call to verify receipt of request and address any arising concerns. The Questionnaires was self-administered and distributed electronically to the incubatees using an online survey tool sent via email. This method distribution is found to increase control over study participants as the questionnaire is delivered to the target respondents email (Saunders, Lewis, & Thornhill, 2016). To enhance the response rate the researcher reached out to the target respondents via a phone call and in person to ascertain receipt of questionnaires and thank early respondents.

3.7 Research Quality

This study adapted the real options-driven incubation process model survey instrument as developed by (Hackett & Dilts, 2004a) and later refined with validated measurement scales (Hackett & Dilts, 2008). The model examines incubation process effect on business performance as measured by profitability and survival rates in five outcome states. This study modified the scales developed by (Hackett & Dilts, 2008) to fit the Kenyan ecosystem and measure business performance by interrogating whether financing was obtained by the incubated SME. The modified questionnaire was subjected to reliability assessments as discussed in the following section.

3.7.1 Research Reliability

Reliability assesses the consistency of results collected using the research instrument (Cooper & Schindler, 2014). Robustness of the research instrument is evaluated by testing for consistency of findings at different times and under different circumstances (Saunders, Lewis, & Thornhill, 2016). Internal consistency is reported to be the most form of reliability, it is concerned with testing the degree to which questions testing one concept are inter-related and therefore can be proven to be testing the same concept (Creswell & Creswell , 2018). This study evaluated the internal consistency using Cronbach's alpha analysis. The alpha value ranges from 0 – 1 with minimal acceptable rate being 0.7 (Cronbach, 1951). Informed by other studies who apply the Cronbach

alpha in reliability testing (Murage, 2018) (Meru & Struwig, 2011), this study assesse whether the questionnaire items assessing the three identified constructs of selection performance, monitoring and business assistance and resource munificence are internally consistent with alphas greater than 0.7.

Table 3.2 Reliability Results

Variable	Cronbach Alpha	Decision
Access to Finance	.820	Accepted for final research
Selection Performance	.780	Accepted for final research
Monitoring & business assistance intensity	.815	Accepted for final research
Resource Munificence	.860	Accepted for final research

3.8 Data Analysis and Presentation

Descriptive analysis was conducted on data collected showing firm characteristics and sector demographics. The evaluation of the effect of business incubation processes (Selection Performance (SP), Monitoring and Business Assistance Intensity (MBAI) and Resource Munificence (RM)) on firm performance, applied two logistic regression models as follows: where the dependent variable, financing obtained is binary and secondly where the dependent variable, VC Funding is binary. Firm characteristics of industry and time incubated were controlled for in the models.

Two regression analysis equations were used as shown below:

$$ln\left(\frac{\hat{Y}}{1-\hat{Y}}\right) = \alpha + \sum \beta_i X_i \quad \text{.....(1)}$$

In the first equation the dependent variable Funding Obtained is binary in nature and hence $\hat{Y}$ is the probability of the venture obtaining or not obtaining any funding whether debt or equity.

X_i is a vector of independent variables: Selection Performance(SP), Monitoring and Business Assistance Intensity (MBAI) & Resource Munificence (RM) and control variables (Industry Type & Time in Incubator).

In the second equation the dependent variable VC funding is binary in nature and hence $\hat{Y}$ is the probability of the venture obtaining or not obtaining venture capital funding. X_i is a vector of independent variables (SP, MBAI & RM) and control variables (Industry Type & Time in Incubator) (Rothaermel & Thursby, 2005).

$$ln\left(\frac{\hat{Y}}{1-\hat{Y}}\right) = \alpha + \sum \beta_i X_i \quad \text{.....(2)}$$

The following diagnostic tests were be conducted to validate the models ensuring that they are reliable and accurate and that assumptions of the models are met.

An overall goodness-of-fit test was used to check if the regression models proposed above fit the data well (Harrell , 2015). The test was performed using the likelihood ratio test. The Likelihood ration test is a popular method used to evaluate the goodness-of-fit of a model, it compares the likelihood of the fitted model to the likelihood of a baseline model that assumes no relationship between the predictors and the outcome.

3.9 Ethical Considerations

This study was conducted in adherence with the Strathmore University Ethical code and an ethical clearance was obtained prior to conducting the study. A research permit was obtained from the National Commission for Science, Technology and Innovation (NACOSTI) before the study was undertaken.

The researcher sought formal informed consent from respondents, where information on the aim and purpose of the study was provided and respondents were informed of their rights including their right to refuse participation or partial participation. Study procedures and expected time to completion was disclosed to respondents and permission obtained before data collection commenced. Privacy of the respondents was maintained with anonymity and confidentiality of respondents' information upheld.

3.10 Chapter Summary

This chapter outlined the methodology employed in the study. It detailed the research philosophy and design, identified the target population, and described the sampling techniques and data collection methods used. The chapter also explained the procedures for ensuring research quality, the data analysis methods applied, and the ethical considerations upheld throughout the study.

CHAPTER FOUR
PRESENTATION OF RESEARCH FINDINGS

4.1 Introduction

This chapter presented the results from the data collected from participants drawn from incubatee firms hosted by public and private incubators in Kenya. The chapter contains the demographic results, the descriptive summary and the correlation tests. Further, a summary of the qualitative data was provided in the chapter.

4.2 Demographic Information

The demographic analysis presents the analysis of the response rate and the profile of the respondents being considered in the survey.

4.2.1 Response Rate

The research sought responses from the owners of 364 incubatees as mapped out by the United Nations Development Programme (UNDP) Kenya in 2022. The study was conducted between March and April 2025 with responses being obtained from 284 respondents which represented 78% response rate which was sufficient in conducting the quantitative analysis as shown in Figure 4.1 below.

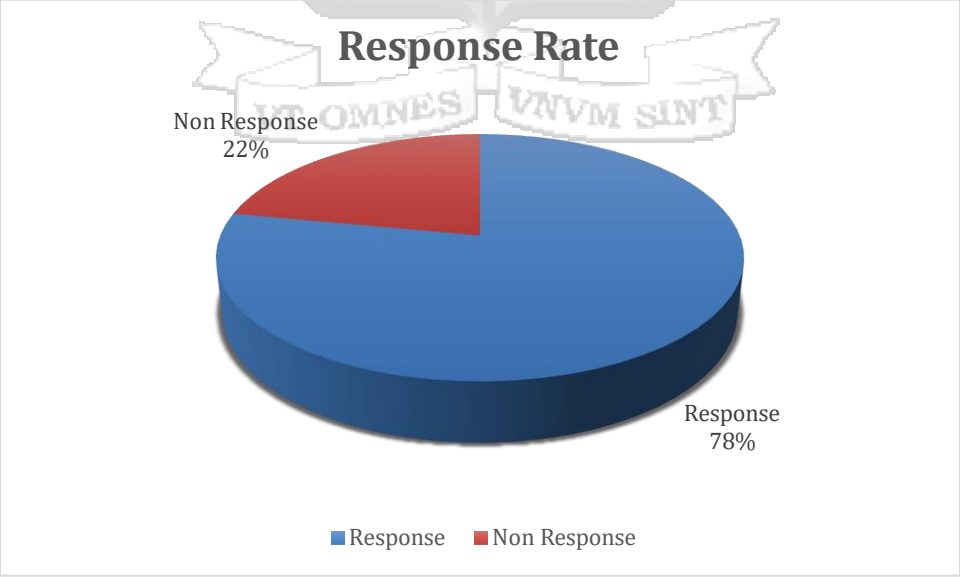


Figure 4.1 Response Rate

4.2.2 Age of the Respondents

The research evaluated the age profile of the respondents and the summary of the analysis is shown in Table 4.1 below;

Table 4.1 Age of Respondent

	Frequency	Percent	Valid Percent	Cumulative Percent
18 - 25 years	61	21.5	21.5	21.5
26 - 35 years	135	47.5	47.5	69.0
36 - 45 years	75	26.4	26.4	95.4
46 – 55 years	13	4.6	4.6	100.0
Total	284	100.0	100.0	

Analysis indicated that most of the respondents 47.5% (n = 135) were between 26-35 years, 26.4% (n = 75) of age 36-45 years, followed by 21.5% (n = 61) between the age of 18-25 years and finally 4.6% of ages over 46 years and below 55 years. The outcome was indicative of diversity in the age of incubatees' owners within the country which implied there was representation within the profession.

4.2.3 Gender of Respondents

The study also reviewed the gender distribution among the founders of the incubates and results showed that 65.5% were male and 34.5% were female which indicated there was parity in the gender distribution within the profession as shown in table 4.2 below

Table 4.2 Gender of Respondents

	Frequency	Percent	Valid Percent	Cumulative Percent
Male	186	65.5	65.5	65.5
Female	98	34.5	34.5	100.0
Total	284	100.0	100.0	

4.2.4 Firm characteristics

The survey then examined various firm characteristics from the respondents. The summary of the findings is presented in this section.

Table 4.3 Current Stage of Business

Stage	Frequency	Percent
Startup/Seed	106	37.3%
Growth	71	25.0%
Establishment	52	18.3%
Expansion	44	15.5%
Maturity and Exit	11	3.9%
Total	**284**	**100%**

Business stage was measured by time in incubation because the age of a firm provides a practical and consistent proxy for its development phase, McAdam and McAdam (2008), find that the lifecycle progression of incubatees is strongly associated with firm age. Most SMEs are in the early development stages, with over 62% either in the seed or growth phase. The stage with the least businesses is the maturity and exit stage with under 4%. This implies that a majority are still building operations and may have limited access to finance.

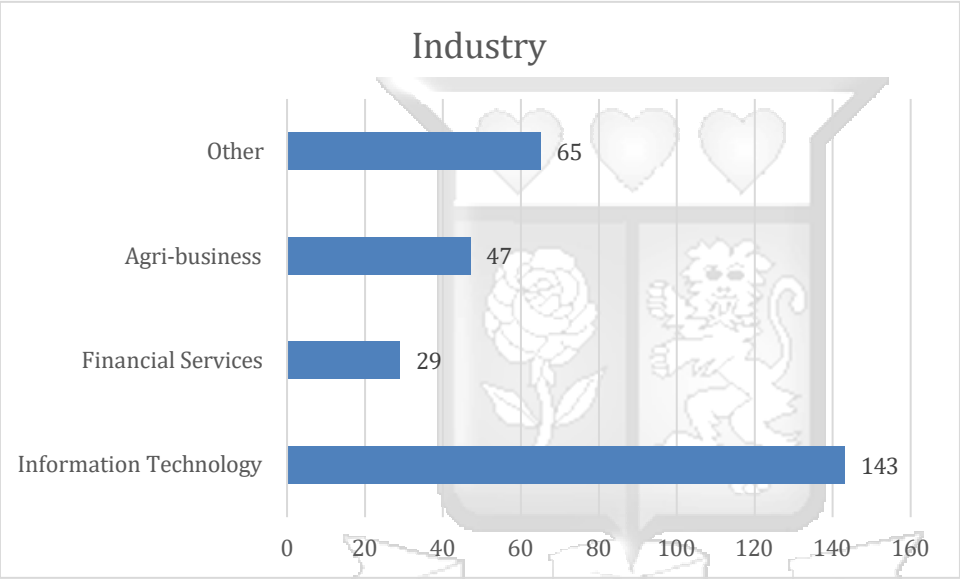
Table 4.4 Number of Staff

Staff Size	Frequency	Percent
0 – 5	130	45.8%
5 – 10	73	25.7%
10 – 30	50	17.6%

30 – 70	31	10.9%
Total	**284**	**100%**

Most firms are micro-enterprises, with over 70% employing 10 or fewer people. Around 45.8% of these organizations employ 5 or less staff with only 10.9% employing more than 30 staff. These small team sizes reflect limited resource capacity, which may constrain scalability and financing ability.

Figure 4.2 Industry of Operation



Half of the incubated firms are in tech-related sectors, aligning with a global trend where IT-based start-ups dominate incubation programs due to scalability potential. The industry with the least number of firms was financial services with 10.2%

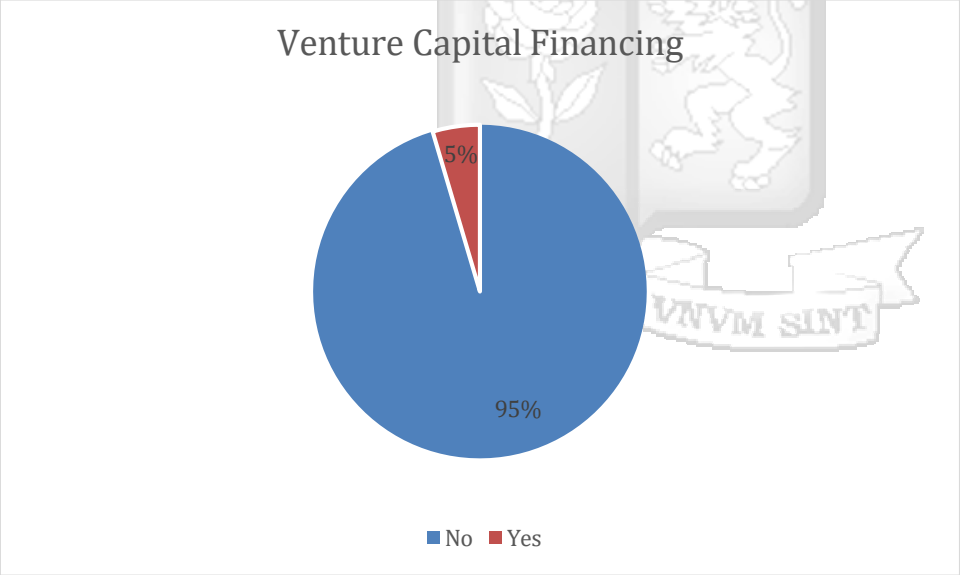
Table 4.5 Financing Received

Amount	Frequency	Percent
0 - Ksh.50,000	44	15.5%
50,001 - Ksh.250,000	53	18.7%
250,001 - Ksh.1,000,000	60	21.1%

1,000,001 - Ksh.5,000,000	67	23.6%
5,000,001 – Ksh.10,000,000	34	12.0%
Over Ksh.10,000,000	26	9.2%
Amount	**Frequency**	**Percent**
Total	**284**	**100%**

Results show that 38.3% have received above Ksh. 1M in financing, with around 9.2% receiving more than 10 million. However, a notable 34.2% received less than Ksh. 250,000 with at least 15.5% receiving less than Kshs 50,000. This shows disparities in financing access, possibly influenced by business stage or industry.

Figure 4.3 Venture Capital Financing



Venture capital financing remains highly inaccessible for incubated SMEs in Kenya, with less than 5% securing VC funds. This shows that resource munificence, especially in access to capital, may not be significantly affecting financing outcomes.

4.3 Descriptive Analysis

The study used structured questionnaires in the data collection and the summary of the responses obtained were presented using means and standard deviation. The results are shown in the section below in line with the variables of the research.

4.3.1 Incubator Selection Performance

The study investigated how incubator selection performance affects the access to finance by SMEs in Kenya and the summary of responses is shown below.

Table 4.6 Incubator Selection Performance

	N	Mean	Std. Deviation
The prior work experience of the company's management team in the field they plan to enter	284	3.0070	1.39660
The prior management experience of the company's management team	284	3.0282	1.44606
The long-term growth potential of the market the start-up company plans to enter	284	3.0845	1.43156
The size of the target market that the company plans to enter	284	3.0845	1.40415
The uniqueness of the product	284	2.9683	1.38482
Whether the product has patent protection	284	3.0880	1.46430
Whether the product has relative advantage over competitor's products	284	3.0141	1.42410
The substitutability of the product the company is proposing to sell	284	3.0528	1.39940
Whether the product demonstrates defendable competitive position	284	2.8908	1.43851
Whether the profit potential of the company is high	284	2.9261	1.43091
Whether the company has the potential to attract investment participation from venture capitalists	284	3.1585	1.36833

Whether the company has multiple harvestable exit (i.e., cash-out) options	284	2.9754	1.44245
Valid N (listwise)	284		

The results for selection performance show that most respondents were moderately neutral to agreeable about the relevance of different selection criteria. Venture capital attractiveness had the highest mean (3.159), highlighting a relatively stronger emphasis on selecting firms that are likely to attract investment. Prior work and management experience had mean scores just above 3.0, indicating that while these attributes are somewhat valued in the incubator selection process, there isn't a strong consensus. Similarly, market-related factors such as the long-term growth potential and the size of the target market were slightly more emphasized, with identical mean scores of 3.085. However, more product-specific variables such as product uniqueness, patent protection, and competitive positioning were met with neutrality, reflected in means close to or slightly below 3.0. Particularly, the variable on defendable competitive position had one of the lower scores (mean = 2.891), indicating that incubators may be under-assessing how well a startup can sustain its market advantage. Profit potential and multiple exit options also received mixed evaluations, with mean values under 3.0, suggesting these financial viability indicators are inconsistently prioritized.

4.3.2 Monitoring and Business Assistance Intensity

The study investigated how Monitoring and Business assistance intensity affects the access to finance by SMEs in Kenya and the summary of responses is shown below.

Table 4.7 Monitoring and Business Assistance Intensity

	N	Mean	Std. Deviation
Company receives sufficient time working directly with incubator manager	284	3.1197	1.40158
Interactions with incubator manager reduce the likelihood of our company making expensive business mistakes	284	3.0704	1.36668

Company receives appropriate time in assistance	284	2.9965	1.37750
Company spends appropriate amount of time interacting with other incubates	284	3.0141	1.44382
Our company receives strategic planning assistance from the incubator	284	2.7746	1.43846
Our company receives production related advice from the incubator	284	2.9965	1.38007
Our company receives operations related advice from the incubator	284	3.0669	1.46301
Our company receives helpful technical fundraising assistance in preparation for funding rounds (preparation of fundraising documentation and pitching) from the incubator	284	3.0528	1.36100
Our company receives administrative assistance and services from the incubator	284	2.9542	1.44927
The incubator regularly validates the quality of potential new strategic service providers	284	2.9261	1.39591
Our incubator ensures the quality of its services by regularly reviewing them	284	2.9718	1.36303
The incubator manager actively seeks ways to continuously improve the level of customer service satisfaction inside the incubator	284	2.9401	1.38898
Valid N (listwise)	284		

The results for business assistance intensity reveal a generally moderate perception of the support received from incubators. Respondents indicated that they receive a somewhat sufficient amount of time working directly with the incubator manager (mean = 3.120), and interactions with the manager were perceived to help reduce costly business mistakes (mean = 3.070). However, opinions on whether the company receives an appropriate amount of assistance time were more neutral (mean = 2.997), suggesting some variability in the adequacy of support offered. Peer interactions such as spending time with other incubates were rated modestly (mean = 3.014),

indicating that while networking does occur, it is not a central element of the incubation experience. Notably, the provision of strategic planning assistance received one of the lowest mean scores (2.775), highlighting a key gap in high-level business guidance. Similarly, production- and operations-related advice scored around 3.0, indicating that while some support exists in these areas, it is not consistent. Technical fundraising assistance had a slightly better score (mean = 3.053), though still not strongly agreed upon, suggesting that only a portion of incubatees benefit from help in preparing for funding rounds. Administrative support, service validation, and quality improvement efforts all were around or below the mean of 3.0, further showing a lack of structured service evaluation and continuous improvement.

4.3.3 Resource Munificence

The study investigated how Resource Munificence affects the access to finance by SMEs in Kenya and the summary of responses is shown below.

Table 4.8 Resource Munificence

	N	Mean	Std. Deviation
Access to administrative support services	284	2.9296	1.44461
Access to managerial expertise	284	2.9296	1.44216
Access to sources of capital (i.e., introductions to banks, venture capitalists and angels)	284	2.8908	1.46528
Access to marketing specialists	284	2.8908	1.43359
Access to consultants	284	2.9155	1.45846
We receive business-related information from the incubator in a way that is easy to understand	284	3.0282	1.48702
Our company acts upon the advice we receive from the incubator manager	284	3.0211	1.40402
Our company acts upon the advice we receive from fellow incubates	284	2.9155	1.39911
Our company utilizes advice obtained from the incubator manager	284	3.1761	1.39560

Our company utilizes the knowledge obtained from other incubates	284	3.1937	1.41465
We maximize our opportunities from the introduction to the incubator's network contacts	284	3.1338	1.42779
The other incubates teach alternate or new strategies for achieving business success	284	3.0176	1.45718
Our reputation is enhanced because of our association with the incubator	284	3.1162	1.38028
Our company is offered flexible lease agreements to meet our changing space needs	284	3.0739	1.45540
Our company makes full use of the administrative services offered at the incubator	284	3.0423	1.40355
Valid N (listwise)	284		

Descriptive statistics for resource munificence indicate that respondents had generally neutral views on the availability, quality, and utilization of incubator-provided resources. On the positive side, the usefulness and actionability of advice—especially from the incubator manager—were more favorably viewed. The variable indicating that companies act upon the advice from the incubator manager scored a mean of 3.021 dev, 1.40, and utilization of that advice scored even higher at 3.176, showing that when incubator managers do engage, their input is generally trusted and applied. Peer learning was also valued, with the highest-rated item being the utilization of knowledge obtained from fellow incubatees (mean = 3.194, dev = 1.415), highlighting the informal value of the incubator community. Other positively rated items include maximizing opportunities from network introductions (mean = 3.134) and reputational benefits associated with the incubator (mean = 3.116), both suggesting some institutional value is derived from incubator affiliation. Less positively, the incubators were seen to offer limited access to consultants (mean = 2.916) and weak emphasis on delivering business-related information in a clear, digestible format (mean = 3.028). The use of administrative services (mean = 3.042) and availability of flexible lease agreements (mean = 3.074) were rated moderately, implying functional yet unremarkable infrastructure support.

4.4 Logistic Regression Analysis

The study performed logistic regression analysis to determine the magnitude of interaction between business incubation processes (Selection Performance (SP), Monitoring and Business Assistance Intensity (MBAI) and Resource Munificence (RM)) and access to finance by small and medium-sized enterprises (SMEs) in Kenya.

As part of the analysis, initially the researcher ran a logistic regression model to assess whether incubator support factors, such as Selection Performance, Monitoring & Business Assistance, and Resource Munificence, could explain access to venture capital. However, the model did not yield statistically significant results — none of the variables had p-values below 0.05. Given that, and the fact that the model did not meet basic fit requirements, the researcher chose not to include it in the final results. This outcome also reflects what the data shows more broadly: fewer than 5% of the incubated SMEs in the sample data collected had received venture capital.

The findings presented evaluate the effect of business incubation processes (Selection Performance (SP), Monitoring and Business Assistance Intensity (MBAI) and Resource Munificence (RM)) on access to finance where the dependent variable, financing obtained is binary. Firm characteristics of industry and time incubated were controlled for in the models.

The summary of the findings is presented in this section.

Table 4.9 Classification Table

			Predicted		
			Access Financeb		Percentage
	Observed		.00	1.00	Correct
Step 0	AccessFinance b	.00	0	139	.0
		1.00	0	145	100.0
	Overall Percentage				51.1

a. Constant is included in the model.

b. The cut value is .500

This was conducted to evaluate how accurately the model classifies outcomes i.e. whether firms accessed finance or not. The findings show that 100% of firms that accessed finance were correctly

predicted (True Positive Rate = 100.0%) and 0% of firms that did not access finance were correctly predicted (True Negative Rate = 0.0%). The overall accuracy was 51.1% which is acceptable. While the overall prediction is just slightly better than chance (50%), it correctly classifies all firms that accessed finance but fails to detect those that did not. The model is heavily biased toward predicting that firms accessed finance may be due to imbalanced data or insufficient sensitivity to firms that were denied finance.

Table 4.10 Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	23.605	8	.003
	Block	23.605	8	.003
	Model	23.605	8	.003

This test assesses whether the model with predictors is significantly better than a model with only the constant (intercept). The model is statistically significant (p= 0.003 < 0.01), indicating that the independent variables collectively improve the prediction of SMEs' access to finance.

Table 4.11 Hosmer and Lemeshow Test

Step	Chi-square	Df	Sig.
1	10.781	8	.214

The research further performed the Hosmer and Lemeshow Test to check the consistency between the observed data and the model fitted for the study. Based on the test the null hypothesis is the observed data is consistent with the estimated values in the model fitting. The findings indicated that the sig value was .214 which was greater than .05 thus accepting the null hypothesis. This showed that the observed data was consistent with the estimated values in the fitted model.

Table 4.12 Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	369.976[a]	.080	.106

a. Estimation terminated at iteration number 4 because parameter estimates changed by less than .001.

The results of the Pseudo-r square focus on determining the magnitude of effect of the independent variables on the dependent variable. Analysis shown above indicated there was predictive positive effect of the independent variables has shown by Cox & Snell's Pseudo R-squared was .080, the likelihood value for Nagelkerke was .106. This confirmed that business incubation had a positive predictive power on the access to finance among SMEs in Kenya.

Table 4.13 Parameter Estimates Results

		B	S.E.	Wald	Df	Sig.	Exp(B)
Step 1[a]	Selection Performance	.737	.302	5.958	1	.015	2.089
	Business Assistance Intensity	.924	.297	9.699	1	.002	2.519
	Resource Munificence	.179	.314	.323	1	.570	1.196
	One to Three	-.813	.409	3.959	1	.047	.444
	Four to Five	-.746	.486	2.361	1	.124	.474
	Information Technology	.227	.314	.526	1	.468	1.255
	Financial Services	.151	.466	.105	1	.745	1.163
	Agribusiness	-.162	.402	.162	1	.687	.851
	Constant	-4.879	1.631	8.945	1	.003	.008

a. Variable(s) entered on step 1: Selection Performance, Business Assistance Intensity, Resource Munificence, One to Three, Four to Five, Information Technology, Financial Services, Agribusiness.

The study findings on the first objective on the incubator selection performance showed a X_1 = 0.717, Wald = 5.958, Sig = .015<.05 indicating that it was statistically significant. A one-unit increase in perceived selection performance doubles the odds (Exp =2.089) of accessing finance.

The second objective examined Business Assistance Intensity and the resulting findings were that X_2 = .924, Wald = 9.699, Sig = .002<.05 indicating there was a statistically significant effect on accessing finance in Kenya.

The results of the third variable parameter estimate on Resource Munificence revealed X_3 = 0.179, Wald = 0.323, Sig = .570 > .05), indicating that Resource Munificence had a positive and insignificant effect on access to finance among SMEs. For the control variables, time between 1-3 years had a negative and statistically significant effect (X = -0.813, Sig = .047 < .05) showing that SMEs incubated for 1–3 years are 55.6% less likely to access finance. Time between 4-5 years had a negative and insignificant effect on access to finance. (X = -0.746, Sig = .124 > .05). Lastly, for the industry, Information Technology (X = 0.227, Sig = .468 > .05), Financial Services (X = 0.151, Sig = .745 > .05), Agribusiness (X = -0.162, Sig = .687 > .05) all had insignificant effect on access to finance among SMEs in Kenya.

4.5 Chapter Summary

This chapter presented the findings from data collected from incubated firms hosted by both public and private incubators in Kenya. It included an analysis of respondent demographics, descriptive statistics, and correlation tests. Additionally, the chapter provided a summary of qualitative insights derived from participant responses.

CHAPTER FIVE
DISCUSSION, CONCLUSION AND RECOMMENDATION

5.1 Introduction

This chapter focused on the presentation of the summary of the research and discussion of the findings. Further, the conclusions and recommendations based on the findings are presented. Also the chapter highlighted the limitations of the survey and the areas for further research to be considered.

5.2 Summary of the Study

The study sought to investigate the effect of incubation on access to finance by Small and Medium-sized Enterprises (SMEs) in Kenya. This study's research objectives sought to analyze the effect of incubator selection performance (ISP), Monitoring and business assistance Intensity (M&BAI) and resource munificence (RM) on access to finance for SMEs. The study also adopted control variables i.e. time spent in incubation and incubatee industry. The study was anchored on the real options theory of incubation and the resource based view theory. The study adopted a positivism philosophy and a descriptive – correlational research design. The target population of the study consisted of a sample of incubatees drawn from 30 public and private incubators. Research quality was assessed using diagnostic tests to verify validity and reliability of the study. Primary data was collected from the incubatees using a questionnaire. Data collected was analyzed using descriptive statistics and inferential statistics where ordinal logistic regression and logistic regression models were employed. The significance of this study will be to: SMEs, business incubators, scholars, investors and financiers with an interest on the influence of incubation on SME access to finance.

Findings showed that incubation had a positive and significant effect on access to finance by Small and Medium-sized Enterprises (SMEs) in Kenya. The study further found that incubator selection performance has a positive and statistically significant effect on access to finance among SMEs in Kenya. The study also revealed that the intensity and quality of business assistance provided by incubators has a positive and statistically significant effect on SMEs' access to finance. The regression results further indicated that resource munificence does not have a statistically significant effect on access to finance among incubated SMEs in Kenya. The study found that the SMEs incubated for 1–3 years have a negative and significant effect on access to finance while the effect for the Four to Five years category was negative but not statistically significant. As for

industry type, no incubatee industry (Information Technology, Financial Services, Agribusiness) showed a statistically significant effect on access to finance.

5.3 Discussion of Findings

5.3.1 Selection Process and Access to Finance

The first objective sought to examine the effect of incubator selection performance—based on market, product, financial, and managerial characteristics—on access to finance by SMEs in Kenya. The study found that incubator selection performance has a positive and statistically significant effect on access to finance among SMEs in Kenya. This finding validates the Real Options theory that a rigorous selection process enhances access to finance for incubated firms by creating high quality options early in the incubation process (Hackett & Dilts, 2004a). The positive relationship between selection performance and access to finance demonstrates that incubators can help SMEs develop resource configurations that improve performance—validating the Resource-Based View (RBV) in the incubation context (Barney, 1991).

This aligns with earlier research asserting that the selection process plays a critical role in determining the effectiveness of business incubation and subsequent firm outcomes. For instance, Lumpkin & Ireland (1988) emphasized the importance of a structured selection approach involving four key factors: management experience, financial strength, market viability, and personal attributes. The current study's approach, which also integrates market, product, financial, and managerial characteristics, mirrors this framework and affirms its relevance in improving incubatee access to finance.

The findings also resonate with Bergek & Norrman (2008), who highlighted two contrasting selection strategies: one centered on the business idea and the other on the entrepreneur or team. These scholars found that incubators adopting a "picking winners" strategy are more likely to achieve superior outcomes. This is consistent with the positive association found in the current study, suggesting that a well-executed and stringent selection process increases the financial viability and investment attractiveness of incubatees, thereby enhancing their access to external finance.

Moreover, the results are in line with Aerts, Matthyssens, & Vandenbempt (2007), who reported

that nearly all incubators in Europe (97%) use screening criteria, with varying emphasis on market (61%), team (27%), and financial (6%) factors. They cautioned that over-reliance on one factor can raise failure rates and advocated for balanced screening—an approach that appears to have been adopted in the Kenyan incubators examined in this study. The strong outcome for SMEs suggests that Kenyan incubators may indeed be implementing such a balanced framework, reinforcing the relevance of multi-faceted selection criteria for enhancing performance. Differences in selection rigor between technological and non-technological incubators were reported by Ratinho, Harms, & Groen (2009), who found that Technology Incubators (TIs) behave more like venture capitalists with comprehensive screening methods, leading to higher incubatee success rates. This also parallels the current study, in which rigorous selection methods positively influenced access to finance, an important success measure.

The findings were further corroborated by extant literature which support the idea that selection processes affect broader performance outcomes beyond just finance. Khalid, Gilbert, & Huq (2012) linked selection with graduation rates, while Vincent & Zakkariya (2021) and Iyortsuun (2017) assessed its effect on various hard and soft performance measures and survival rates, respectively. In the Kenyan context, the findings further confirm Njau (2022), who observed that selection criteria such as technical and team experience, product uniqueness, financial capability, and long-term strategic orientation all contributed positively to venture creation. The overlap between Njau's criteria and those in the current study indicates that these selection benchmarks are not only theoretically sound but also empirically effective in supporting SME development in Kenya.

5.3.2 Monitoring & Business Assistance and Access to Finance

The study further sought to assess the effect of the intensity, quality, and comprehensiveness of monitoring and business assistance on access to finance by SMEs in Kenya. The study revealed that the intensity and quality of business assistance provided by incubators has a positive and statistically significant effect on SMEs' access to finance. This study's findings validate Real Options Theory by illustrating how Monitoring and Business Assistance Intensity (M&BAI) by incubators is the continued choice to 'exercise' the real option created on selection through continued support (Hackett & Dilts, 2004a) leading to the favorable outcomes of enhanced access to finance. From an RBV perspective, M&BAI contributes to building internal capabilities that

improve firm performance.

This finding is consistent with international literature that emphasizes the role of business support services as a key determinant of startup success, particularly in relation to securing funding. For instance, Cumming & Fischer (2012), in their empirical analysis of 101 incubated firms in Ontario, found that an increase in the number of advisory hours directly increased the likelihood of receiving angel financing. This underscores the idea that time-intensive and quality mentorship interventions are critical enablers of financial access, as they improve the financial readiness and investment appeal of incubatees. The current study's findings support this relationship, suggesting that more robust and targeted business support builds credibility and investor confidence among SMEs in Kenya.

Similarly, findings were corroborated by Aaboen & Löfsten (2011) found that both general and specialized forms of business assistance positively influenced incubatees' ability to access venture capital and external financing. These findings reflect the value of not just the volume but also the type and relevance of support provided, as echoed in the current study, where quality and comprehensiveness of assistance are shown to be just as important as intensity. Scillitoe & Chakrabarti (2010) expanded on this by examining how the intensity of monitored business assistance strengthens the relationship between incubators and their clients. They found that different types of interventions yield varying levels of performance, reinforcing the idea that customized support services enhance outcomes. The current study aligns with this, suggesting that strategic and hands-on incubator involvement enables SMEs to build stronger business models and become more investor-ready.

Furthermore, Khalid, Gilbert, & Huq (2012), Vincent & Zakkariya (2021), and Iyortsuun (2017) all found a significant positive association between monitoring and support intensity and performance outcomes across developing countries, including India and Nigeria. These studies even identified business assistance intensity as a better predictor of firm performance than other incubator components like selection or resource munificence. The Kenyan study reinforces these insights, indicating that business assistance is a central pillar in SME financial development strategies. While various studies confirmed positive effects of advisory intensity on both financing and sales growth, Mole et al. (2008) noted a more mixed picture where employment growth improved with advisory services, but sales growth did not. This variance points to the fact that the

impact of business assistance may depend on how well it is tailored to the incubatees' specific growth challenges, a factor the current study acknowledges through its focus on the quality and comprehensiveness of support.

In the Kenyan context, Kibuchi (2016) documented the effectiveness of intensive monitoring and continued support in the post-incubation phase at iHub, a local incubator. The services offered—such as product development, marketing strategy formulation, and management training—mirror the components identified in the current study, further validating the local relevance of intensive business support. Likewise, Murage (2018) demonstrated that business assistance significantly boosts sales, employment, and innovation outcomes in university-based technology incubators showing that strong advisory frameworks are particularly effective within structured institutional environments.

5.3.3 Resource Munificence and Access to Finance

Lastly, the study sought to determine the effect of resource availability, quality, and utilization (munificence) on access to finance by SMEs in Kenya. The regression results indicate that resource munificence does not have a statistically significant effect on access to finance among incubated SMEs in Kenya. The insignificance of resource munificence in this study offers a nuanced reflection on both Real Options Theory and the Resource-Based View. Whereas incubators may create real options through resource availability, the value of these options depends on the quality and timing of their execution (Hackett & Dilts, 2004a). This result diverges from a number of international and local studies that emphasize the critical role of incubator-managed resources in enhancing firm legitimacy, networking opportunities, and ultimately, financial access.

Findings contrast previous literature such as Hausberg & Korreck (2020) which highlight the mediation role of incubators in facilitating incubatees' access to external networks, knowledge, and financial resources. Similarly, Bergek & Norrman (2008) introduce the concept of network mediation, noting that effective matching of incubatees with external factors such as financiers and industry experts is a core function of resource-rich incubators. Despite these assertions, the current study suggests that such mediation efforts may not be effectively translating into tangible financial outcomes for SMEs in the Kenyan context.

Hackett & Dilts (2004a) and Ratinho et al. (2009) emphasize the significance of internal incubator capabilities in delivering high-quality resources that support incubatee growth. These include

administrative strength, access to legal and financial services, and tailored mentorship. However, the lack of significance in the current study may imply that while resources may be available, their quality, targeting, or utilization might be suboptimal, thus limiting their impact on access to finance. A similar view is reflected in Iyortsuun (2017), who found only an insignificant positive correlation between resource munificence and performance among Nigerian startups, attributing it to incubators' limited ability to deliver quality, relevant resources. The corroboration with the Kenyan context may suggest systemic issues in the operationalization of resource offerings, such as lack of follow-up support, irrelevant resource allocation, or failure to adapt resources to the unique needs of diverse incubatees.

Conversely, several studies report strong positive associations between resource munificence and startup performance. For instance, Vincent & Zakkariya (2021) and Kumar (2017) found that access to technology infrastructure, financial linkages, and professional experts significantly boosted the financial and innovation performance of Indian startups. These studies argue that resource richness enhances incubatee visibility and legitimacy, which are crucial when pitching to external investors. McAdam & McAdam (2008) also underscore that association with a reputable incubator improves firm legitimacy and enhances access to external financing. The incubators in their study facilitated incubatee funding not only by building networks but by providing active support in technical fundraising preparations, something which may be underdeveloped or inconsistently applied in Kenyan incubators.

In Kenya, Njau et al. (2019) and Kibuchi (2016) affirm that incubators like iHub provide valuable professional connections and credibility to incubatees, assisting in the preparation of investment pitches and linking them with VCs and angel investors. Despite this, the current study's finding suggests that such support, while present, may not be uniformly effective or widely accessible across incubators in the country, thereby diluting its measurable effect on financial access. Bollingtoft & Ulhoi (2005) also point out that organizational culture and collaboration among incubatees foster resource sharing and support. Kenyan incubators have yet to fully establish such internal networks and shared values, which may explain the weak influence of resource munificence observed in this study.

5.4 Conclusions

The study found that incubator selection performance has a positive and statistically significant

effect on access to finance among SMEs in Kenya. This indicates that SMEs selected into incubation programs based on stronger market potential, product uniqueness, financial viability, and managerial experience are over twice as likely to secure financial access compared to those that are not. Descriptive statistics further support this finding, with mean scores for selection criteria hovering around the neutral mark suggesting moderate perceived strength in the evaluated selection dimensions. Notably, the criteria rated relatively higher include venture capital attractiveness, market growth potential, and patent protection, highlighting the importance of perceived investor appeal and market opportunity in financing decisions. These results underscore the critical role of rigorous and well-structured selection processes in incubation programs.

The study further revealed that the intensity and quality of business assistance provided by incubators has a positive and statistically significant effect on SMEs' access to finance. This implies that SMEs receiving more intensive and higher-quality support from incubators are more likely to access finance compared to those with limited support, holding other factors constant. Descriptive statistics suggest that SMEs moderately agree with the availability and usefulness of incubator-provided support. However, relatively lower scores were observed in areas like strategic planning support, administrative assistance, and continuous improvement in service quality, suggesting potential gaps in some aspects of incubator service delivery. In conclusion, the findings indicate that tailored, hands-on, and high-quality business assistance is critical for enhancing the financial readiness and attractiveness of incubated SMEs.

The study further shows that resource munificence has a positive and statistically insignificant effect on access to finance among incubated SMEs in Kenya. While the odds ratio suggests a positive relationship, the lack of significance implies that resource availability and utilization alone may not directly influence financing outcomes, or that their effect is more indirect or context-dependent. Descriptive statistics, however, reflect a moderately positive perception of resource availability and utilization within incubators. Conversely, access to key external resources such as capital sources, marketing specialists, and managerial expertise scored relatively lower, suggesting that some critical resource linkages are not fully leveraged or consistently available. In conclusion, while incubators appear to offer a supportive environment with moderately utilized resources, the availability and use of these resources alone may not be sufficient to enhance SME access to finance.

The study also adopted control variables. The study found that the time spent in incubation shows

mixed influence. SMEs incubated for 1–3 years are significantly less likely to access finance compared to those in the reference category. This may point to a possible dip in momentum or investor attention mid-way through incubation. The effect for the Four to Five years category was negative but not statistically significant. As for industry type, no incubatee industry (Information Technology, Financial Services, Agribusiness) showed a statistically significant effect on access to finance. This implies that the effectiveness of incubation support on financing outcomes is broadly similar across industries, and not strongly dependent on sector.

5.5 Recommendations

Recommendations Based on Theory

Selection performance had a significant positive effect on access to finance. Based on this conclusion, the study recommends implementation of a structured, performance-based selection criteria for incubatees focusing on management experience, product uniqueness, market potential, and financial viability.

Business assistance intensity was identified as the strongest and most significant predictor of access to finance. The study thus recommends that incubators should increase the frequency and depth of engagement with incubatees through tailored mentorship, strategic planning support, and fundraising coaching.

The study therefore stressed that focus should not only be on availability but also on the targeted and effective use of resources. The firms should align resource provision with the specific growth stage and financial needs of SMEs.

Recommendations for Policy

The government can also encourage incubators to offer pre-incubation programs or bootcamps to help early-stage ventures build the required competencies before formal admission.

Policymakers should also establish performance tracking systems for business assistance delivery to ensure incubatees receive consistent, high-quality support.

Recommendations for Practice

The study further recommends that incubators should use a scorecard or evaluation framework that prioritizes SMEs with a high likelihood of success and fundability.

They should develop standardized business development modules, including pitch preparation, investor targeting, and financial modeling. The study further suggests that the relevant authorities should foster peer-to-peer learning and structured interaction among incubatees to leverage shared experiences and networks.

The study also noted the need to improve linkages to external capital providers such as banks, angels and VCs through curated introductions and partnerships. The incubators should also develop feedback mechanisms to ensure resource offerings are relevant and efficiently utilized by incubatees.

The study recommends investing in continuous upgrading of incubator facilities and advisory services, focusing on quality over quantity. Milestone-driven incubation programs with clear timelines, deliverables, and performance reviews at each phase are recommended.

Additionally, the avoidance of complacency during the mid-stage of incubation by reinvigorating support and re-evaluating business needs regularly is advised. Incubators should consider graduation policies or staged exit options to avoid over-incubation that may reduce urgency or investor interest.

5.6 Limitations of the Study

This study has several limitations. First, it relied on self-reported data from incubatee founders, which may be subject to response bias. Second, the focus on incubated firms excludes non-incubated SMEs, limiting generalizability. Third, the sampling frame was based on incubators identified by UNDP (2022), possibly omitting newer or informal incubators. Additionally, the cross-sectional design limits the ability to draw causal inferences over time. Lastly, the use of a binary measure for access to finance may not fully capture the depth or quality of funding obtained.

5.7 Areas for Further Studies

The study was based on incubated SMEs in Kenya. A comparative study can be conducted between incubated SMEs in different counties in Kenya or across different countries which could provide deeper insights into how regional economic policies, incubator models, and ecosystems affect SME financing. Further research can also explore how different incubation models e.g. public vs. private, sector-specific vs. general influence the financial outcomes of incubatees. This can help determine which model offers the most cost-effective support. Further research can also be conducted on how SMEs fare after exiting incubators in terms of financial stability, profitability,

and investor attractiveness. This could help measure the sustainability of incubation benefits beyond the support period.

5.8 Chapter Summary

This chapter presented the study's main findings, showing that incubator selection performance and business assistance intensity significantly improve SME access to finance in Kenya, while resource munificence does not. These results support both Real Options Theory and the Resource-Based View. Practical, policy, and theory-based recommendations were offered, including structured selection, targeted mentorship, and improved resource utilization. Limitations such as reliance on self-reported data and a cross-sectional design were acknowledged. The chapter also suggested areas for further research, including comparative studies across incubation models and post-incubation performance tracking.

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APPENDICES

APPENDIX 1: NACOSTI RESEARCH PERMIT

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: **116931**

Date of Issue: **18/June/2024**

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APPENDIX 2: ETHICAL CLEARNCE LETTER

Strathmore UNIVERSITY

21st May 2024

Ms Kurui Joy,
joy.kurui@strathmore.edu

Dear Ms Kurui,

RE: Effect of Business Incubation on Access to Finance by Small and MediumSized Enterprises (SMEs) in Kenya

This is to inform you that SU-ISERC has reviewed and **approved** your above **SU-masters** proposal. Your application reference number is **SU-ISERC2258/24.** The approval period is from **21st May 2024 to 20th May 2025.**
This approval is subject to compliance with the following requirements:

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

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

Yours sincerely,

Mr Ambrose Rachier, Chairperson; SU-ISERC

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APPENDIX 3: PARTICIPANT INFORMATION & CONSENT FORM

PARTICIPANT INFORMATION AND CONSENT FORM EFFECT OF BUSINESS INCUBATION ON ACCESS TO FINANCE BY SMALL AND MEDIUM-SIZED ENTERPRISES (SMES) IN KENYA

SECTION 1: INFORMATION SHEET

Investigator: Joy Chepngetich Kurui

Institutional affiliation: Strathmore Business School (SBS)

SECTION 2: INFORMATION SHEET–THE STUDY

2.1: Why is this study being carried out?

Incubators play a key mediation role in enhancing access to funding and increasing opportunities for networking with other stakeholders resulting in enhanced legitimacy and credibility. This study investigates the effect of incubation processes on SME access to finance. This study's research objectives seek to analyze the effect of incubator selection performance (ISP), Monitoring and business assistance Intensity (M&BAI) and resource munificence (RM) on access to finance for SMEs.

2.2: Do I have to take part?

No. Taking part in this study is entirely optional and the decision rests only with you. If you decide to take part, you will be asked to complete a questionnaire to get information on the effect of incubation on access to finance. If you are not able to answer all the questions successfully the first time, you may be asked to sit through another informational session after which you may be asked to answer the questions a second time. You are free to decline to take part in the study from this study at any time without giving any reasons.

2.3: Who is eligible to take part in this study?

- Company founder
- Managing Director/CEO

2.4: Who is not eligible to take part in this study?

- Any other employee

2.5: What will taking part in this study involve for me?

You will be approached by email and requested to take part in the study. If you are satisfied that you fully understand the goals behind this study, you will be asked to sign the informed consent: Are there any risks or dangers in taking part in this study?

There are no risks in taking part in this study. All the information you provide will be treated as confidential and will not be used in any way without your express permission.

2.6: Are there any benefits of taking part in this study?

The information will be used to improve incubation processes by incubators enhancing access to finance for incubated firms.

2.7: What will happen to me if I refuse to take part in this study?

Participation in this study is entirely voluntary. Even if you decide to take part at first but later change your mind, you are free to withdraw at any time without explanation.

2.8: Who will have access to my information during this research?

All research records will be stored in securely locked cabinets. That information may be transcribed into our database but this will be sufficiently encrypted and password protected. Only the people who are closely concerned with this study will have access to your information. All your information will be kept confidential.

2.9 : Who can I contact in case I have further questions?

You can contact me, Joy Chepngetich Kurui, at SBS, or by e-mail joy.kurui@strathmore.edu, or by phone +254 704 290267. You can also contact my supervisor, Dr. Bernadette Wanjala at the Strathmore Business School, Nairobi, or by e-mail bwanjala@strathmore.edu or by phone +254 722 319614

If you want to ask someone independent anything about this research please contact:

The Secretary–Strathmore University Institutional Ethics Review Board, P. O. BOX 59857, 00200, Nairobi, email ethicsreview@strathmore.edu Tel number: +254 703 034 375

I,_____, have had the study explained to me. I have understood all that I have read and have had explained to me and had my questions answered satisfactorily. I understand that I can change my mind at any stage.

Please tick the boxes that apply to you;

Participation in the research study

☐ I AGREE to take part in this research

☐ I DON'T AGREE to take part in this research

Storage of information on the completed questionnaire

☐ I AGREE to have my completed questionnaire stored for future data analysis

☐ I DON'T AGREE to have my completed questionnaire stored for future data analysis

Participant's Signature:

_____

Date:_____/_____/_____

DD / MM / YEAR

Participant's Name:

_____

Time:_____/_____

HR / MN

(Please print name)

I,_____(Name of person taking consent) certify that I have followed the SOP for this study and have explained the study information to the study participant named above, and that s/he has understood the nature and the purpose of the study and consents to the participation in the study. S/he has been given opportunity to ask questions which have been answered satisfactorily.

Investigator's Signature:

_____

Date:_____/_____/_____

DD / MM / YEAR

Investigator's Name: Joy C Kurui

_____

Time:_____/_____

HR / MN

APPENDIX 4: LIST OF INCUBATORS

Incubator Program	City
Mt Kenya Hub	Nyeri
NaiLab	Nairobi
IbizAfrica Strathmore University	Nairobi
Ihub	Nairobi
Cisco Edge Incubation UON	Nairobi
Chandarana Kenyatta University	Nairobi
Sote Hub	Voi
Kenya Country Business Incubators(KOKEBi)	Nairobi
Growth Africa / Growth Hub program	Nairobi
Coelib Center	Nakuru
Innovation Incubation & Entrepreneurship Center	Meru
Startup Lions	Turkana
Lake hub / Lake Hub Incubation program	Kisumu
lawyers hub	Nairobi
E4Impact	Nairobi
Pangea Accelerator	Nairobi
Land Accelerator	Nairobi
Panda Labs	Nairobi
Ygap	Nairobi
MBM Africa - MBM Labs Africa	Nairobi
Sinapsis / Fast TracK accelerator	Nairobi
Villgro Africa / Healthcare	Nairobi
Standard Chartered Women in Technology Incubator	Nairobi
Catalyst Fund	Nairobi
Baobab Network	Nairobi
Startup Africa/ StartupAfrica accelerator program	Nairobi
Antler Kenya	Nairobi
MEST	Nairobi
Spark Accelerator	Nairobi

VT OMNES
VNVM SINT

APPENDIX 5: QUESTIONNAIRE TO INCUBATEES

The aim of this questionnaire is to assess the effect of business incubation on incubatee firm access to financing in Kenya. Kindly give your responses as accurately as possible. All responses will be treated with utmost confidentiality and anonymity.

Section 1: Demographic Data

Tick √ where appropriate

1. Age: 18 - 25 years ☐ 26 - 35 years ☐ 36 - 45 years ☐ 46 – 55 years ☐ 56 years and above ☐
2. Gender: Male ☐ Female ☐
3. Name the incubator you are in ……
4. What are your highest educational qualifications? Certificate ☐ Diploma ☐ Bachelor's Degree ☐ Master's degree ☐ Doctoral degree ☐

Section 2: Firm Characteristics

Tick √ where appropriate

5. What would you say is the current stage of your business? Startup/Seed ☐ Growth ☐ Establishment ☐ Expansion ☐ Maturity and exit ☐
6. How many staff does your firm have (not including yourself)
   0 – 5 ☐ 5 - 10 ☐ 10 - 30 ☐ 30 - 70 ☐ 70 - 100 ☐ over 100 ☐
7. What Industry does your company operate in? Information Technology ☐ Financial Services ☐ Agri-business ☐ other ☐
8. How long have you been in the incubator/incubation program? Less than a year ☐ 1 year ☐ 2 years ☐ 3 years ☐ 4 years ☐ 5 years ☐ More than 5 years ☐
9. Have you received any financing(Debt or Equity)? Yes ☐ No ☐
10. How much financing (equity and debt) have you received since joining incubation program? 0 - Ksh.50,000 ☐ Ksh, 50,001 - Ksh 250,000 ☐ Ksh.250,001 - Ksh.1,000,000 ☐ Ksh.1,000,001 - Ksh.5,000,000 ☐ Ksh.5,000,001 – Ksh 10,000,000 ☐ over Ksh 10,000,000 ☐
11. Have you received Venture Capital (VC) financing? Yes ☐ No ☐

Section 3 Selection Performance

How would you rate the importance of the following company characteristics at time of admission into the incubation program? Tick √ where appropriate: Extremely Unimportant = 1; Unimportant = 2; Neutral = 3; Important = 4; Extremely Important = 5

	1	**2**	**3**	**4**	**5**
The prior work experience of the company's management team in the field they plan to enter					
The prior management experience of the company's management team					
The long-term growth potential of the market the start-up company plans to enter					
The size of the target market that the company plans to enter					
The uniqueness of the product					
Whether the product has patent protection					
Whether the product has relative advantage over competitor's products					
The substitutability of the product the company is proposing to sell					
Whether the product demonstrates defendable competitive position					
Whether the profit potential of the company is high.					
Whether the company has the potential to attract investment participation from venture capitalists.					
Whether the company has multiple harvestable exit (i.e., cash-out) options					

Section 4 Monitoring and Business assistance intensity

Please indicate to what extent you agree with the following statements by selecting the most appropriate indicator. Tick √ where appropriate: Strongly disagree = 1; Disagree = 2; Neutral = 3; Agree = 4; Strongly agree = 5

	1	**2**	**3**	**4**	**5**
Company receives sufficient time working directly with incubator manager					
Interactions with incubator manager reduce the likelihood of our company making expensive business mistakes					
Company receives appropriate time in assistance					
Company spends appropriate amount of time interacting with other incubatees					
Our company receives strategic planning assistance from the incubator					
Our company receives production related advice from the incubator					
Our company receives operations related advice from the incubator					
Our company receives helpful technical fundraising assistance in preparation for funding rounds (preparation of fundraising documentation and pitching) from the incubator					
Our company receives administrative assistance and services from the incubator					
The incubator regularly validates the quality of potential new strategic service providers					
Our incubator ensures the quality of its services by regularly reviewing them					
The incubator manager actively seeks ways to continuously improve the level of customer service satisfaction inside the incubator					

Section 5 Resource Munificence

Please rate the ability of your incubator to make the following different resources available to your company by choosing the most appropriate answer.

Tick √ where appropriate: Extremely bad = 1; Bad = 2; Neutral = 3; Good = 4; Extremely good = 5

	1	2	3	4	5
Access to administrative support services					
Access to managerial expertise					
Access to sources of capital (i.e., introductions to banks, venture capitalists and angels)					
Access to marketing specialists					
Access to consultants					

Please indicate to what extent you agree with the following statements by selecting the most appropriate indicator

Tick √ where appropriate: Strongly disagree = 1; Disagree = 2; Neutral = 3; Agree = 4; Strongly agree = 5

	1	**2**	**3**	**4**	**5**
We receive business-related information from the incubator in a way that is easy to understand					
Our company acts upon the advice we receive from the incubator manager					
Our company acts upon the advice we receive from fellow incubatees					
Our company utilizes advice obtained from the incubator manager					
Our company utilizes the knowledge obtained from other incubatees					
We maximize our opportunities from the introduction to the incubator's network contacts					
The other incubatees teach alternate or new strategies for achieving business success					
Our reputation is enhanced because of our association with the incubator					
Our company is offered flexible lease agreements to meet our changing space needs					

Our company makes full use of the administrative services offered at the incubator					

THANK YOU FOR YOUR TIME AND PARTICIPATION IN THIS STUDY!