

**ADDIS ABABA UNIVERSITY
SCHOOL OF COMMERCE
DEPARTMENT OF BAIS**



**The Effect of Investment on ICT Based Startups:
The Case of Startups Located in Addis Ababa**

Research Paper Submitted to Addis Ababa University School of Commerce in Partial fulfillment for the Award of Master of Arts (MA) in Business Leadership

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June, 2023

Addis Ababa, Ethiopia

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Declaration

I, the undersigned, certify that the research project titled "The Effect of Investment on ICT Based Startups" is my original work, has not been submitted for consideration for any academic program at any other university, and that all sources of information utilized in the study have been properly cited.

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This is to certify that the study "The Effect of Investment on ICT Based Startups" conducted by Yomuma Likessa for the purpose of partially satisfying the requirements for the Degree of Master of Arts in Business Leadership at Addis Ababa University College of Business and Economics School of Commerce is an original work and has not been previously submitted for any degree, either at this University or any other University.

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Acknowledgement

I want to thank everyone who helped and supported me during this study process from the bottom of my heart. First and foremost, I want to express my sincere gratitude to Abdurezak Mohammed (PhD), who served as my advisor, for his unfailing patience and important advice during the entire thesis process. I am also very appreciative of my family's numerous and invaluable contributions.

Abstract

This study examines the impact of investments on the success of ICT-based startup enterprises, specifically focusing on the relationships between Startup Success, Investment Readiness, Type and Source of Investment, and Timing of Investment. The purpose of this research is to provide insights into the critical factors influencing the success of ICT startups and offer recommendations for entrepreneurs, investors, and policymakers. A quantitative research methodology was employed, collecting data from a diverse sample of ICT startup companies. Descriptive, correlational, and regression techniques were utilized to analyze the data and derive conclusions. The target population for this study includes ICT-based startup enterprises, and the sample size consists of a representative selection of these companies. Data analysis revealed that both Investment Readiness and Timing of Investment are statistically significant and positively related to Startup Success. In contrast, the relative influence of Type and Source of Investment was found to be comparatively smaller. These findings emphasize the importance of prioritizing investment readiness and optimizing the timing of investment decisions for startup success. Stakeholders in the startup ecosystem, including investors and policymakers, are encouraged to consider these factors when evaluating potential investments in ICT-based firms. While Type and Source of Investment remain essential, they should not be the sole determinants of a startup's success. This study contributes valuable insights to the growing body of literature on the role of investment in the development of ICT-based startup companies and offers practical recommendations for startups, investors, and governments. Keywords: ICT startups, investment readiness, startup success, timing of investment, type and source of investment.

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Chapter one

1. Introduction

1.1 Background of the study

Ethiopia brags one of the fastest-growing economies in Africa and gloats an energizing ICT division that's developing rapidly. Ethiopia has made huge endeavors in progressing access to digital innovation and administrations while fortifying foundation advancement endeavors, however, ICT companies in Ethiopia regularly battle with accessing financing which prevents their victory or development plans (Ethiopian Investment Commission, 2021)

Ethiopia's ICT sector is extending rapidly, much obliged to speculation by both government and companies alike in arrangements, laws, framework, and individuals required to encourage its quick development. Ethiopia anticipates this sector to play a fundamental part in driving financial improvement - making modern openings for enterprise, development, and work whereas making business. However, getting financing remains an impediment for numerous Ethiopian business people looking to grow and enhance while at the same time making occupations; numerous business visionaries discover getting finances a tough battle in Ethiopia.

Startups require investment financing in arrange to grow consumer bases, create products or services rapidly, and contract staff. Shockingly, new companies in Ethiopia regularly confront different obstructions in securing such investment funding - from restricted money-related access, constrained organizing associations, and legitimate challenges - all of which might confine development and obstruct thriving whereas ruining ICT division advancement in Ethiopia (Ethiopian Investment Commission, 2021)

The growth and success of ICT-based startups, according to scholars who says investments crucial for startup success, depend on adequate investment. They contend that investment gives start-ups the resources they need to develop their goods or services, increase their market share, and successfully compete with established businesses (Gompers & Lerner, 2001; Kerr, Lerner, & Schoar, 2014). Furthermore, investments from venture capital firms and angel investors can give

valuable experience, mentorship, and networking opportunities that can help to the overall success of the startup (Hellmann & Puri, 2002; Mason & Harrison, 1996).

Although crucial, financing is not a guarantee of company success, according to this argument's opponents. They argue that aspects including the viability of the business concept, the skills of the founding team, and the market's level of competition are more important in determining the success of ICT-based businesses (Sahlman, 2010; Yeh & Lee, 2016). Furthermore, some studies have demonstrated that overfunded firms run the risk of losing focus, becoming complacent, and failing to realize their full potential (Gorman & Sahlman, 1989).

Another viewpoint in this discussion contends that the success of ICT-based companies depends more on the type of investment than the amount. In contrast to solely financial investors, scholars argue that companies can gain more from strategic investors who can offer industry-specific knowledge, contacts, and resources (Da Rin, Hellmann, & Puri, 2011). Evidence also suggests that venture capital investments from respected corporations can convey quality to other investors and stakeholders, enhancing the likelihood of a startup's success (Kortum & Lerner, 2000).

Some scholars advise against placing too much focus on financing as a factor in startup success. They argue that concentrating only on raising capital can cause business owners to ignore other important facets of their operations, such as creating a sustainable business model, fostering a positive workplace culture, and cultivating client relationships (Nicholls, 2010; Emerson & Bugg-Levine, 2012). Additionally, a startup's autonomy and flexibility may be restricted by being unduly reliant on outside investors, which may limit their capacity to develop and adapt (Mazzucato & Penna, 2016).

1.2 Problem statement or research problem

Ethiopia's ICT firms face an additional barrier due to limited access to capital and investments. Although its ICT sector offers significant development potential, many business owners struggle to access sufficient funds needed for growth, innovation, job creation, or job retention. Startups may find it more challenging to grow due to this limited access, thus hindering their ability to fulfill their full potential and progress further in this sector.

According to research by Ethiopia's Investment Commission, most Ethiopian business visionaries depend on individual reserves or credits from family and companions as financing for their operations [1]. As a result, Ethiopia's potential for innovation, job creation, startup success, and job development may well be seriously constrained by restricted access to capital. Startups operating within ICT segments confront additional challenges when attempting to raise funding due to legal limitations, restricted systems for potential investors, and the need for access to financial institutions [3]- all issues which make raising venture difficult work.

A complex interplay of factors, including the type and source of financing, the startup's readiness for investment, and the timing of investment, affect the success or failure of ICT-based startups. While some scholars stress the value of resources, mentorship, and networking opportunities, others argue that aspects including the feasibility of the business idea, the skills of the founding team, and the competitive environment are more crucial. The absence of a thorough knowledge of how the type and source of investment, the companies' readiness for investment, and the timing of investment jointly affect the success or failure of ICT-based businesses is the research challenge that this study tries to answer.

This research attempts to provide a more nuanced knowledge of the elements that contribute to the success or failure of ICT-based startups by examining the various forms of investments, the role of strategic investors, the investment readiness of startups, and the optimal timing of investments. This study will provide information on startup success and failure, enabling them to make better decisions in the dynamic and cutthroat environment of ICT-based companies.

1.3 Research Question

1. What effect does the investment readiness of ICT-based startups have on success and growth?
2. Which investment type (i.e., seed funding, venture capital funding, grants, or loans) has had the greatest influence in shaping and propelling ICT-based startups toward success and growth?
3. What is the role of investment from various sources (government, private investors, and foreign) on success and growth of ICT-based startups?
4. What is the relationship between investing in ICT-based startups at certain times and their job creation, innovation, and economic impact?

1.4. General and Specific objective

To Investigate the effect of investment attributes on the growth and success of ICT startups in Ethiopia.

Specific objective:

1. Assessing the effects of investment readiness on ICT based startups success and growth
2. Study the effect of investment type on ICT startups' development and sustainability
3. Examine the effect of sources of investment on ICT startups' success and growth
4. Evaluate the association between investment timing in ICT-based startups and their job creation, innovation, and economic impact.

1.5 Significance of the study

The significance and research potential of this ecosystem study is immense. First and foremost, its report provides detailed insight into the effect of investment in success and growth of Ethiopia's ICT sector face as well as factors restricting access to investment capital. With this data at hand, policymakers, bankers, and business owners can design strategies that encourage investments while aiding startups to thrive, spurring innovation while creating jobs, and driving economic development forward.

This study provides information about how investments effect the growth and success of startups operating within ICT industries. By investigating factors like the amount and type of capital received by startups, timing, objectives, and expectations of investors as well as objectives/expectations of these investors; investment strategies can be developed that maximize impact for company success and development.

Thirdly, this study contributes to an expansive body of knowledge regarding startup funding and entrepreneurship in developing nations. Although more is known about startup investments in industrialized nations than in developing ones, less research exists regarding specific difficulties or opportunities faced by entrepreneurs operating startups there. By focusing on ICT companies like Ethiopia's, this research can shed light on which elements contribute to startup success while simultaneously building policies to foster entrepreneurialism in such ecosystems.

In general, this study's significance lies in its capacity to direct policy development for extending and succeeding new companies inside Ethiopia's ICT industry and other creating countries. Moreover, its point is to cultivate more dynamic startup ecosystems which support entrepreneurialism, innovation, and financial development; which in turn benefits society as a whole by impelling financial improvement and stimulating enterprise.

1.6 Scop of the study

1.6.1. Thematic Scope

The thematic scope of this research study revolves around the following key themes:

- Investment and related experiences of ICT-based startups founders
- Finance acquisition strategies employed by ICT startup entrepreneurs
- The effect of financing and investment on the growth and success of ICT-based enterprises

1.6.2. Area Scope

The area scope of this study encompasses the ICT sector within Ethiopia, particularly focusing on startups and their founders located in Addis Ababa. It aims to understand the investment related issues the founders face in the context of the Ethiopian market and regulatory landscape.

1.6.3. Methodology Scope

The methodology scope of this study will include:

- A quantitative survey of Ethiopian ICT startup founders to gather data regarding their experiences with financing and investment
- Online survey with selected Ethiopian ICT startup entrepreneurs who have extensive knowledge of the industry's and which have investment related experience
- Statistical analysis of the collected data to identify patterns and trends that inform policy recommendations

1.6.4. Time Scope

The time scope of this research study will cover the period from the late 2023s to the present day (2023). This timeframe is selected to provide an up-to-date understanding of the current investment landscape and challenges faced by Ethiopian ICT startup founders, taking into account the latest developments in the industry and the country's regulatory environment in this sector.

1.7 Organization of the study

Beginning with an introduction that provides background knowledge and historical context, outlining a problem statement and research questions, and emphasizing their significance of the study, this assessment of literature will investigate what makes ICT-based enterprises successful, their challenges when seeking finance, and how nature and sources of investment impact sector growth. Finally, the methodology section will detail research design strategies such as data collection strategies and analysis methods used; the result is discussed and summary of the finding and recommendation is provided in the latter section of the study.

Chapter Two

2. Review of Related literature

2.1 Overview of the ICT Startup Sector in Ethiopia

Ethiopia has established itself as a powerful player on the African ICT startup scene due to a growing pool of entrepreneurs and an empowering commerce environment [4]. To advance ICT-related businesses over Ethiopia, investments were moreover made to overhaul the digital infrastructure - including rolling out 4G systems and introducing fiber optic cables [5.]. Moreover, Ethiopia propelled various activities outlined to energize their expansion such as technology parks/incubators as well as setting up Ethiopian Information and Communication Technology Development Agency (EICTDA) (Ethiopian Information and Communication Technology Development Agency, 2022)

In Ethiopia, it is difficult for startup technology companies to get the money they need to grow. They often have to rely on their own savings or borrow from family and friends (Ethiopian Investment Commission, 2021). This was found in a survey done by the Ethiopian Investment Commission. startup businesses in this industry may have difficulty growing and becoming successful because they struggle to create companies, create new ideas, and create job opportunities.

One challenge confronting business proprietor in the region is an inadequate talent supply for software advancement, engineering and data science disciplines. Finding workers prepared with specialized capabilities to plan and deliver merchandise or administrations may demonstrate challenging for a few undertakings (Gebre, 2019), preventing innovation and showcase nearness.

Ethiopia's ICT startup sector has demonstrated remarkable growth and innovation despite these obstacles, excelling in creating mobile programs and solutions tailored specifically to local needs and challenges (Gebre & Taye, 2019). Startups operating within this field include those that offer

healthcare, education, and transportation applications which may improve access to services for millions of Ethiopians.

2.1.1 Definition of ICT-based Startups

ICT-based startups can be characterized as businesses that make innovative digitally enabled products and services designed to address advertise needs (Gebre, 2019). ICT startups tend to function inside the innovation segment and create and spread equipment, software, and other digital merchandise to produce esteem creation for society. Ethiopia uses ICT-based startups broadly alluding to businesses centered on versatile app improvement, software solutions, or indeed eCommerce platforms (Gebre & Taye, 2019).

The definition of ICT startups is vital when considering endeavors and regulations outlined to cultivate industry development. Ethiopia has taken a broad view in their definition, driving them to put forward enactment and activities supporting companies working inside this field; as a case, incubators and technology parks were as of late set up giving infrastructure, mentorship services and networking opportunities (Ethiopian Information and Communication Technology Development Agency, 2022) whereas there have moreover been activities launched supporting development of digital and mobile goods that meet local issues and necessities (Ministry of Innovation and Technology, 2020a)

Ethiopia's ICT startups display one-of-a-kind classification and assessment challenges due to the breadth of definition. Without clear measurements for tracking performance and effect of activities and programs outlined to support start-up expansion, measuring their effect can be a tough climb (Alula & Asfaw, 2019). Hence, this theme emphasizes the requirement for comprehensive descriptions of ICT-based firms as well as more objective ways of measuring their impact.

2.1.2 Overview of the ICT Ecosystem in Ethiopia

Ethiopia's ICT ecosystem comprises numerous members, from startups and digital businesses to government organizations, academic institutions, investors and international organizations (Alula & Asfaw, 2019). Ethiopia has seen colossal progress with respect to its ICT industry over recent

years with innovation parks and incubators opening their entryways, advanced foundation extension taking place and activities presented that support mobile applications and digital solutions development (Ministry of Innovation and Technology, 2020b). Ethiopia's capital city Addis Ababa serves as its epicenter, facilitating most startup undertakings that make up this ecosystem.

Ethiopia's government has executed different programs designed to bolster business extension in Ethiopia's ICT ecosystem, making Ethiopian Information and Communication Technology Development Agency (EICTDA). Set up in 2018, EICTDA promotes trade and innovation inside this field by creating strategies and projects which support sector expansion - counting innovation parks/incubators establishment, loaning money/mentoring business wanders as well as preparing courses on digital skills development (Ethiopian Information and Communication Technology Development Agency, 2022).

Ethiopia's digital infrastructure development has contributed colossally to its ICT ecosystem advancement. To grow statewide Internet and connection access, the government has made major investments in fiber optic systems (African Development Bank, 2021), whereas 4G mobile network roll-out has allowed innovation companies and startups to construct cutting-edge products and services which depend intensely on the strong web connection.

Ethiopia's ICT industry is upheld by an expanding network of outside institutions and investors. For case, the African Development Bank as of late revealed an activity planned to cultivate ICT start-up improvement by advertising monetary and specialized help (African Development Bank, 2021), whereas further development of Ethiopia's sector was given through contributions by international bodies like World Bank and International Finance Corporation.

In spite of the fact that these developments are promising, Ethiopia's ICT environment still faces a few key obstacles. One key issue lies with young companies in this sector having restricted access to funds that permit for expansion or scaling operations; also, accessing gifted labor may ruin advancement inside startups (Gebre, 2019).

2.1.3 Emerging Trends and Challenges in the ICT Sector in Ethiopia

Ethiopia's ICT sector is currently facing many emerging trends and issues that threaten its development and expansion (Alula & Asfaw, 2019). One key development within this field is an emphasis on creating mobile applications and digital solutions tailored specifically for local needs and challenges - this would give millions of Ethiopians easier access to services provided through mobile applications developed by startups within this sector for transportation, healthcare and education (Ministry of Innovation and Technology, 2020a). Furthermore, to encourage mobile app and digital solution creation that addresses local concerns effectively the government has launched initiatives like National Digital Transformation Strategy (Ministry of Innovation and Technology, 2020b).

Recent trends in the sector include an upsurge in interest in cutting-edge technologies like artificial intelligence (AI), blockchain, and the Internet of Things (IoT). Startups within this sector are exploring their applications as a means to develop cutting-edge products and services which may increase productivity, reduce costs and enhance user experiences (Addis Fortune, 2021), with some government initiatives including creating an Artificial Intelligence Centre of Excellence (Ethiopian Herald, 2020) serving to foster its development and use in innovation processes.

Ethiopia's ICT sector remains challenged, however. One primary difficulty lies with limited access to funding: businesses often rely on personal cash reserves or loans from family and friends for funding operations, restricting growth. With a shortage of qualified talent available within this industry, entrepreneurs may face difficulty developing and implementing innovative goods and services (Gebre, 2019).

Ethiopia's ICT sector faces another formidable obstacle due to limited public access and awareness. According to estimates by the World Bank, less than 15% of Ethiopians have internet access which severely constrains the market for digital products and services (World Bank, 2020). Furthermore, a widespread lack of literacy may limit the uptake and usage of digital solutions by society at large.

2.2 The Importance of Investment for ICT-based Startups

Angel investors, venture capitalists, government initiatives, and crowdfunding websites offer multiple sources of financing for startup industries. Startup companies require funds in order to produce cutting-edge goods and services while drawing customers in and expanding their operations (Gebre, 2019).

One of the key benefits of investing is access to tools and knowledge that may assist companies based in ICT to expand and scale their businesses. Entrepreneurs may receive networking opportunities, mentorship support, and access to new markets from investors (OECD, 2013). Furthermore, financing allows startups to hire qualified employees - which is essential in developing cutting-edge products and services (Bhatnagar, 2011).

Ethiopia's ICT ecosystem also relies heavily on investment for growth. Startup investments offer several key benefits that include expanding digital infrastructure, developing innovative products and services, creating jobs, as well as attracting overseas investors who provide new funding options to startups (World Bank, 2010). Investment can also attract international investors which further elevates Ethiopia's importance within ICTs while giving start-ups more financial options.

Ethiopian startups facing ICT-based businesses face significant difficulties accessing funding; often depending on personal funds or loans from friends and family (Ethiopian Investment Commission, 2021). Further limiting Ethiopia's business funding resources are venture capitalists' and angel investors' lack of understanding in relation to ICT startups (World Bank, 2020). Without proper knowledge and comprehension regarding potential investors may become less willing to support startups operating within this field (Gebre & Taye, 2019).

To address these challenges, the government and other organizations have initiated measures to promote investment growth in Ethiopia's ICT sector. For example, Ethiopian Investment Commission developed investment standards and rules in support of this industry's growth (Ethiopian Investment Commission, 2021), while World Bank and African Development Bank

both launched initiatives designed to expand ICT investments (African Development Bank, 2021). Such moves might increase funding options available to ICT-based business owners while supporting their success and encouraging further expansion.

2.2.1 Definition and Types of Investment

Investments are undertaken with the intention of turning a profit through allocating resources such as money, time, and expertise [19]. When discussing ICT firms in Ethiopia, "investments" typically refer to financial aid provided to assist with the growth and development initiatives of startups in this sector.

Startups in Ethiopia's ICT sector can choose between various investment options for funding their products or services, with seed money often providing an initial infusion of funding that assists businesses with product or service development and promotion (Bock, Opsahl, George, & Gann, 2012). Seed capital may come from angel investors, venture capitalists, or crowdsourcing platforms - among many other places.

Enterprises operating within Ethiopia's ICT sector may also seek series capital, which refers to additional rounds of funding received after having launched products or services and demonstrated potential growth and scaling (Mazzucato & Penna, 2016). Like seed funding, series fundraising occurs over multiple rounds (such as A, B, and C rounds), often for larger sums than initial seed investment (Nicholls, 2010).

Ethiopian startups in the ICT industry also benefit from alternative forms of funding like impact investing and social entrepreneurship, both of which lend money to companies that may produce positive social or environmental results in addition to financial profits (Emerson & Bugg-Levine, 2012). Social entrepreneurship involves developing products or services which address social or environmental problems while still yielding profits (Nicholls, 2010).

No matter their source of financing, startups in Ethiopia's ICT sector must demonstrate their ability to develop and scale. This may involve creating an effective company strategy document outlining

potential markets for products or services being provided and providing proof that plans can be carried out to reach the goals set.

2.2.2 The Role of Investment in Supporting the Growth and Success of Startups

Startups operating within Ethiopia's ICT sector need investment for them to thrive and succeed, in particular those focused on IoT development and provision. Without enough cash on hand for product and service creation and customer attraction purposes as well as expanding businesses (Gebre, 2019), startups would struggle. There are various sources for raising funding such as crowdfunding websites, government programs, angel investors, or venture capitalists offering funding options.

One key advantage of funding is having access to information and resources that could aid businesses in expanding and diversifying operations. Entrepreneurs could potentially receive networking opportunities, mentorship support, and access to new markets or customers from investors (OECD, 2013). Furthermore, financing allows startups to hire qualified employees which is essential for developing cutting-edge products or services (Bhatnagar, 2011).

Investment is essential in growing the startup ecosystem. Investment can enhance digital infrastructure development, new product/service creation, and job creation; as well as bring foreign investors and organizations to invest in start-ups thereby giving start-ups more funding options (World Bank, 2010).

Investment can play an essential role in supporting startup growth and success; however, investing can present its own unique set of difficulties. Startups typically face stiff competition for financing in developing nations like Ethiopia where access may be restricted (Ethiopian Investment Commission, 2021), while sometimes significant portions of a company's stock may need to be surrendered in exchange for capital (Chen & Wang, 2020).

To address these obstacles, startups need to demonstrate they have the capacity for expansion and scaling as well as develop an extensive business plan. This typically means developing a minimal

viable product (MVP), showing market demand, and demonstrating the capacity to implement plans effectively and reach goals successfully.

2.2.3 The Benefits and Risks of Investment for Startups

Startups can reap many advantages from investing, including access to funds, resources, and knowledge that will allow them to expand and develop their businesses. Yet investments do come with risks that entrepreneurs must remain cognizant of while working toward managing.

Financing has many advantages for entrepreneurs. Investments provide startups with access to finance so that they can develop cutting-edge goods and services, gain clients, expand their businesses, and gain new markets and clients as part of expansion (Gebre, 2019). They may even help with expansion by connecting startups to potential new clients (OECD, 2013).

Investment can give startups access to resources and expertise. Investors provide startups with new markets and customers, networking opportunities, and mentorship (Bhatnagar, 2011), in addition to financial help that allows startups to hire qualified employees who will create cutting-edge products and services (World Bank, 2010).

However, investments can pose risks to start-up enterprises. One such risk is equity dilution: startups could be required to part with significant amounts of their stock in exchange for investment funding - potentially restricting how their company runs and develops (Chen & Wang, 2020). Furthermore, investors might put pressure on businesses to prioritize short-term financial goals over longer-term expansion and innovation (Sahlman, 2010).

Conflict of Interest The other risk of investing involves potential conflicts of interest between investors and business owners, where their objectives and interests cannot intersect with those of the latter, leading to disagreements about issues like strategy, management and governance (Yeh & Lee, 2016). A company's ability to make informed judgments and effectively manage risks could also be hindered by investors who lack transparency and accountability (Gompers & Lerner, 2001).

Startups that wish to successfully raise capital must establish clear priorities and goals before searching for investors who share these ideals. Usually, this requires conducting extensive research on potential investors before drawing up contracts that clearly state all terms and conditions associated with an investment and keeping open lines of communication with all those invested.

2.3 The Impact of Investment on ICT-based Startups

ICT enterprises that aim to succeed must secure investment to thrive and expand, particularly in developing nations like Ethiopia. The investment gives entrepreneurs access to money, tools, and knowledge they require in order to produce cutting-edge goods and services that draw clients in while expanding their businesses (Gebre, 2019).

ICT startups can gain from investment in several ways. First of all, money can help businesses purchase cutting-edge tools and software; create innovative business strategies; test out unconventional marketing/product development approaches; differentiate themselves from competition by broadening their clientele base; as well as achieve long-term growth/profitability (Sahlman, 2010).

Second, investment can assist entrepreneurs with reaching new markets and consumers. Thanks to investors, startups can benefit from networking opportunities, mentorship programs, accessing new markets/clients as well as networking/mentorship/mentoring support to expand their clientele base, diversify customer bases, and achieve sustainability for long-term success (OECD, 2013).

Thirdly, funding may promote the expansion of the startup ecosystem by creating new jobs, new products and services, and new digital infrastructure. Investment may also bring in overseas organizations and investors, increasing the industry's profile and expanding the alternatives for startup financing (World Bank, 2010).

Startup founders need to be mindful of the risks involved with funding their startups, including conflicts of interest between investors and firms and stock dilution. In order to mitigate these risks, startups should clearly establish their aims and priorities before seeking lenders who share these

values - this typically requires conducting due diligence on potential investors, creating contracts that state clearly their terms and conditions, maintaining close communications between all parties involved, as well as keeping investors up-to-date (Chen & Wang, 2020).

2.3.1 The Relationship between Investment and Startup Growth

Startup growth relies heavily on investment, particularly within the ICT industry. Studies indicate that businesses that accept financing tend to experience faster expansion (Gompers & Lerner, 2001). Investment funds provide startups with the money they need for developing cutting-edge products and services as well as marketing them effectively - all necessary components in expanding a company (Gebre, 2019).

Investment can have a dramatic impact on corporate growth by giving companies access to new markets and customers. Investment can provide companies with resources necessary for developing effective marketing strategies, increasing brand recognition, and making connections with new clients - essential ingredients in fast expansion in target areas (OECD, 2013). Investment also creates employment opportunities within firms by giving employees the resources needed for job training.

Investments can help startups hire and retain top employees who will play an essential role in developing cutting-edge products and services (World Bank, 2010). Startups that possess sufficient funds tend to offer more attractive salaries and benefits packages to attract top industry talent and develop strong teams.

But investment and business expansion do not always follow in tandem; investors could put pressure on firms to prioritize short-term financial goals over longer-term development and innovation when receiving investment (Sahlman, 2010). Furthermore, large amounts of company stock may need to be forfeited to receive a capital injection, thus restricting control over how it's directed (Chen & Wang, 2020).

Startups looking to capitalize on investment for business expansion should have an accurate grasp on their priorities and ambitions, prioritizing finding investors that share these traits; conducting extensive research on prospective investors before signing an explicit investment contract that clearly specifies all terms and conditions and keeping open lines of communication with all participants involved in their investment decision process is recommended.

Investment plays an essential part in corporate growth by providing businesses with access to funds needed for expansion into new markets and clients, effective marketing plans, and building connections with prospective new customers (OECD, 2013). Investment also gives organizations tools for rapid expansion while simultaneously building stronger foundations (Alula & Asfaw, 2019).

2.3.1 The Impact of Investment on Startup Performance Metrics

Investment is key for startups' continued development and can have an immense impact on performance indicators like revenue, employment, and innovation. In this section, we examine these measures of success more in depth.

A. Revenue

Investment can make an important impactful statement about a startup's revenue potential; providing it with funds necessary for research & development (R&D), marketing & promotion, and expansion activities that increase performance metrics (World Bank, 2020). For startups in particular, revenue serves as a crucial indicator of long-term viability and financial sustainability.

Studies demonstrate that businesses receiving funding typically generate greater revenues than their non-funded peers (Gompers & Lerner, 2001). Investment can help a business broaden its consumer reach and market penetration to boost revenues (Alula & Asfaw, 2019) Additionally, startups receiving investment have an opportunity to use it to develop unique products or services that differentiate themselves from rivals and increase revenue.

B. Employment

Investment has an impactful effect on employment, another crucial performance metric. Startup financing permits them to regularly grow their workforces with more enticing compensation plans to attract and retain top talent within their industries (OECD, 2013), leading to greater job creation and economic expansion across their local areas.

Investments offer businesses access to resources that enable them to develop cutting-edge technologies and business models that increase productivity and efficiency (World Bank, 2010).

C. Innovation

Innovation is a critical performance metric for startups' long-term expansion and success, which makes the investment all the more crucial (Sahlman, 2010). Funds invested into R&D provide startups with funds they need for research & development as well as access to knowledge sources which increase innovation.

Startups that possess sufficient funding may invest in innovative business strategies and technological developments that create cutting-edge products and services, in addition to creating networking and mentoring opportunities that may foster an entrepreneurial mindset (Chen & Wang, 2020).

Funding may have mixed impacts on startup performance indicators; when startups receive funding, investors may apply pressure for short-term financial objectives over long-term growth and innovation objectives (Gebre & Taye, 2019). Furthermore, companies could be required to sacrifice a significant share of equity as part of funding agreements which limits their control of operations and growth trajectory (OECD, 2013).

Startups must develop a thorough understanding of their objectives and top priorities as well as seek investors that share their vision and values to maximize investment's effect on performance metrics. This involves performing thorough due diligence on potential investors before creating

contracts that outline all terms of an investment agreement and maintaining open lines of communication with these potential backers.

2.3.2 The Role of Investor Attributes in Supporting Startup Growth

Investor qualities such as expertise, network connections, and knowledge can greatly aid startup growth and success. In this section, we explore their impact on startup growth and performance.

A. Investor Experience

Experienced investors are key contributors to startup growth. New businesses can navigate the pitfalls associated with starting and scaling businesses thanks to this knowledge (Sahlman, 2010).

Studies show that firms that secure funding from experienced investors tend to outshine those without. Seasoned investors offer companies advice regarding financial management, product development, and strategic planning that helps them meet their goals more easily.

Reputable investors typically possess an in-depth knowledge of market and industry trends, which can assist companies in staying abreast of emerging opportunities for growth (OECD, 2013). Starting up a business in an ever-evolving field like ICT could gain immense benefits from having such investors onboard.

B. Investor Network

The network of investors supporting a firm might also aid in its potential to expand. Startups may not otherwise have access to certain tools and resources from investors with a wide network (World Bank, 2010).

By being introduced to potential partners, clients, and suppliers by investors with a large network, startups can expand their horizons and accelerate their growth (Chen & Wang, 2020). Additionally,

investors with a large network can help businesses locate finance and investment opportunities, providing them with the resources they need for expansion and growth.

C. Investor Expertise

Investor knowledge can also play a crucial role in business success. Startups can gain invaluable insight and knowledge regarding product development, market trends, and customer demands from investors with experience in relevant industries or technologies (Sahlman, 2010).

Startups can access resources and expertise from qualified investors such as legal or technical advice that can assist them in meeting challenges head-on and meeting goals (World Bank, 2010).

Startups should carefully assess prospective investors to see whether their needs and goals align, keeping in mind that not all investors possess these features. Furthermore, entrepreneurs should maintain open lines of communication with investors in order to receive support and guidance that helps their venture thrive.

2.4 The Role of Government Policies and Regulations in Shaping the Investment Landscape for Startups

Government policies and rules have an outsized influence on startup investment environments, both influencing conditions for success as well as accessing capital. This section explores what impact laws and regulations are having on this landscape of startup investment.

A. Capital Availability

Governmental policies and regulations may have an impact on the availability of financing for businesses. For instance, government funding programs like grants, loans, and tax incentives may be able to provide new companies with the capital they require to launch and grow their enterprises [9].

Entrepreneurs may find it simpler to secure private finance from investors if policies that support the expansion of the venture capital and angel investment ecosystems are in place. Regulatory barriers to investment can be lowered, investors can receive financial incentives, and the expansion of investment networks and platforms can be supported (World Bank, 2010).

B. Accessibility of Capital

Government policies and regulations may have an influence on funding availability for businesses. Regulations that restrict foreign investment or access restrictions to financial institutions could make it hard for startups to secure sufficient money needed to expand and develop their companies (OECD, 2019a).

Policies designed to foster diverse and inclusive investment ecosystems can ensure startups from all regions and socioeconomic backgrounds have access to the capital they require for success. Such policies could include those which promote diversity within incubators/accelerators in underrepresented areas as well as supporting diversity/inclusion within investing communities (OECD, 2013).

C. Conditions for Growth and Success

Government restrictions and regulations may limit a startup's capacity to grow and prosper. Strong intellectual property rights, streamlined regulatory processes, and easy access to skilled labor are a few examples of policies that might help the development of a favorable business climate (World Bank, 2010).

Laws that encourage innovation and entrepreneurship, such as tax benefits for R&D, can help build a culture of creativity and stimulate the creation of novel, inventive goods and services (OECD, 2019b).

Additionally, it is very important to keep in mind that rules and regulations could have unanticipated effects on the climate for startup investment. For instance, overly onerous or restrictive regulations might discourage investment and stifle innovation. Decision-makers must consider the potential consequences of their choices.

Government laws and regulations often have an immediate and profound effect on startup investment environments, altering development requirements as well as capital access and availability. Policymakers must carefully examine their policies' potential effects in terms of supporting innovation, entrepreneurship, and inclusive growth in their efforts towards supporting startups as an investment vehicle.

2.4.1 Overview of Government Policies and Regulations Affecting the ICT Sector in Ethiopia

Ethiopia has implemented numerous rules and regulations designed to encourage growth and development within their ICT sector, this section provides a brief summary of some of these legislation and regulations that shape Ethiopia's ICT space.

A. National ICT Policy

Ethiopia's National ICT Policy, created and revealed in 2004, seeks to use technology as a way of stimulating social and economic development as well as hastening expansion in their ICT sector. It includes several key issues which need to be addressed such as increasing access to reliable yet reasonably-priced ICT infrastructure; encouraging locally produced content production; as well as stimulating growth through financial and legal reform (Ministry of Innovation and Technology, 2004).

B. ICT Sector Strategy

Ethiopia's 2016 ICT industry Strategy comprises various initiatives designed to advance growth and development within this sector and is informed by their National ICT Policy. This strategy highlights several essential issues which must be prioritized, including strengthening the legal and

regulatory environment for ICT sectors, supporting human resource and skill development programs, and aiding ICT firms with investments that strengthen capacity (Ethiopian Startup Ecosystem Development Project). Ethiopia's 2016 ICT industry Strategy encompasses initiatives designed to advance ICT industry growth and development, drawing inspiration from Ethiopia's National ICT Policy. The strategy also details essential topics which need to be tackled, including strengthening the legal and regulatory framework and increasing human resource development (Ethiopian Communications Authority, 2019).

C. Telecommunications Sector

Ethiopia implemented several laws and policies in 2019 to foster telecom development, including creating the Ethiopian Communications Authority (ECA). The ECA oversees this sector while guaranteeing all operators have equal playing conditions while encouraging competition and innovation (Ethiopian Communications Authority, 2019).

D. Cybersecurity

Ethiopia has implemented various rules and regulations designed to enhance cybersecurity and safeguard electronic infrastructure in Ethiopia. In 2016, they created the Ethiopian Computer Emergency Response Team (CERT), charged with tracking cybersecurity incidents (Ethiopian Computer Emergency Response Team, 2021). Furthermore, legislation such as the Computer Crime Proclamation has also been put in place by their government in order to promote the secure use of ICTs; such laws make such actions as unauthorized access or data tampering unlawful (The Federal Democratic Republic of Ethiopia, 2016).

Ethiopia's ICT sector faces numerous hurdles, including a lack of affordable internet infrastructure, labor shortages, and the expansion needs of local enterprises.

2.4.2 The Impact of Policies and Regulations on Investment in Startups

Government policies and rules can have an enormous effect on startup investment environments, from growth conditions and success indicators to the accessibility of capital. This section explores how laws and regulations influence startup capital investments.

A. Access to capital

Policies and regulations that foster the expansion of venture capital and angel investment ecosystems can increase access to private funding for startups from investors. Such support may take the form of eliminating regulatory obstacles to investing, providing tax incentives to investors, and encouraging the establishment of investment networks or platforms--measures that could increase startup funding (World Bank, 2019a).

Laws that promote the development of government funding programs like grants, loans, and tax incentives can also provide startups with the capital they require to launch and grow their firms (OECD, 2013). However, because of regulations that forbid foreign investment or limit access to capital markets, it may be difficult for startups to obtain the funding they require to launch and grow their firms (OECD, 2019a).

B. Supportive Business Environment

Laws and policies that support the development of a favorable business climate may have an impact on investments in startups. For instance, regulations that give strong intellectual property rights can help foster investment in startups by maintaining the value of a startup's intellectual property (World Bank, 2019b).

Legislation that simplifies regulatory processes and provides access to qualified talent can boost startup environments and attract more investors (World Bank, 2019a).

C. Regulatory Burden

It is essential to remember that overly onerous or restrictive regulations may impede startup investment, disincentivizing investment and impeding innovation (World Bank, 2019b). For instance, regulations that forbid access without valid reasons or mandate onerous reporting requirements could stifle growth (Alemu, 2019).

Regulations that don't offer clear direction could discourage investment in startups as investors become wary about allocating resources in an unstable regulatory environment (OECD, 2019b).

Government laws and regulations often have an immense effect on startup investment, altering both conditions for success as well as accessing funds for expansion. Therefore, policymakers must evaluate any effects their policies could have on new enterprises creating jobs in society.

2.5 Existing Studies on Investment and ICT-based Startups in Ethiopia

Ethiopia's ICT sector has experienced remarkable growth over the years due to the government's policies and initiatives intended to foster investment and entrepreneurship within this field. This section presents recent research pertaining to funding sources available for startups that specialize in ICT in Ethiopia.

A. Investment Landscape in Ethiopia

Studies reveal that Ethiopia's investment climate remains unclear and businesses face limited access to capital during startup (Alemu, 2019). Progress, however, can be seen because Ethiopia's government is taking measures such as tax benefits for investors in ICT as well as building a national ICT park (Kassahun & Abate, 2019).

B. ICT-based Startups in Ethiopia

Research into Ethiopian ICT companies has focused on their characteristics, challenges, and growth potential. A survey of ICT-based startups in Addis Ababa for instance revealed that most

focused-on software development with only a smaller percentage engaging in hardware or telecommunications (Tilahun & Sewunet, 2018). inadequate facilities as well as a shortage of skilled labor are two challenges they often encounter when trying to grow and thrive.

Studies conducted across Ethiopia's ICT market have consistently indicated its room for expansion. Research suggests that Ethiopia's ICT market can make significant contributions towards economic development and job creation (World Bank, 2020), yet companies in this industry need to address any problems within themselves in order to tap their full potential. In order to take full advantage of Ethiopia's potential ICT market expansion opportunities.

C. Impact of Investment on ICT-based Startups

Even though there has been little research specifically exploring the impact of investment on ICT-based enterprises in Ethiopia, studies from other contexts provide invaluable insights into its benefits and drawbacks. Research shows that having access to money helps entrepreneurs hire qualified talent more easily while investing in R&D or expanding businesses (Hellmann & Puri, 2002) Fortunately, however, facilities, and skilled labor are often in short supply or inadequately available (Tilahun & Sewunet, 2018).

However, investments may present unique challenges, including losing control and diluting founder ownership; meeting investor expectations quickly; and the pressures inherent to growth (Lerner, 2002).

Studies conducted already demonstrate the opportunity for growth within Ethiopia's ICT sector despite an ever-evolving startup investment environment. To fulfill its promise, Ethiopia must address startup-specific obstacles including a lack of trained talent and funding sources.

2.6 Role of Angel Investors, Venture Capital, and Diaspora Investments

2.6.1 Angel Investors

Angel investors are essential early-on in business as a source of financing and strategic advice, providing financing in exchange for equity holdings or convertible loans in return. Angels usually contribute their own funds in return for equity holdings or convertible loans and typically possess sizable net worth while possessing expertise within their areas of specialization. (Mason & Harrison, 1996) Ethiopia still lacks an appreciation of angel investing's importance to ICT-based firms, although research from other nations shows their availability not just of money but mentorship opportunities and access resources can greatly assist angel investors with helping firms expand and succeed (Kerr, Lerner, & Schoar, 2014).

2.6.2 Venture Capital

Early-stage, high-growth enterprises are financed by institutional investors known as venture capital (VC) firms in exchange for stock (Gompers & Lerner, 2001). VC firms frequently invest in start-ups with scalable business models and the potential for a substantial return on investment through an exit strategy, such as an IPO or acquisition, according to Da Rin et al. (2011). (Da Rin, Hellmann, & Puri, 2011) The impact of VC funding on ICT-based startups in Ethiopia is not well understood. However, research has shown that in terms of growth rates, innovation, and financial success, VC-backed companies usually outperform their non-VC-backed rivals (Kortum & Lerner, 2000). Additionally, VC companies can provide helpful resources including market expertise, strategic counsel, and connections to potential partners and customers. (Gorman & Sahlman, 1989).

2.6.3 Diaspora Investments

Diaspora investments refer to contributions made by people living outside their country of origin who want to help organizations and projects thereby lending loans, stock investments, or sending remittances home. While no comprehensive study of Ethiopia's diaspora investors' contribution has yet been done for its ICT enterprises, research in other countries shows how diaspora investments may provide access to international markets, knowledge transfer capabilities, or

strategic alliances in addition to financial resources. (Gillespie, Riddle, Sayre, & Sturges, 1999) These investments could play an integral role in making Ethiopia's ICT enterprises successful!

2.7 Empirical Review

2.7.1 Investment and ICT-based Startup Growth

Research on the relationship between investment and the growth of ICT-based startups has been extensive, with various studies exploring different facets of this relationship. Audretsch et al. (2012) and Bertoni et al. (2011) focused on the role of venture capital (VC) in the growth of ICT-based firms, while Chemmanur et al. (2011) emphasized the impact of angel investments.

Another aspect of investment that has been explored is the role of corporate venture capital (CVC) in the growth of ICT-based startups. Dushnitsky and Lenox (2005) found that startups that receive CVC investments exhibit better innovation performance and higher market valuations compared to those without such investments. This suggests that CVC investments can provide valuable resources and strategic support, which contribute to the growth of ICT-based startups.

2.7.2 Investment and ICT-based Startup Success

In addition to the impact of incubators and government support on the success of ICT-based startups, as highlighted by Colombo and Grilli (2005) and Lerner (2010), other factors related to investment have also been investigated. One such factor is the role of business angels and their networks in the success of ICT-based startups. Harrison et al. (2015) found that startups backed by angel networks have a higher probability of survival, growth, and successful exits compared to those supported by individual angels.

Furthermore, the role of accelerators in the success of ICT-based startups has been examined. Cohen and Hochberg (2014) found that participation in a high-quality accelerator program significantly increases the likelihood of raising additional financing, exiting successfully, and achieving higher valuations. This suggests that accelerators can provide valuable resources, mentorship, and networking opportunities that contribute to the success of ICT-based startups.

2.3 Investment and ICT-based Startup Performance

In addition to the studies by Hsu (2007) and Cumming and Groh (2018), which investigated the impact of investment on the performance of ICT-based startups, other researchers have examined the role of different financing methods and investor characteristics on startup performance. For example, Puri and Zarutskie (2012) analyzed the role of bank financing in the performance of ICT-based startups, finding that bank-financed startups tend to have higher survival rates and better financial performance compared to those that rely on other sources of financing.

In terms of investor characteristics, Busenitz et al. (2005) explored the impact of investor experience and expertise on the performance of ICT-based startups. They found that startups supported by investors with relevant industry experience and expertise tend to exhibit better performance in terms of growth, innovation, and profitability.

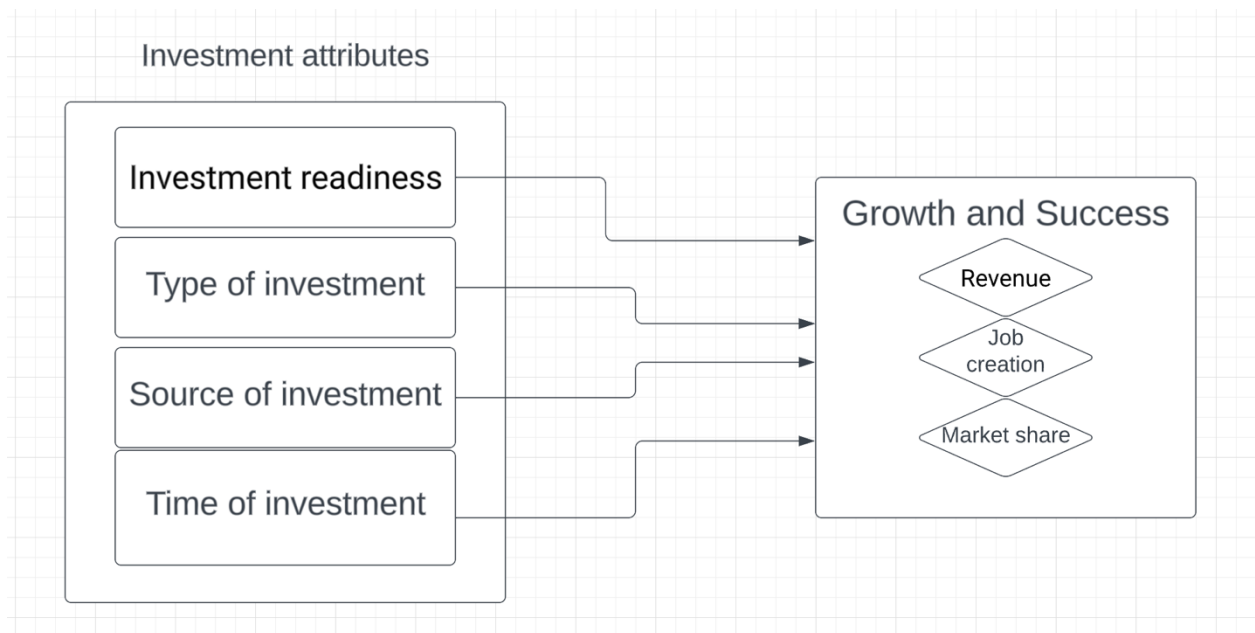
2.8 Gaps in the literature

There remains a gap in the literature detailing the precise factors that affect these results, particularly in the context of Ethiopia, despite the increased interest in the growth and success of ICT-based companies. By emphasizing factors including source and type of investment, timing of investment, and investment readiness, our study tries to close this gap. The functions of various sources and forms of investment in the Ethiopian environment have received little attention, and these interactions may be influenced by the ecosystem's distinctive features. Furthermore, empirical studies on the best time to invest and the significance of investment readiness for ICT-based businesses in Ethiopia are lacking. The study we are conducting intends to provide a more thorough understanding of the elements that influence the growth and success of ICT-based companies in Ethiopia by focusing on these characteristics.

2.8 Conceptual framework

The study's conceptual framework, focusing on the success and growth of ICT-based startups in Ethiopia, is derived from existing research, such as Colombo & Grilli (2005), which explores the role of founders' human capital in the growth of new technology-based firms; Gompers et al. (2005), which examines the impact of public markets on venture capital investment cycles; Hsu (2007), which investigates the relationship between experienced entrepreneurial founders, organizational capital, and venture capital funding; and Mollick (2014), which provides an exploratory study on the dynamics of crowdfunding. Based on this literature, we develop hypotheses suggesting positive associations between our independent variables (source and type of investment, timing of investment, and investment readiness) and the dependent variables (success and growth of ICT-based startups) in the Ethiopian context.

Figure 1: Conceptual framework chart



Source: Author's own representation based on the literature review

Chapter Three

3. Research Methodology

3.1 Research Design

To investigate the effects of investment attributes on ICT firms' growth and success, a quantitative research methodology was chosen for this study. This sort of strategy permits objective examinations of variables in connection to Ethiopia's startup environment (Gompers et al. 2005).

3.2 Research Approach

This research studied the development and success of new ICT enterprises using deductive, quantitative techniques. A web-based survey and stratified random starting sampling was employed in order to explore relationships and influence between qualities/variables; investment factors/startup success indicators using multiple regression analysis.

3.3 Population and Sampling

3.3.1 Population

The target population for this research consisted of 100 ICT startups operating in Ethiopia that received outside financing; their focus area for funding since the startups are incorporated in diffract foreign countries it is very hard to get all hundred.

3.3.2 Sampling Technique

In our study, we employed a purposive sampling technique to select an accurate and diverse sample from the target population of ICT-based startups in Ethiopia. The sampling procedure involved several steps, including defining the target population as ICT-based startups operating in Ethiopia, focusing on those in the early and growth stages of development. To ensure diversity and representativeness within our sample pool, we established criteria that included factors such as the age of the startup, industry sector, size (number of employees and customers), and geographic

location within Ethiopia. We then compiled a list of potential participants by consulting various sources, such as startup databases, industry reports, and networking with local stakeholders, including startup accelerators, incubators, and entrepreneurship organizations. Based on the established criteria, we selected a sample that maximized diversity and representativeness, enabling us to gain a comprehensive understanding of the factors impacting the success and growth of ICT-based startups in the Ethiopian context.

3.3.3 Sample Size

ICT startups with investment have a population of 100; Yemane's Formula was used to calculate sample sizes from finite populations while Yemane's formula determined investigation sample sizes.

$$n = N/(1+N(e)^2)$$

For this problem, N is the population being studied and E is the desired level of precision (10% for a 90% confidence level); accordingly, n is required as a sample size from this population under investigation.

So as to provide sufficient statistical power, this study relies on a sample size of 50 startups for this research project. The respondents are located in Addis Ababa the capital city of Ethiopia and the fifty startup founders or cofounders are targeted and the data is collected using online survey.

3.4 Data Collection Methods

3.4.1 Primary Data Collection

3.4.1.1 Online Surveys

Startup founders or key team members were polled online via Likert scale survey for data on investment readiness, types and sources, timing of investments and startup success indicators.

3.5 Data Analysis Techniques

3.5.1 Qualitative Data Analysis

3.5.1.1 Regression and correlation analysis

Descriptive statistics were employed to summarize and present quantitative data, with means, standard deviations and frequency distributions used to summarize and present quantitative findings. Multiple regression analysis and correlation was also utilized in order to explore associations between independent variables (investment attribute) and dependent variables (startup success indicators).

3.6 Reliability and Validity

3.6.1 Reliability

As part of an effort to maintain the reliability and reproducibility of this study, all phases of data collecting and analysis were meticulously documented to increase openness and reproducibility. By triangulating multiple sources for collecting information and using multiple techniques of triangulation when gathering the information necessary to draw reliable research conclusions. In our study, we calculated Cronbach's alpha for each construct in our measurement instrument. The results showed that all constructs had Cronbach's alpha values above the 0.7 threshold, indicating a satisfactory level of internal consistency and reliability. By confirming the reliability of our measurement instrument through this statistical test, we have further strengthened the credibility of our findings and conclusions.

3.6.2 Validity

Member checking (also referred to as participant validation) was employed in this research study to ensure its validity. To ascertain those interpretations accurately represented participants' experiences and perspectives, participants received an overview of the findings. Purposive sampling enabled the selection of those with relevant expertise for furthering its construct validity.

3.7 Ethical Considerations

Every survey participant received informed consent before beginning the questionnaire in order to make certain they understood its goals, their ability to withdraw at any time, and ensure confidentiality in the responses provided. Any identifiable details will be deleted or anonymized so as to maintain participant privacy.

3.8 Limitations of the Study

Due to its dependence on potentially biased self-reported survey respondent data and difficulty generalizing due to its exclusive focus on Ethiopia's ICT-based startup ecosystem, this study may contain several limitations. Furthermore, its cross-sectional design with a smaller sample size could compromise statistical power and make drawing causal links between variables difficult.

Chapter Four

4. Data presentation, interpretation and analysis

4.1 Introduction

In this section of the study, findings are discussed regarding investment in newly established ICT-based businesses in Ethiopia. Qualitative data analysis methods allow better comprehension among its 40 participants --founders of ICT businesses--while online survey data was used for collection. From there it was examined for trends, patterns, or relationships within variables under investigation.

4.2 Respondent Rate

Based on Yemane's Formula for Finite Populations, 50 individuals were chosen as sample participants for this research project. Yemane's Formula takes into account population size and desired precision when calculating sample sizes for social science studies; as our target group consisted of founders of ICT firms in Ethiopia, we sought a large enough sample to represent diverse perspectives and experiences.

Data gathering was met with challenges that reduced its sample to 40 respondents; these challenges included errors in survey design, entering difficulties entering data into databases, and difficulty reaching some intended respondents. Still, 40 is an accurate representation of Ethiopia's target population and provides useful insight into investments impacting ICT-based businesses in Ethiopia.

With an 80% response rate (40 out of 50 targeted respondents) Fincham, J. E. (2008), this study saw a respectable and satisfactory participation level that can be considered acceptable within social science research. As evidenced by its response rate, most founders who were targeted were willing to share their insights regarding investment as it related to their companies' development.

Although an even higher response rate would have been ideal, even 40 responses provided solid data analysis and interpretation support that enabled it to meet its research objectives and advance our knowledge on ICT startup companies' impact from investments.

4.3 Respondent Profile

Respondent profiles provide details regarding a range of experiences and opinions shared among study participants as well as an overview of demographic information such as position within startups, age, length of operation of startup(s), focus industries they operate in or lack thereof, and so forth. Within subsections and tables which follow, this profile will be further delineated with in-depth descriptions and arguments supporting each topic addressed within.

4.3.1 Position

As part of an effort to gain insight into respondents' responsibilities and involvement in investment-related decision-making processes, roles, and obligations were obtained via respondents' positions within their startups. The table below gives details about this sample's composition with regard to leadership roles and decision-making authority as illustrated by its distribution across respondents' positions.

Table 1: Position

Position	Frequency	Percentage
CEO	28	70%
CTO	5	15%
CMO	1	12.5%
Others	6	2.5%

Source: Author's own representation based on collected data

Seventy percent (70%) of respondents to this study hold CEO positions within their organizations, showing that most participants hold significant decision-making power and influence within the enterprise they oversee. Therefore, this research can shed insight into the experiences and perspectives of top executives responsible for making major investment-related decisions due to this large proportion of CEO respondents in our sample population.

12.5% of respondents were CTOs - making this group one of the two largest groups within our sample. CTOs typically possess extensive technical backgrounds that enable them to define and implement startups' technological strategies; their thoughts provide keen insights into ICT enterprises' technical challenges as well as potential financial opportunities.

The sample was underrepresented as only 2.5% were CMOs responsible for managing startup marketing strategies and client acquisition operations. Although CMOs represented only 2.5% of respondents overall, including them ensures that this study provides insight from different viewpoints related to investment and growth within ICT-based startup ecosystems.

15% of respondents hold senior roles within their firms, such as CFO or COO. Researchers can better comprehend how funding affects ICT-based firms by including these individuals in their sample; their unique perspectives help provide researchers with greater insights.

4.3.2 Age

As part of an effort to collect an array of experiences and perspectives from respondents of varying ages, their ages were recorded.

Table 2: Age

Age	Frequency	Percentage
18-24	14	35%
25-34	24	60%
35-44	2	5%

Source: Author's own representation based on collected data

According to the chart, most responses (60%) fall between 25 and 34 years of age, showing that most respondents are either starting or midway through their careers. Many professionals of this age tend to possess excellent education credentials making them ideal leaders of new ICT businesses.

35% of respondents between 18-24 were young professionals or prospective business owners in the startup sector, which provides insight into unique challenges and opportunities encountered by younger founders/executives in the ICT-based enterprise's ecosystem.

The older age group (35-44) constitutes only 5% of our sample, yet including them ensures we consider more knowledgeable and experienced individuals, contributing towards gaining an in-depth knowledge of how investments affect ICT-based enterprises.

4.2.3 Startup Operation Duration

The duration of startup activities was collected so as to assess the maturity and experience of ICT-based startups in our sample population.

Table 3: operation duration

Operation duration	Frequency	Percentage
0-1 year	12	30%
1-2 year	22	55%
2-3 year	3	7.5%
Above 3 year	3	7.5%

Source: Author's own representation based on collected data

At 55%, most startups (in this table) had only been operational for between one to two years - suggesting they are in their initial growth phases and still struggling with financing, client acquisition, and scaling operations. Of this sample population, 30% constitute businesses that have only been active for less than one year - an indication of many ICT businesses still beginning their journeys into operation.

Only 7.5% of Ethiopia's ICT startup ecosystem features businesses operating for two to three years; suggesting they have had difficulty successfully navigating early growth stages and raising funding. A similar proportion (7.5%) can also be found among ICT enterprises operating for more than three years, suggesting long-term survival is still difficult for Ethiopian enterprises based in ICT.

4.2.4 Industry

Industry concentration data of startups were collected to ascertain their size and diversity within ICT firms within our sample pool.

Table 4: industry

Industry	Frequency	Percentage
ICT	19	47.5
Agri-tech	6	15%
Edu-tech	4	10%
Others	11	27.5%

Source: Author's own representation based on collected data

ICT startups account for 47.5% of startups sampled. Agri-tech businesses that use technology to advance agriculture and food production account for 15% while companies using IT for education purposes make up 10%. Finally, 27.5% represent various industries to further diversify our sample and provide insight into market niches within an ICT-based ecosystem.

4.3 Descriptive Analysis

ICT startups account for 47.5% of startups sampled. Agri-tech businesses that use technology to advance agriculture and food production account for 15% while companies using IT for education purposes make up 10%. Finally, 27.5% represent various industries to further diversify our sample and provide insight into market niches within an ICT-based ecosystem.

Table 5: mean and standard deviation

Attribute	Mean	Standard deviation
Investment Readiness	3.4250	0.81394
Type of Investment	2.8875	0.68291
Source of Investment	2.8167	0.87608
Timing of Investment	3.0625	1.03427
Startup Success Index	3.4208	0.83971

Source: Author's own representation based on collected data

The sample's companies appear to be somewhat prepared for investments, based on the sample's mean IR score (3.4250). The standard deviation of 0.81394 indicates some variation in the enterprises' level of investment readiness, which may indicate that some businesses are better prepared than others for funding.

Type of Investment: The typical type of investment for the companies in the sample falls between debt and equity funding, with a mean TY score of 2.8875. The considerably reduced diversity in the sorts of investments that the businesses received, as indicated by the standard deviation of 0.68291, suggests that there is significant stability in the funding climate across the sample.

According to the mean Source of Investment (SI) score (2.8167), funds is often obtained from sources that lie between domestic and foreign investors. The sample's standard deviation of 0.87608, which denotes a moderate degree of variance in the sources of investment, shows that the startups in the sample have access to a wide range of funding sources.

Timing of Investment (TI): According to the average TI score of 3.0625, investments are frequently made in startups. The standard deviation for startups is 1.03427, which indicates a broader range in the timing of investments and may indicate significant heterogeneity in the stage at which these businesses obtain funding within the sample.

4.4 Regression

In order to examine the relationship between the dependent variable, the Startup Success Index, and the four predictor variables, Timing of Investment, Source of Investment, Investment Readiness, and Type of Investment, a multiple linear regression analysis was conducted in this study. Determining the relative weights that each predictor variable provides to the calculation as well as the overall performance and model fit are the main objectives of this analysis. The importance and strength of the relationships between the predictor variables and the Startup Success Index were shown by the regression analysis's results, which are summarized below. Investors and stakeholders can use this data as a decision-making tool to raise the likelihood that a firm will flourish.

4.4.1 Model Summary

Table 6: model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.677	.458	.396	.65265	1.928

Representation based on SPSS result

The regression model summary gives an overview of the model's performance, fit, and assumptions. The model's R-value of 0.677 indicates that there is a strong or high connection between the predictors and the dependent variable, based on Cohen's (1988) classification of effect sizes. The predictor factors may be responsible for around 45.8% of the variation in the Startup Success Index, according to the R Square value of 0.458 (or 45.8%). The adjusted R Square value, which offers a more accurate evaluation of the model's efficacy, takes into account the number of predictors and sample size. In this case, the adjusted R Square is 0.396 (or 39.6%), which is reasonably close to the R Square number. The standard error of the estimate, which is 0.65265, provides an estimate of the model's accuracy in predicting the dependent variable. The absence of significant autocorrelation is a key assumption for linear regression.

4.4.2 ANOVA analysis

Table 7: ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	12.591	4	3.148	7.390
	Residual	14.908	35	.426	
	Total	27.499	39		

Source: Representation based on SPSS result

The null hypothesis that the predictors of the model do not significantly account for the variance in the dependent variable is examined in the ANOVA table. The F-statistic of 7.390 and the p-value less than 0.001 (Sig. = 0.000) demonstrate that the predictors of the model are statistically significant when considered collectively in explaining the variation in the Startup Success Index (SSI), thereby rejecting the null hypothesis.

4.4.3 Coefficients

Table 8: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.072	.640		1.676	.103		
	TI	.354	.138	.436	2.561	.015	.535	1.870
	SI	.208	.177	.217	1.172	.249	.453	2.207
	IR	.313	.136	.303	2.291	.028	.886	1.129
	TY	-.135	.200	-.110	-.676	.503	.585	1.710

Source: Representation based on SPSS result

For each predictor variable, the coefficients table shows the unstandardized and standardized coefficients, t-statistics, p-values (Sig.), and collinearity diagnostics. The unstandardized coefficients (B) describe the change in the dependent variable (SSI) for a one-unit change in the predictor variables, whereas the standardized coefficients (Beta) of the model quantify the relative contribution of each prediction.

4.4.4 Collinearity Diagnostics

Table 9: collinearity

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions (Constant)
1	1	4.828	1.000	0.00
1	2	0.083	7.619	0.04
1	3	0.049	9.898	0.05
1	4	0.023	14.450	0.03

Source: Representation based on SPSS result

The collinearity diagnostics determine whether multicollinearity is present, which occurs when predictor variables in the model have strong associations. The stability and significance of the predictor variables may be impacted by high multicollinearity. In this case, the variance inflation factor (VIF) values are all less than 10, demonstrating that multicollinearity is not a serious worry in the model.

4.4.5 Residuals Statistics

Table 10: Residuals

Mean	0.00000
Std. Deviation	0.61828
Minimum	-1.456
25th Percentile	-0.420
50th Percentile	-0.023
75th Percentile	0.440
Maximum	1.80
Mean	0.00000

Source: Representation based on SPSS result

The residuals statistics provide information on the distribution of the model's errors, also referred to as residuals. If the mean of the residuals is close to zero, the model should yield unbiased predictions. This premise is met because the mean residual in this case is 0.00000. The standard deviation of the residuals (0.61828) provides an estimate of the model's error in predicting the dependent variable. The standardized residuals should be distributed normally, with a mean of 0 and a standard deviation of 1, which is the case for this model.

4.5 Correlation

A Pearson correlation analysis was performed to look at the bivariate correlations between the predictor variables (IR, TY, SI, and TI) and the dependent variable (SSI) before moving on to the regression analysis. This analysis helps uncover any potential multicollinearity problems and sheds light on the strength and direction of the correlations between the variables.

The variables' Pearson correlation coefficients (r), which range from -1 to +1. While negative coefficients indicate a propensity for one variable to decline as the other increases, positive coefficients indicate a tendency for the variables to increase together. Values closer to 0 signify a weak or nonexistent relationship, whereas values closer to -1 or +1 suggest stronger ties.

The significance level (p-value) for each association indicates the likelihood that the correlation was discovered by coincidence. The association between the variables is statistically significant and less likely to have happened by chance when the p-value is lower (usually below 0.05).

Table 11, Correlation

	IR	TY	SI	TI	SSI
IR	1	-0.008	0.020	0.271	0.426**
TY	-0.008	1	0.635**	0.470**	0.230
SI	0.020	0.635**	1	0.623**	0.424**
TI	0.271	0.470**	0.623**	1	0.601**
SSI	0.426**	0.230	0.424**	0.601**	1

Table 11, Correlation

Startup Success Index and Investment Readiness exhibit a positive, moderate, and statistically significant association ($r = 0.426$, $p = 0.01$). This implies that better startup success rates are linked to higher levels of investor preparedness. Type of Investment and Success of startups have a positive and weak link ($r = 0.230$, $p > 0.05$), although it is not statistically significant. This suggests that there may not be much of a relationship between type of investment and startup success index in forecasting the success of a startup. The source of funding may have a substantial role in determining startup success because there is a positive, moderate, and statistically significant association between Source of funding and startup success index ($r = 0.424$, $p = 0.01$). Timing of Investment and startup success index are positively correlated, strongly correlated, and statistically significant ($r = 0.601$, $p = 0.01$). This suggests that a key factor in determining the success of companies is the timing of financing.

Chapter Five

5. Summary, Conclusion, and Recommendations

This study conducted an investigation on the relationships among Investment Readiness, Type and Source of Investment, Timing of Investment, and Startup Success Index. With descriptive, correlation and regression analysis applied to their data set for examination; conclusions were reached and draw from it.

5.1 Descriptive Analysis Findings

Descriptive analysis provided a broad summary of characteristics about our sample population. To facilitate understanding, this process required visualizing distribution and central tendencies of variables to enable better profiling startups based on readiness, source of funding sources and timing - data which set the foundation for further examination.

5.2 Correlation Analysis Findings

Correlation analysis was employed to uncover bivariate relationships between dependent variables and predictor variables, with findings including:

Investment Readiness Index and Startup Success Index data has shown a correlation between greater startup success and investment preparedness levels and investment readiness levels - this correlation underscores how crucial it is for companies to prepare themselves adequately before seeking funding, since successful organizations tend to be better-equipped.

Correlation analysis was utilized to detect bivariate relationships between dependent variable and predictor variables, and their respective findings. Our investigation yielded promising findings including:

Greater startup success correlates with greater levels of investment readiness, according to a positive, moderate, and statistically significant relationship between Startup Success Index and

Investment Readiness indices. This underlines how essential it is for organizations seeking funding to prepare themselves appropriately; successful organizations tend to be better-equipped than underprepared ones.

According to the findings of this research project, which shows a statistically significant correlation between Timing of Investment and Company Success Index, which underscore the significance of timing investments for startup success, timing investments is vitally important for business success. This outcome emphasizes the significance of making investments at just the right moment during startup's growth in order to enhance success chances and make smart investments at just the right time for company.

5.3 Regression Analysis Findings

Regression analysis can be used to ascertain each predictor variable's contribution towards variations in Startup Success Index, with results showing this can have profound effects. For instance:

This research highlights the criticality of these components within a startup ecosystem and advises stakeholders to direct their attention toward improving investment readiness and optimizing timing of investment decisions. Two factors most influential to startup success were Investment Readiness and Timing of Investment, both having positive effects on Startup Success Index.

Although significant in their own right, Type of Investment and Source of Investment, while still significant, were less significant predictors of startup success despite continuing to show significance within this model. Our findings illustrate that although significant, these traits should not be the primary considerations when assessing likelihood that an organization might thrive.

5.4 conclusion

Study findings revealed in-depth information regarding the relationship among Startup Success Index, Investment Readiness, Type, Source, Timing of Investment in startup ecosystem. Descriptive research, correlation and regression analyses on 40 startup companies revealed specific traits' importance as drivers of company success.

Investment Readiness and Timing of Investment , both having positive influences on company performance, were identified as two significant features. Our findings revealed that companies with solid business plans, in-depth market analyses, solid financial planning strategies and experienced management teams had greater chances of flourishing than their counterparts without such preparations and investments at key moments; doing this greatly increases chances of success and should therefore be prioritized when making investments into companies at this crucial juncture.

Researchers discovered that Type of Investment and Source of Investment played less of a role than previously expected in predicting startup success, although both may play some impactful roles depending on specifics like investor expertise and trustworthiness; both may positively contribute to outcomes for companies relying on investors as sources of funds. Stakeholders should not put too much weight into these two aspects when judging likelihood of firm success; in general, these two variables shouldn't carry too much sway over company outcomes anyway.

These findings have vast ramifications for the startup ecosystem as they demonstrate how entrepreneurs, investors, and governments must prioritize measures designed to increase investment readiness and timing if they wish to create an atmosphere conducive to achievement, growth and innovation. Furthermore, the results offer practical insights entrepreneurs may use to increase their chances of success; investors can utilize to make wiser investments decisions; while governments use as guidance in creating initiatives or regulations which effectively support businesses.

All participants of a startup ecosystem need a keen grasp on the relationships among investment readiness, kind, source, timing, effects on business performance and the cooperation mindset to promote an environment which fosters success, creativity and economic expansion. Information gained through this study can serve as the cornerstone for further investigation and practical applications that lead to an ever more robust startup ecosystem.

5.5 Recommendations

After reviewing these findings, several recommendations are given to investors, business owners and governments:

Prioritize businesses which are better prepared to receive funding by investors since this will increase the odds that their investments succeed and have an overall beneficial effect on startup environments by supporting well-prepared enterprises.

Startup founders should focus on increasing investment readiness by polishing business concepts, conducting in-depth market research, devising sound financial strategies and building strong management teams - these activities may all help their company secure adequate financing at just the right time and enhance chances of success. By fulfilling five important criteria founders may increase chances their companies will succeed while getting better financing deals while having positive consequences within their ecosystems.

Policymakers can aid entrepreneurs by developing initiatives and programs which offer them resources, mentoring and training to become investment ready. Fostering an environment favorable towards startups may encourage investments from all stages of development - these policies could promote economic development by creating an ecosystem friendly to business owners and investors alike.

Additional research should consider factors that influence business performance, including industry characteristics, geographical location and founder backgrounds. Longitudinal

investigations provide further insights into ecosystem dynamics as well as long-term investments' impacts on company successes.

Implementation of these recommendations will assist stakeholders in improving the startup ecosystem by creating an environment which fosters innovation, growth and success for startups. Implementation may lead to advancement in technologies as well as employment possibilities increasing substantially and general economic expansion resulting from this.

Investors can utilize these findings to guide their decisions, increase returns and help new businesses. Furthermore, founders can increase their odds of success and attract the appropriate investors at just the right moment by using this knowledge. Policymakers can utilize it to develop policies and programs which support entrepreneurs while creating a vibrant ecosystem.

Understanding the relationships among investment readiness, type, source, timing and business performance are essential elements in creating success and stimulating innovation in startup ecosystems. Investors, producers and politicians all play key roles here to foster success while spurring creativity.

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