

**The entrepreneurs' experiences of access to resources
in the entrepreneurial ecosystem.**

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Declaration

I, Mankodi Moitse, declare that the thesis, which I hereby submit for the degree of Doctor of Philosophy at the University of Pretoria, is my own work and has not been previously submitted by me for a degree at this or any other tertiary institution.

Ethics Statement

The author, whose name appears on the title page of this thesis, has obtained, for the research described in this work, the applicable research ethics approval. The author declares that she has observed the ethical standards required in terms of the University of Pretoria's Code of ethics for researchers and the Policy guidelines for responsible research.

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Abstract

Research on the entrepreneurial ecosystem has focused attention on the macro system dynamics and its elements. Despite an increasing myriad of entrepreneurial ecosystem research studies that have been conducted that aim to enhance its theory, the perspectives of entrepreneurs' access to resources in the entrepreneurial ecosystem have received limited attention. Notwithstanding the concept of an entrepreneurial ecosystem gaining considerable recognition amongst researchers and policymakers, there is still criticism that how the entrepreneur operates in the ecosystem remains under-theorised. Therefore, although entrepreneurial ecosystem research continues to receive attention, one specific area that has not received much empirical research is how entrepreneurs access resources, especially in an undeveloped entrepreneurial ecosystem. Given the importance of the entrepreneurial ecosystem to drive economic activity, research is critical to gain a better understanding of how entrepreneurs access resources in a resource-constrained environment with weak system linkages.

Through an interpretive phenomenological approach, with twenty-five interviews conducted in Gauteng Province where there is higher economic activity relative to the rest of the country. Further, relative to the other Provinces, Gauteng has entrepreneurial ecosystem components although not be sufficient, some not effective and not interconnected. The study found that there are four master theme perspectives: environmental, agency, linkage, and resource access. The four perspectives consist of eleven themes and their supporting sub-themes to create a model on the entrepreneur's experiences of the entrepreneurial ecosystem to access resources. The model shows that entrepreneurs concerned about their environment and entrepreneurial resource gaps look to the pool of entrepreneurial actors to identify and create linkages to access resources. The resources are accessed from the entrepreneurial actors using relationships - personal, collective, professional - and their prior knowledge and experiences. This model contributes to theory demonstrating the practices and routines of the entrepreneurs to access resources in a resource-constrained context with weak ecosystem linkages.

Entrepreneurs can use these practices to better respond to their resource challenges by proactively establishing linkages with entrepreneurial ecosystem actors.

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CHAPTER 1. INTRODUCTION

Despite an increasing myriad of entrepreneurial ecosystem research studies having been conducted that aimed to enhance its theory (Audretsch, Mason, Miles, & O'Connor, 2018; Morris et al., 2022; O'Connor & Audretsch, 2022), the perspectives of the entrepreneurs' access to resources in the entrepreneurial ecosystem have not received sufficient attention. Notwithstanding the concept of the entrepreneurial ecosystem gaining considerable recognition amongst researchers and policymakers (Cao & Shi, 2020; Stam & Spigel, 2015), there is still criticism that it remains under-theorised (Colombelli et al., 2019). Therefore, although entrepreneurial ecosystem research continues to receive attention, one specific area that has not developed much empirical research is how the entrepreneurs access resources, especially in an undeveloped entrepreneurial ecosystem. Given the importance of the entrepreneurial ecosystem to drive economic activity (Stam, 2015; Stam & Van de Ven, 2021), its research is critical to gain more understanding of the practice of the entrepreneurs. This chapter introduces the background to the research problem and the problem statement; it provides the research questions to the study as well as the contribution that the study aims to make. The chapter concludes by outlining the structure of the document.

Scholars have conceptualised how entrepreneurial ecosystems develop in different ways (Mack & Mayer, 2016; Spigel, 2017; Stam & Spigel, 2015; Stam & Van de Ven, 2021; Thompson, Purdy, & Ventresca, 2018). Entrepreneurial ecosystems are regarded as interconnected components that support the success and growth of entrepreneurship (Brush et al., 2018). The various components of the entrepreneurial ecosystems at a broad macro level are regarded as well researched, but there is a limited focus on the entrepreneurs and their entrepreneurial firms (Spigel, 2018; Roundy & Lyons, 2023). Considering the criticisms about the lack of centrality of the entrepreneur in the entrepreneurial ecosystem research to date (Thompson et al., 2018), this study adopted a micro actor level perspective, centred on the view that an entrepreneur is a critical entrepreneurial ecosystem actor, whose experiences define how

resource are accessed and explain the effectiveness of the entrepreneurial ecosystem (Cunningham et al., 2019).

According to Spigel (2018), both approaches are necessary for a comprehensive understanding of entrepreneurial ecosystems. In response, Cavallo et al. (2019) called for more research to advance other critical areas of the entrepreneurial ecosystem. As a result, this study will focus on entrepreneurs and their experiences as they access resources in entrepreneurial ecosystems, specifically how they identify and link with other entrepreneurial actors to access scarce resources for their entrepreneurial firms (Morris et al., 2012).

Moore (1993) introduced the concept of the ecosystem approach as a systematic response to business competitiveness, and it has now evolved to entrepreneurial ecosystems. There are various entrepreneurial ecosystem frameworks; however, the most widely known of these was developed by Isenberg (2011). Entrepreneurial ecosystem frameworks have attracted the attention of practitioners as well as governments seeking to drive economic activity (Isenberg, 2011; Maroufkhani, Wagner, & Wan Ismail, 2018). The coalescence of key theoretical entrepreneurial ecosystem frameworks consists mainly of financial capital, human capital, social capital, formal and informal networks, formal institutions, government policy, support service intermediaries, leadership, entrepreneurial knowledge, market demand, and physical infrastructure (Theodoraki et al., 2018). Underlying entrepreneurial ecosystems are the interactions amongst the different actors that take place in response to the mobilisation of resources by the entrepreneurs and the allocation of resources (Cao & Shi, 2020).

The influence of clusters and innovation systems on entrepreneurial ecosystems cannot be ignored. They highlight not only the importance of ecosystems in driving economic growth but also contribute to explaining the genesis of entrepreneurial ecosystems (Granstrand & Holgersson, 2020; Spigel & Harrison, 2017). Compared to entrepreneurial ecosystems that focus on the entrepreneurs, clusters focus on the concentration of industries that are the firm's external resources, while innovation systems focus on the firm as well as key institutions,

such as research organisations and regulatory bodies (Nuur et al., 2009). In this study, the **innovativeness of the entrepreneurial ecosystems' is the entrepreneur as the central agent as compared to the previous location-based approaches to industrial development.**

Entrepreneurial ecosystem research has developed further and now extends to different spatial contexts (Isenberg, 2011; Sheriff & Muffatto, 2015; Stam & Spigel, 2015). For example, these include entrepreneurial ecosystems at the national, regional, city, and university levels (Breznitz & Zhang, 2019; Feldman et al., 2019), as well as other support services such as incubators and accelerators (Dutt et al., 2016; van Rijnsoever, 2020). There is a concern that its focus has largely been on developed economies, leaving out the contribution that could have been made from understanding the entrepreneurial ecosystem phenomenon in the context of developing economies (Audretsch et al., 2018; Brown & Mason, 2017; Cantner, Cunningham, Lehmann, & Menter, 2020; Jacobides, Cennamo, & Gawer, 2018).

The focus of the study is on the agency of the entrepreneurs, as they carry the responsibility to ensure the growth and survival of the entrepreneurial firms. Thus, they act to engage the ecosystem to develop their own entrepreneurial ecosystem with the aim of managing resource uncertainties (Malatesta & Smith, 2014). While other entrepreneurial actors, both inside and outside the firm, play a critical role, it is up to the entrepreneur as the key actor to drive the growth of the firm. Malatesta and Smith (2014) posit that the entrepreneur in this regard is concerned with what resources are needed and which ones are critical; whether these resources can be generated internally or if there is a need to go external; what levels of these resources are available overall; and to what extent the organisation linkages have an impact on access to the resources. Therefore, it is the entrepreneur driving the changes, which involve various interactions (Garud & Giuliani, 2013).

According to Goss and Sadler-Smith (2018), this entrepreneurial agency captures different levels of opportunity-creating efforts as the entrepreneur engages various components of the ecosystem. As a result, entrepreneurial

agency requires motivation and ability (McMullen et al., 2020). The agency of the entrepreneur brings change through the entrepreneur taking action with the intention to produce the desired outcome, which also involves bringing together the skills of various individuals (Bøllingtoft & Ulhøi, 2005).

Entrepreneurial ecosystem research is therefore critical to developing the theory in areas that still have various shortcomings. These include the lack of clear frameworks on how entrepreneurial ecosystems work and what institutions impact their performance (Alvedalen & Boschma, 2017; Cavallo et al., 2019). Colombelli et al. (2019) further argue that research on entrepreneurial ecosystems needs to develop frameworks in order for their processes to be understood. Although research on entrepreneurial ecosystems has been on the rise, some of these limitations remain; thus, this study will focus on gaining an understanding of the bottom-up mechanisms of how the entrepreneurial ecosystem works (Spigel, 2018) and the influence of the geographical context (Aldrich & Fiol, 1994; Welter, 2011).

In this regard, South Africa, as a developing economy, serves as a rich context for research on entrepreneurship and entrepreneurial ecosystems (George et al., 2016). Through a qualitative study applying the Interpretative Phenomenological Analysis (IPA), the results of this research aim to bring forth the experiences of entrepreneurs as they develop their ecosystems by mobilising resources from the different entrepreneurial actors in a developing economy context. Through interpretive methodologies, the experiences of people are better understood (Brocki & Wearden, 2006). Spigel (2018) suggests that future research questions on entrepreneurial ecosystems should address how such systems are developed from a bottom-up perspective. Asking this question will therefore result in a qualitative study addressing how and what types of questions are asked (Onwuegbuzie & Leech, 2006). To explore this aspect in more detail, entrepreneurs' personal lived experiences and how they interact with various actors were the focus of an IPA study conducted by the researcher to gain a rich understanding of the phenomenon (Smith, 2004).

Drawing on Resource Dependency Theory (RDT), the qualitative results aim to fill the knowledge gap and highlight the unique multiple experiences of entrepreneurs as they engage with other entrepreneurial actors to develop their own entrepreneurial ecosystems. Although there has been a debate about the level of development of RDT (Davis & Cobb, 2010; Ozturk, 2020), it has been relied upon to understand external resource dependencies, even though there has been limited empirical work relating to multiple resource dependencies.

Specifically, RDT is appropriate to this study as entrepreneurs inherently require access to multiple resources (Audretsch & Link, 2018; Cao & Shi, 2020; Stam & van de Ven, 2019) which they do not have due to the disadvantage of newness (Morris, Kuratko, Audretsch, & Santos, 2022). This in turn drives them to depend on multiple entrepreneurial actors. As a result, to access resources from multiple actors, entrepreneurs develop routines and practises (Roundy & Lyons, 2023). In this study therefore, RDT is used to explain how in a system where there is multiple resource dependency, entrepreneurs use relations, knowledge and experiences to access resources from multiple resource owners (Asheim, Smith, & Oughton, 2011; Brown & Mason, 2017; Lee, 2018; Speldekamp, Knobens, & Saka-Helmhout, 2020) to access resources.

This study extends the RDT to multiple resource dependency as an appropriate lens to investigate the perspectives of entrepreneurs' when accessing resources in the entrepreneurial ecosystem. The research setting is the Gauteng Province, South Africa, one of the areas in where there is a relatively high level of entrepreneurial activity. It therefore provides a situational context (Willig, 2013), in a developing economy, where the necessary components of the entrepreneurial ecosystem, such as funders, education, training, support, and service organisations exists within reach of entrepreneurs.

1.1. Research Problem

Literature suggests two approaches to entrepreneurial ecosystems (Spigel, 2018). The first is the top-down approach, which focuses on the attributes and components of the entrepreneurial ecosystem (Colombelli et al., 2019; Spigel,

2016; Stam, 2015). For example, this approach focuses on government interventions that aim to create entrepreneurial ecosystems meant to drive entrepreneurial activity (Brown & Mason, 2017). The second approach is bottom-up, which focuses on the entrepreneurs, and how they access resources for their entrepreneurial firms (Goswami, Mitchell, & Bhagavatula, 2018; Lux, Macau, & Brown, 2020; Thompson et al., 2018). However, the bottom-up approach remains mostly conceptual, and lacking in empirical validation (Spigel, 2018; Thompson et al., 2018). To address this gap in empirical validation, this study adopts a bottom-up perspective.

1.1.1. Theoretical problem

This study's theoretical problem is addressed in two parts. First, the study argues that the bottom-up perspective in this study, which has been under-theorised so far, better explains the centrality of the entrepreneur within the entrepreneurial ecosystem as they act to access the resources. Essentially, the impact of a successful entrepreneurial ecosystem is ultimately assessed by whether the system effectively assists entrepreneurs. Most scholars have focused on the top-down approach, despite the acknowledgement of the centrality of the entrepreneur in the entrepreneurial ecosystem (Cantner et al., 2020; Cavallo et al., 2019; Colombelli et al., 2019; Mack & Mayer, 2016; Roundy, Bradshaw, & Brockman, 2018; Spigel & Harrison, 2017). Stam (2015) posits that it is the entrepreneur who is at the centre of the entrepreneurial ecosystems, which is one of the critical shortfalls of this approach as it focuses on the system-level dynamics without the visibility of the exact entrepreneurial needs (Roundy & Lyons, 2023). There has been limited research on the entrepreneurial ecosystem from a bottom-up entrepreneur's perspective (Motoyama & Knowlton, 2017; Sarma & Sunny, 2017; Spigel, 2018).

Second, the bottom-up approach argued in this study views entrepreneurial ecosystems as also comprising critical mechanisms and practises used by entrepreneurs (Spigel, 2018) to access resources. Entrepreneurs very often have routines and practises through which they ultimately access other entrepreneurial actors who possess the relevant resources. Yet these micro-mechanics have not been the focus of entrepreneurial ecosystem research, leaving a critical gap

unexplained on how the resources are ultimately accessed by the entrepreneurs (Roundy & Lyons, 2023). This includes practises that entrepreneurs employ to search, identify, select, and link with resource owners. For example, entrepreneurs have to constantly make choices to manage the time they spend on their businesses and the time they invest in creating social networks with other entrepreneurs and entrepreneurial actors (Spigel, 2018). Entrepreneurs also make decisions about whether to work as individuals or as a collective as they pursue resources and opportunities (van de Ven, Sapienza, & Villanueva, 2007; van de Ven, 1993). According to Colombelli et al. (2019), these engagements also shape the ecosystem as it responds to the entrepreneurs' resource needs. It is worth noting that despite the benefits of collective action, there are entrepreneurs who may not wish to be part of the collective and thus self-exclude from networks or other actors because they may not see the value in collective participation, prefer to work and make decisions on their own in their own time, or they might be excluded because of discrimination of some form (Spigel, 2018). These variations are part of the critical understanding of how the entrepreneur acts within the entrepreneurial ecosystem that requires research attention.

1.1.2. Contextual problem

Different research contexts for studying an understudied phenomenon contribute to existing theories, and this has the potential to generate new theories (George et al., 2016). Thompson et al. (2018) highlight the significance of the dearth of research on entrepreneurial ecosystems, particularly in resource-constrained contexts. Entrepreneurial ecosystems are a global phenomenon; however, research into this topic has been limited in developing economies, despite their recent rapid economic growth (Bruton, Ahlstrom, & Obloj, 2008; Bruton, Zahra, & Cai, 2018; Cao & Shi, 2020; Roundy, Bradshaw, & Brockman, 2018b). It is obvious that less attention has been given to understanding the impact of varying resource endowments on entrepreneurial ecosystems, as highlighted by the limited research on developing economies (Cao & Shi, 2020).

South Africa is regarded as a developing economy, based on the income level indicator used to classify countries (Hoskisson, Eden, Lau, & Wright, 2000; Hoskisson, Wright, Filatotchev, & Peng, 2013). Therefore, it provides a unique

context for the study of entrepreneurial ecosystems. Low levels of income mean that the ability to deploy resources to develop entrepreneurial capabilities, skills, support, services, and institutions remain constrained (Gaffney et al., 2013). This challenge is compounded by the fact that entrepreneurs are generally resource-constrained (Roundy & Bayer, 2019). For the purposes of this study, resource scarcity is a critical factor defining the context for the research, given that entrepreneurial ecosystems focus on the mobilisation of resources by the entrepreneurs.

South Africa, similar to other African economies, and notwithstanding the variations in terms of population sizes, natural resource endowments, the levels of development amongst developing economies, is part of the United Nations' least developed countries, with Africa accounting for 33 out of the 50 least developed countries. The debate about resources in Africa comprises many contradictions (Edoho, 2015). According to the UN (2018) report, Africa is endowed with most of the world's natural resources, but the continent has limited capacity to benefit these resources (Hoskisson et al., 2000). Africa's trade is primarily driven by commodity exports, estimated at 75% in 2018, confining its development disproportionately to resource extraction industries (Tvedten et al., 2014). Further, its inflows of capital are not supported by appropriate absorptive capacity in the form of efficient capital markets that could have facilitated efficient allocation of capital (Hagan & Amoah, 2019).

Esterhuizen and Van Rooyen (2006) also found that a lack of resources, experience, capital, and advanced technology led to low competitiveness amongst African firms and had an impact on their level of performance. To address these deficiencies and point to resource dependency, (Tvedten et al., 2014) posit that there must be a link between local businesses and businesses outside the country. This means that African firms will have to foster linkages with foreign suppliers to access critical skills (Kuada & Sørensen, 1999; Tvedten et al., 2014). Akinlo (2004) drew attention to the fact that where there were high technology gaps, effective linkages were hampered. As a consequence, some foreign firms brought their own supply chains, thereby making dependency even more embedded (Gu, 2009). Adding to the concerns is that even where there are

opportunities for knowledge spillovers, there is insufficient capacity in African businesses to capture such knowledge (Akinlo, 2004). According to Bosma and Kelley (2019), although entrepreneurial intent is high in Africa, none of the African countries ranks in the top 50, according to the Global Entrepreneurship Development Institute (GEDI) (The Global Entrepreneurship and Development Institute, 2017). This illustrates that while the intent to start up a business is indeed widespread in developing economies, the transition from intent to actual start-up is low, and these economies are contending with lower levels of entrepreneurship (Klaus, 2018; World Economic Forum, 2013).

This suggests that although, theoretically, support is provided to entrepreneurs, the gap is still significant between intent and actualisation. This supports the view that, given its abundant natural resources, and through quality entrepreneurship, Africa can still achieve economic activity that will lead to economic growth (Edoho, 2015). Despite this opportunity, the challenge of entrepreneurs accessing the necessary resources for their entrepreneurial firms is more pronounced in developing economies because of underdeveloped market-supporting institutions, capital markets, and labour markets. Consequently, these limitations are constraining economic growth and development (Cao & Shi, 2020; Hoskisson et al., 2000). The resource dependency theory was used for this study, because not only are entrepreneurs and entrepreneurial firms characterised by their limited resources in developing economies, but they also operate in resource-constrained environments (Sheriff & Muffatto, 2015). Therefore, understanding the activities of the entrepreneur in an entrepreneurial ecosystem in developing economies contending with double constraints illuminates and expands ecosystem research. Multiple challenges explain why entrepreneurs in these economies embark on multiple activities that may not be apparent in well-resourced economies. In addition, there are relatively more entrepreneurs operating in such resource-rich environments (GEM 2022/2023).

1.2. Research Question and Sub-questions

To gain rich knowledge from the lived experiences of entrepreneurs as they access resources in the entrepreneurial ecosystem and how they make sense of their experiences, the research questions focus on how the phenomenon under

investigation is experienced, the different themes that emerge, their main essence, and subjective reflections (Pietkiewicz & Smith, 2014; Sanders, 1982). The following question, in line with an interpretive phenomenological analysis study, therefore focused the research. The key research question and the four sub-questions are:

- RQ How do entrepreneurs access resources in the entrepreneurial ecosystem?
- SQ1 Who are the actors that entrepreneurs link with to obtain resources?
- SQ2 What are the entrepreneurs' experiences in establishing a multi relational system of linking with entrepreneurial actors who possess the resources they need?
- SQ3 How do entrepreneurs access the required resources from entrepreneurial actors?

Unless the entrepreneurs can access the resources, the entrepreneurial ecosystem does not have the desired effect on the entrepreneurs and their businesses (Morris et al., 2022). Even if resources are in the ecosystem, they are controlled by someone, and it will still require the entrepreneur to have the capacity to access them (Villanueva et al., 2012). Equally important, these questions aim to understand the system mechanisms at the micro level, where the experiences of the entrepreneurs show their practises and routines (Roundy & Lyons, 2023; Spigel, 2018). The diversity of entrepreneurial needs suggests that entrepreneurs require resources from multiple actors at varying levels (Audretsch, Mason, Miles, & O'Connor, 2018). Therefore, responding to the research question and the sub-questions will enhance our understanding of who are entrepreneurial actors that entrepreneurs are involved with and how they link with them.

1.3. Research Contribution

Theoretical

This study contributes at three levels. There is a gap in the literature on entrepreneurship, as the focus has been on the top-down approach. Attention was focused on the macro dynamics of the elements of the entrepreneurial

ecosystem. The first contribution, therefore, is that this study responds to calls for research to investigate the entrepreneurial ecosystem phenomenon from the bottom-up perspective of the entrepreneur (Spigel, 2018). It argues that it is the entrepreneur who drives the process to access resources fit for the purpose of entrepreneurial personal, business, and financial needs at the appropriate time and sufficient quantum. Stam (2015) posits that it is the entrepreneur who is at the centre of the entrepreneurial ecosystems, although it is a challenge as the focus has been on the development of the ecosystem elements without the visibility of the exact entrepreneurs needs. Yet, it is the entrepreneurs who determine their needs and act on their decision to access the resources within the ecosystem. Therefore, this study makes a contribution by focusing attention on the entrepreneurs in the ecosystem.

Second, this research contributes to limited research on how, in entrepreneurial ecosystems, an entrepreneur is the main actor in a multi-resource dependence relationship with various entrepreneurial actors (Brown & Mason, 2017). Entrepreneurs require multiple resources (Audretsch & Link, 2018; Cao & Shi, 2020; Stam & van de Ven, 2019), which drives them to depend on multiple entrepreneurial actors. This leads to multiple resource dependence and practises to link with the multiple resource owners. In addition to the use of RDT in dyadic relationships. Hence, in this study, this theory is used to explain a system of multiple dependency relations as entrepreneurs access resources from multiple resource owners. Therefore, the entrepreneurs in the ecosystem (Spigel, 2018; Thompson et al., 2018) engage in multiple relational systems (Asheim, Smith, & Oughton, 2011; Brown & Mason, 2017; Lee, 2018; Speldekamp, Knobens, & Saka-Helmhout, 2020) to access resources, thus extending RDT to an area with limited published research.

Third, as previous research focused on the components and the various attributes of the entrepreneurial ecosystem, such as their emergence, governance, and connectedness (Cantner et al., 2020; Cao & Shi, 2020; Stam and Van de Ven, 2021) in developed economies, less attention has been directed towards gaining an understanding of the practices of the entrepreneurs in the entrepreneurial ecosystem (Roundy & Lyons, 2023). By developing this research in a developing

economy that is resource constrained and has weak system linkages, the study centres attention on entrepreneurs as drivers of their ecosystem linkages to access resources. The contribution therefore illuminates the entrepreneur's micro practice mechanisms of accessing within the entrepreneurial ecosystems.

Practically

This study makes the following three practical contributions. Limited knowledge of how entrepreneurs access resources increase their risks and makes them more vulnerable to failure (George et al., 2016). It is evident that without these insights, less has been offered as practical contributions to entrepreneurs (Roundy & Lyons, 2023). First, therefore, the study is directed at entrepreneurs, highlighting the practices and routines (Spigel, 2018) entrepreneurs in the entrepreneurial ecosystem are involved in. These practices include the decisions entrepreneurs must make and the actions they take regarding which entrepreneurial actors to link with and how to engage with them. The study highlights the different tools that entrepreneurs use and the choices they make to pursue resources. In illuminating these practices, the study increases awareness of the different ways entrepreneurs' efforts can be optimised to access resources from other entrepreneurial actors in a resource-constrained environment.

Second, the study informs the development of effective policies to stimulate economic growth and avoids the development of inappropriate policies and interventions that do not empower entrepreneurs. Effective policies and their implementation that are created from evidence-based practices that are impactful for entrepreneurs contributes to successful entrepreneurial activity. The findings from the study can be utilised to improve monitoring of the appropriateness of the policies and adapt them to support a culture of entrepreneurship. In addition, policymakers can review the appropriateness of government interventions to focus more on becoming an effective facilitator in the entrepreneurial ecosystem.

Third, the study contributes insights to entrepreneurial actors regarding the entrepreneurial-led resource mobilisation through the entrepreneurial ecosystems to enable effective engagements between these groups. This addressed the intersection between the entrepreneurs' practices and the

resultant response by the entrepreneurial actors owning the resources. Resource constraint entrepreneurial actors engage in time-consuming activities, aiming to effectively allocate the resources to meet the demand. The insights can aid the entrepreneurial actors to be more accessible to entrepreneurs and make themselves more visible to them.

Methodology

The entrepreneurial ecosystem has been researched using diverse research methods, but mostly single case studies, and focused on the entrepreneurial ecosystem as the unit of analysis (Cao & Shi, 2020; Motoyama & Knowlton, 2017; Sarma & Sunny, 2017; Thompson et al., 2018). IPA has been predominately applied in psychology (Smith, 2017). Applying IPA in this study, with the entrepreneur as the unit of analysis, extends IPA into the field of entrepreneurship, and contributes to the knowledge base and understanding of a phenomenon primarily through the lens of the entrepreneurs through lived experiences of the phenomenon.

This approach as it illuminates the entrepreneurs as a central agent, deviates from the studies that primarily focused on how the ecosystem elements without the entrepreneurs as central actors. IPA assumes a connection between participants' narratives and their emotional, mental, and situated contexts (Love et al., 2020) and that of the researcher. This approach allowed entrepreneurs and researchers to interpret and discuss their experiences. Furthermore, Pietkiewicz and Smith (2014) noted that such a study can identify the key routines and systems.

1.4. Conclusion

In summary, the role of the entrepreneurial ecosystems in creating conducive environments for positive economic outcomes is critical; yet the field remains under-theorised. There is a gap in knowledge on how entrepreneurs develop their own entrepreneurial ecosystems. Therefore, by focusing on entrepreneurial ecosystems from a bottom-up perspective, the study aims to contribute to the understanding of how entrepreneurial ecosystems develop. Adopting a qualitative methodology and specifically IPA, the study aims to generate rich knowledge and an understanding of the phenomenon based on the

entrepreneurs' lived experiences. Lastly, drawing from RDT in a context of a developing economy, the study aims to respond to the criticism that most of the extant research studies on entrepreneurial ecosystems are not representative of the majority of the environments across the world, and in particular, where there are constrained resources, needing to extend RDT to a context of a multiple resource dependency.

1.5. Document Structure

The next chapter, Chapter 2, frames the research in a South African context as an emerging economy. In Chapter 3, the definitions of the entrepreneurial ecosystem and a comparison with other systems are provided, with a focus on the theoretical foundations. Chapter 4 introduces the research design and methodology, and the paradigm. In addition, this chapter discusses the population and the sample, the process to collect the data, the data quality, ethical considerations, and the IPA process. Chapter 5 provides the study's findings. In Chapter 6, the findings are discussed in relation to existing literature. Chapter 7 concludes the research with the study's contribution, limitations, and possible areas for future research. A list of references is provided in Chapter 8, followed by appendices.

CHAPTER 2. SOUTH AFRICAN RESOURCE-CONSTRAINED CONTEXT

South Africa is one of the Level-C economies, according to the Global Entrepreneurship Monitor (GEM, 2022/2023). South Africa's entrepreneurial firms have to contend with a number of barriers to success, similar to entrepreneurs in most of the developing economies as indicated by the Global Entrepreneurship Monitor (GEM, 2019/2020). South Africa scores below average in all the framework conditions that are necessary to create a positive climate for entrepreneurship, and it has a low entrepreneurship context index ranking of 49 out of 54 (GEM, 2019/2020). These barriers to success and resource constraints translate into underdeveloped market-supporting institutions, including capital markets, labour markets, as well as institutional voids, which constrain economic development, and increase the cost of transacting (Khanna & Palepu, 2000). Institutional development needs to be enhanced to achieve increased profitability for domestic firms (Dau et al., 2020).

Research on entrepreneurial ecosystems has focused on Western, developed economies; for example, Europe (Audretsch & Belitski, 2017; Audretsch & Link, 2019; Breznitz & Zhang, 2019; Colombo, Dagnino, Lehmann, & Salmador, 2019; Fraiberg, 2017). Limited attention has been given to the local economies' small cities, and revived ecosystems (Bala Subrahmanya, 2017; Roundy, 2017, 2019), and much less attention has been focused on developing economies (Arruda et al., 2015). Sheriff and Muffatto (2015) argue that in many developing and low-income countries, entrepreneurship is critical for economic growth; however, the entrepreneurial ecosystems are still in the infancy stage. For example, according to GEM (2018/2019), Africa has one of the highest positive perceptions of starting a business; yet it ranks the lowest in the actual translation from the intention leading to the physical start of a business.

In addition to studies conducted in developed economies, extant literature has primarily emphasised the identification of entrepreneurial ecosystems that are successful, thriving, and vibrant. Examples are the high-profile entrepreneurial ecosystem in Edinburgh (Spigel, 2016); Silicon Valley (Kenney & von Burg, 1999); Bangalore (Goswami et al., 2018); and Taiwan (Klingler-Vidra et al., 2016).

Developing economies have been under-studied; yet they represent a unique context that will contribute to the theorisation about entrepreneurial ecosystems (Roundy, 2017; Roundy & Bayer, 2019; Sheriff & Muffatto, 2015).

In Africa, entrepreneurial firms are frequently unable to access financial resources due to their high-risk profile (George et al., 2016) and lack of collateral. The challenge is that commercial institutions do not always wish to support the growth of entrepreneurial businesses (Dutt et al., 2016). Although performing better than most of the African countries, and South Africa has a well-developed equity, insurance, and credit market, its low level of business dynamism negatively affects the rate of entrepreneurs starting new businesses, according to the Global Competitiveness Report (2019). The rather inflexible labour market means that entrepreneurial firms are unlikely to afford the right capacity level of employees, given the lowest start-up skills level, the lowest of all the categories at 7% according to the Global Entrepreneurship Index (2019). These factors are part of the entrepreneurial failures, which contribute to the state of the environment in which the foundational infrastructure is insufficient to support business formation and growth (Dutt et al., 2016). Digitisation may offer some relief; however, there are still low levels of resource mobility to adequately support entrepreneurial activity (Cao & Shi, 2020).

South Africa ranked at place 60 out of 141 on the Global Competitiveness 2019 ranking and of the 63 countries surveyed in 2022, South Africa ranked 60th in terms of its overall competitiveness; thus, it is an appropriate context as an emerging economy for the study. South Africa's gross domestic product has been under pressure and declining, with the unemployment rate steadily rising from 24.1% in 2008; 24.3% in 2014; 27.1% in 2018; rising to 29.1% in 2019, and further rising to 32,9% according to Stats SA (2023). The South Africa National Development Plan (NDP) Vision 2030 set a target of reducing unemployment to 6% by 2030, aiming to achieve a working labour force of 24 million. However, while much of such aspired-to growth in employment will have to come from new enterprises, in an increasingly resource-constrained environment, entrepreneurial firms do not have the specialised entrepreneurial resources they

require for their businesses (Donegan et al., 2019; Liñán et al., 2011; Roundy, 2017).

Besides the very high levels of unemployment, South Africa is also one of the most unequal economies, with the majority of the entrepreneurial ecosystem activity concentrated in specific locations (WEF, 2014). Therefore, in advancing the role of entrepreneurship as a means to address poverty, all perspectives of overcoming poverty might be necessary to enable vibrant entrepreneurship (Sutter, Bruton, & Chen, 2019).

CHAPTER 3. LITERATURE REVIEW

This chapter begins with a review of the definitions of entrepreneurial ecosystems. It further distinguishes the entrepreneurial ecosystems from clusters and innovation systems and provides a critique of the entrepreneurial ecosystem research. This is followed by the study's theoretical underpinning, and a discussion on entrepreneurs' identification and selection of actors, their linkages, and their access to the critical resources in entrepreneurial ecosystems.

3.1 Definition of Entrepreneurial Ecosystem

Cohen (2006) was the first to use the concept of entrepreneurial ecosystem. To date, there is no unified definition of an entrepreneurial ecosystem (Stam, 2015). According to Ács, Stam, Audretsch, and O'Connor (2017), this is due to the varied environments and levels the ecosystems operate in. Despite the lack of such a unified definition, most definitions of an entrepreneurial ecosystem notably focus on the components, the interactions between the elements, and the impact on entrepreneurial activity (Cao & Shi, 2020). However, defining the entrepreneurial ecosystem in this manner does not acknowledge the centrality of entrepreneurs in the entrepreneurial ecosystems as the active participants developing their own ecosystem through identifying, creating linkages, engaging, and relating with the other entrepreneurial actors. Table 1 below shows the review of existing definitions studied through the lens of the RDT, which will underpin the proposed study.

Table 1: Definitions of the entrepreneurial ecosystem

Author	Entrepreneurial ecosystem	Interaction	Resource mobilisation	Entrepreneur-led
Cohen (2006)	Interconnected group of actors in a local geographic community committed to sustainable development through the support and facilitation of new sustainable ventures	Yes	No	No
(Roundy et al., 2018)	Self-organised, adaptive, and geographically bounded community of complex agents operating at multiple,	Yes	No	No

Author	Entrepreneurial ecosystem	Interaction	Resource mobilisation	Entrepreneur-led
	aggregated levels, whose non-linear interactions result in the patterns of activities through which new ventures form and dissolve over time			
Autio et al. (2019)	Regional communities of stakeholders and associated resources that specialise in supporting the start-up and scale-up of digital new ventures that compete with radical business model innovation	Yes	No	No
Audretsch and Belitski (2017)	Institutional and organisational as well as other systemic factors that interact and influence commercialisation and identification of entrepreneurial opportunities	Yes	No	No
Roundy et al. (2017)	Agents, social structures, institutions, and cultural values that act together to produce entrepreneurial activity	Yes	No	No
(Kuckertz, 2019)	Regional, complex agglomeration of entrepreneurial activity providing two classes of relevant services, namely a) enhanced entrepreneurial activity benefiting its larger economic and societal environment and b) various forms of formal and informal support that generally enhance the probability of success of entrepreneurial activity	No	No	No
Spigel (2017)	Combinations of social, political, economic, and cultural elements within a region that support the development and growth of innovative ventures and encourage nascent entrepreneurs and other	Yes	Yes	No

Author	Entrepreneurial ecosystem	Interaction	Resource mobilisation	Entrepreneur-led
	actors to take the risks of starting, funding, and otherwise assisting high-risk ventures			
Researcher	Therefore, entrepreneurial ecosystem as an interconnected group of actors, whereby an entrepreneur is regarded as the main actor who contributes to the emergence of the entrepreneurial ecosystem by identifying, selecting, and mobilising resources from multiple actors	Yes	Yes	Yes

Source: Researcher's synthesis of literature

Table 1 shows that most definitions are aligned with the top-down approach. In line with RDT and its characteristics, an entrepreneurial ecosystem in the current study is defined as 'an interconnected group of actors, whereby an entrepreneur is regarded as the main actor who contributes to the emergence of the entrepreneurial ecosystem by identifying, selecting, linking, mobilising, and accessing resources from multiple actors.'

3.2 Entrepreneurial Ecosystem Concept

Entrepreneurial ecosystems borrow from a biological term, which refers to an environment consisting of all the organisms and components that interact; a view that was extended to entrepreneurship (Spilling, 1996). Over time, a number of component frameworks of entrepreneurial ecosystems were developed (Isenberg, 2011; Stam & Spigel, 2015; Stam & van de Ven, 2019). These frameworks describe elements of the entrepreneurial ecosystems as resource allocation systems that enable entrepreneurial activities (Ács et al., 2014). Financial capital, human capital, and support intermediaries have been identified by entrepreneurs as some of the key components of the entrepreneurial ecosystem (WEF, 2013). Other recent frameworks categorise the components into resource endowments, and institutional arrangements consisting of physical infrastructure, demand, intermediaries, talent, knowledge, leadership, finance, formal institutions, culture, and network (Stam & van de Ven, 2019). According to

Autio, Nambisan, Thomas, and Wright (2018), to create an effective entrepreneurial ecosystem, these components need to interact to share critical knowledge through the various networks of entrepreneurial actors. In the entrepreneurial ecosystem, entrepreneurs are regarded as central, as they interact with the ecosystem to pursue value while using resources as they flow through existing institutions (Cao & Shi, 2020).

Scholars remain concerned that entrepreneurial ecosystems are under-theorised, amongst others, for their lack of explanations of the mechanisms through which they operate (Alvedalen & Boschma, 2017; Cao & Shi, 2020; Crişan et al., 2019; Roundy & Lyons, 2023). There are also concerns about the lack of clarity on how the networks operate, especially having to explain effective and non-effective networks; the impact different environments have on the effectiveness of the system; and the impact of the maturity levels of the various components on the entrepreneurial ecosystem or as a whole (Alvedalen & Boschma, 2017; Audretsch et al., 2018; Cantner et al., 2020). The view is that theoretical foundations need to make it explicit as to which components and relations are critical, and how they influence each other (Audretsch et al., 2018). More work is required on how the entrepreneurial ecosystem work (Cao & Shi, 2020; Roundy & Bayer, 2019), particularly how entrepreneurs access resources so that appropriate policy interventions can be implemented. Therefore, gaining an understanding of how entrepreneurial ecosystems develop is critical to advancing theory (Audretsch & Belitski, 2017).

3.2.1 Distinguishing entrepreneurial ecosystems from clusters and innovation systems

Entrepreneurial ecosystems are part of the understanding of entrepreneurship (Benjamin Spigel & Harrison, 2017), similar to clusters and innovation systems (Martin & Sunley, 2011). Clusters are regarded as a concentration of industries that are the firm's external resources, such as knowledge and specialist suppliers, focusing on the industry and on the firm's interactions. On the other hand, innovation systems focus not only on firms, but also include organisations and key institutions such as universities, and organisations that focus on research and financiers (Nuur et al., 2009). Entrepreneurial ecosystems draw from clusters

and innovation systems, which all explain the different economic performances of geographical locations (Ács et al., 2017).

There are common themes between entrepreneurial ecosystems, clusters, and innovation systems. Some of the key common characteristics are the role of networks and of institutions and organisations. They include policy interventions to stimulate business growth, as well as government support through funding and training (Spigel & Harrison, 2017). In these business ecosystems, relationships between the actors work in varying combinations; they are either uni-directional or bi-directional to enhance the system's performance. Within clusters, entrepreneurs leverage their close networks to gain business insights and increase their competitive advantage (Spigel & Harrison, 2017).

Central to the innovation system are institutions and policy, where innovation activity is driven, because specific locations are endowed with knowledge, and networks are active and enabling innovation policy initiatives (Spigel & Harrison, 2017). Drawing attention away from the national innovation system to regional innovation systems was a response by Cooke et al. (1997) to a need for a more dynamic system reflects the regional economic activity (Chung, 2002). The entrepreneurial regional innovation systems tended to respond to the availability of capital, specifically venture capital, and to pools of experienced entrepreneurs, and strong networks driving innovation, where entrepreneurial actors create their own networks and institutions (Spigel & Harrison, 2017).

While there are similarities between these concepts, Spigel and Harrison (2017) note that their micro elements work differently. For example, entrepreneurial ecosystems focus on entrepreneurs who aim to create new entrepreneurial firms that start small and then scale up, and they do not form firms in clusters (Cao & Shi, 2020). Autio et al. (2018) emphasise that in the entrepreneurial ecosystem, the focus is on the processes to capture value. In addition, while clusters and innovation systems focus on market and technical knowledge, entrepreneurial ecosystems are about the knowledge of opportunity identification, business planning, and exploiting the opportunities (Spigel & Harrison, 2017).

In the context of entrepreneurial ecosystems, the relationship between the government and entrepreneurial actors is one where the government takes on the role of facilitator and is not a direct actor as those found in clusters and innovation systems (Stam, 2015). Many skills gained by an entrepreneur are not only applicable to a specific industry or sector but accrue to entrepreneurs across sectors (Stam, 2015). For entrepreneurial ecosystems, entrepreneurship is an outcome of ecosystem activities, which interact to provide a vibrant entrepreneurial environment (Spigel, 2017).

3.2.2 Critique on entrepreneurial ecosystem research

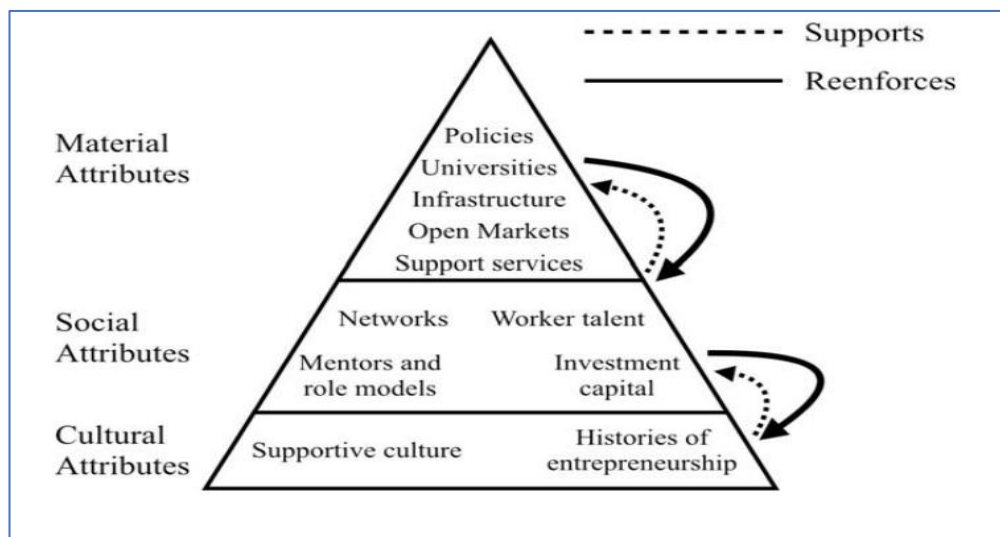
Fayolle, Landstrom, Gartner, and Berglund (2016) posit that entrepreneurship must be seen holistically. As a result, recent literature has emerged focusing amongst others, on entrepreneurial ecosystems, resource allocation, interactions, and governance (Cantner et al., 2020; Cao & Shi, 2020). Creating and growing entrepreneurial firms, takes both the individual characteristics of the entrepreneurs and their surrounding environment (Garnter, 1985; van de Ven, 1993). These characteristics include the ability to identify opportunities, access resources, and to be able to innovate and develop growth strategies (Brown & Mason, 2017). On the other hand, the surrounding environment consists of, for example, various forms of capital, institutions, culture, and policies making up an entrepreneurial ecosystem (Pfeffer & Salancik, 2003; Spigel & Stam, 2018). Overall, entrepreneurial ecosystems aim to enable the positive economic performance of entrepreneurial firms (Ács et al., 2017).

The criticism levelled against entrepreneurial ecosystem research to date is that understanding the entrepreneurial ecosystem from the entrepreneurs' perspective has lagged behind (Spigel, 2018). Most literature does not go far enough to explicitly show how entrepreneurs develop their entrepreneurial ecosystems. For example, Mack and Mayer (2016) only refer to firm rates, the impact of scarce resources, unlimited capital, and infrastructure for entrepreneurial firms. Similarly, Cantner et al. (2020) suggest that entrepreneurial ecosystems develop when entrepreneurs pursue an unexplored idea. They further argue that for an entrepreneur to exploit opportunities and capture value, relationships with other actors and the local environment are important. However,

it remains unclear how the process moves from an entrepreneur's idea into activities in the entrepreneurial ecosystem.

Despite the criticism against past research, entrepreneurial ecosystems continue to receive research attention. Recent studies have looked into various aspects of the entrepreneurial ecosystems, including the impact on the entrepreneurial firm's performance components (Motoyama & Knowlton, 2017; Stam & van de Ven, 2019), and how they can connect (see Fig 1) the ecosystem's level performance (Roundy et al., 2017; Stam, 2018). It also looked at the strong and active entrepreneurial ecosystems that continuously generate new knowledge, create pools of skilled workers, and create a positive culture that attracts more support (Qian, 2018; Benjamin Spigel, 2016). Acknowledging the complexity of entrepreneurship (Berger & Kuckertz, 2016; Fayolle et al., 2016; Feldman et al., 2019), the need for a comprehensive understanding of entrepreneurial ecosystems has been highlighted, including the entrepreneurs' perspective (Motoyama & Knowlton, 2017; Spigel, 2018; Thompson et al., 2018).

Figure 1: Relationships amongst ecosystem attributes



Source: Spigel (2015)

Calls have been made for entrepreneurial ecosystem frameworks to go further than defining the components, and to also explain the impact of the various contexts on the ecosystem, as well as substantially distinguish itself from other geographical ecosystem frameworks (Cao & Shi, 2020; Colombo et al., 2019; Spigel & Harrison, 2017). In this literature review, the phenomenon of

entrepreneurial ecosystem is defined and distinguished from clusters and innovation systems. Some scholars also encourage entrepreneurial ecosystem research to not only focus on developed economies (Cao & Shi, 2020). Therefore, this study focuses on the perspective of the entrepreneur of the resource access in the entrepreneurial ecosystem between the entrepreneurs and other entrepreneurial actors. Specifically, the focus is on the entrepreneurs' experiences as they mobilise to access scarce resources for their businesses from the entrepreneurial actors in a resource-constrained environment.

3.3 Theoretical Underpinning

3.3.1 Resource dependency theory

This study draws from the RDT to theorise how entrepreneurs develop their entrepreneurial ecosystems in their effort to respond to the resource requirements for the growth and survival of their firms. In terms of the RDT, organisations depend on the external environment to access the resources they do not have within their firms (Pfeffer & Salancik, 2003). Key RDT assumptions are first, that the external environment has resources that are critical for the entrepreneur's business; second, that organisations without these critical resources are dependent on other organisations that own the resources; and lastly, that there are power imbalances between the organisations (Pfeffer & Salancik, 2003).

Organisations also engage in dependency reduction strategies to secure critical resources (Pfeffer & Salancik, 2003). The dependency reduction strategies include mergers and acquisitions; joint ventures and alliances; a board of directors; political action; and succession planning to mitigate the risk of resource uncertainty (Pfeffer & Salancik, 2003). Dependency is created when firms do not own all the required critical factors of production necessary for their business models (Hillman et al., 2009; Tokman et al., 2019). Organisational strategies, such as mergers and acquisitions, alliances, joint ventures, and board interlocks are deployed to manage the risk of dependency on other firms and in turn, they increase the firm's relative power (Emerson, 1962).

Resource Dependency Theory (RDT) has been relied upon to understand resource dependency (Pfeffer & Salancik, 2003) in varying environments, and this has an influence beyond management studies. For example, RDT has been extended to healthcare, marketing, psychology, education, strategy, and sociology (Davis & Cobb, 2010); however, it remains dominant in management studies (Pustovrh, Rangus, & Drnovšek, 2020). It has also been extended to explain other areas, such as organisational performance (Drees & Heugens, 2013), and environments not only driven by competition but by collective interests (Villanueva et al., 2012). Although the RDT focuses more on large actors, it has also been successfully extended to small firms (Shu & Lewin, 2017) and to nascent entrepreneurial ecosystems that rely on exogenous sources to create and attract resources for their growth (Roundy & Bayer, 2019). However, Ozturk (2020) notes that most of the RDT applications have focused on dependence reduction strategies; and in particular, mergers and acquisitions, and board interlocks.

RDT in entrepreneurship is relevant, because entrepreneurs are not always confident about their resource endowments, and thus rely on their environment for additional resources (Pustovrh, Rangus, & Drnovšek, 2020; Villanueva et al., 2012). When entrepreneurs are reliant on resources from other entrepreneurial actors, they also enter into relationships with such actors, who are regarded as powerful on the basis of their possession of the resources (Pfeffer & Salancik, 2003). However, Gulati and Sych (2007) challenged the single-sided focus on dependence and power imbalance and argued that joint dependence (or interdependence) can also be an outcome, where organisations can pursue control over the resources through cooperative interactions. According to Hillman et al. (2009), management of environmental dependencies is not only concerned with a potential takeover of other organisations, but also with mutual cooperation and interdependence. Therefore, it is not always about seeking to increase power to secure critical resources and guarding against having to depend on powerful resource owners (van de Ven et al., 2007).

While power relationships are present in resource-dependent relationships, there are also collective mutual dependence relationships as well. Van de Ven et al.

(2007) argued that instead, the “entrepreneurs might also appeal to collective interests to create and leverage a long-term relationship”. They argued that resource mobilisation does not always follow a logic of self-interest but is also motivated by opportunities for both parties. Therefore, acquiring external resources is also facilitated by mutual dependence and not only by taking advantage of power over the other (Villanueva et al., 2012). In addition, the nature and amount of the resources required for successful entrepreneurial activity are unlikely to be concentrated in a few entrepreneurial actors only; therefore, entrepreneurial firms need to engage with various actors and organisations to be able to gain access to resources (Villanueva et al., 2012). Amongst entrepreneurial actors, there also exist collaborations to forge relationships (Pustovrh, Rangus, & Drnovšek, 2020). Through collaborating and networking, organisations can achieve mutually beneficial outcomes (Lavie, 2005), creating positive outcomes beyond the limitations of the individual entrepreneurs, for increased knowledge-sharing amongst the various entrepreneurial actors (Richey et al., 2009).

Gaps in the RDT remain, despite its extensive application, and it is experiencing a recent resurgence in popularity (Katila, Rosenberger, & Kathleen, 2008; Pustovrh, Rangus, & Drnovšek, 2020; Roundy & Bayer, 2019). Key RDT research gaps remain in the limited application of combined strategies (Hillman et al., 2009). Ozturk (2020) notes another concern that scholars mainly focus on dependency reduction strategies resulting in the limited development of the main theoretical concepts of the RDT. Another observation noted by Pfeffer and Salancik (2003) was that there may be dependence reduction strategies other than the ones they developed. In addition, while the RDT has been applied to entrepreneurial ecosystems (Roundy & Bayer, 2019), there is a scarcity of research focusing on entrepreneurs as they engage multiple actors to access the necessary resources from the entrepreneurial ecosystems, which is the focus of the current study.

3.3.2 Resource dependency theory boundary conditions and the entrepreneurial ecosystems

This research draws from RDT to study entrepreneurial ecosystems because of the resource scarcity environment for entrepreneurs. It is an appropriate theory due to its systemic lens in board interlocks. The appropriateness of RDT to study entrepreneurial ecosystems is underpinned by resource scarcity for entrepreneurs, as well as that of the entrepreneurial ecosystems in resource-scarce environments (Brown & Mason, 2017; Roundy & Bayer, 2019). Specifically, this study focuses on the bottom-up approach of the entrepreneurial ecosystem, where the entrepreneur depends on the entrepreneurial ecosystem actors for critical resources (Spigel, 2018). Drawing from the RDT, the aim is to understand how entrepreneurs access resources through engaging the external environment (Pfeffer & Salancik, 2003), which comprises multiple actors.

Entrepreneurs look to the ecosystem as their external environment to access resources for their firms' survival (Zane & DeCarolis, 2016a; Zhang et al., 2010). The external environment is critical to entrepreneurs because it consists of resources that they depend on and require, but which may be scarce or not always readily obtainable by the firm (Barney & Ulrich, 1984). The RDT is relied upon to explain the power dynamics, as the entrepreneurs depend on the other entrepreneurial actors in the entrepreneurial ecosystem who have the resources that they do not have an aim to access (Zhang et al., 2010). Applying the RDT to entrepreneurial ecosystems responds to the call by Brown and Mason (2017), stating that given the scarcity of resources for entrepreneurs, it is an appropriate lens for the proposed study. Tokman et al. (2019), aligning with Moore (1993), note that "firms need to align themselves with others that hold attractive resources to co-evolve in an ecosystem in order to gain an advantage in marketplace competition". Given the critical resource limitations in emerging economies (Brown & Mason, 2017), the resource dependency theory is therefore seen as a useful lens to study the bottom-up approach of entrepreneurial ecosystems. According to Sheriff and Muffatto (2015), the need to mobilise resources is much more pronounced amongst entrepreneurial firms in emerging economies.

Work on systems in the RDT is linked to some of the empirical work, with reference to board interlocks (Mizruchi et al., 2006). Board interlocks are a form of system that connects directors to companies (Howard et al., 2017). Even though it is a dyadic relationship, it does not explain the practices where there are multiple resource relationships. Interlocking directors, who can serve on one or more boards, impact the firm by bringing together otherwise disparate firms (Connelly & Van Slyke, 2012). Valeeva, Heemskerk, and Takes (2020) argue that the firm and board directors' interlock should be analysed as social systems characterised by the actors and their interests. Therefore, the board of directors, through interlocks, creates network systems to respond to resource dependency (Pfeffer & Salancik, 2003). Board of directors' networks are therefore a system (Burt, 1980) that forms when firms experience resource uncertainty and thus diversify their network partnerships through board interlocks (Beckman, Haunschild, & Phillips, 2004). Therefore, the RDT, through its systemic lens in board interlocks, is seen as an appropriate theory for the study of the entrepreneurial ecosystem.

3.4 Typology of Resource Requirements for Entrepreneurial Firms

The typology of the resource requirements for entrepreneurs has evolved; however, there are key resources that remain central throughout.

Table 2: Typology of entrepreneurial resources

Author	Finance	Human capital	Social capital	Other resources
Aldrich & Martinez (2001)	Yes	Yes	Yes	No
WEF (2013)	Yes	Yes	No	Yes
Zane & DeCarolis (2016)	Yes	Yes	No	Yes
Spigel & Harrison (2017)	Yes	No	Yes	Yes
D. B. Audretsch & Link (2018)	Yes	Yes	Yes	Yes
Stam & van de Ven (2019)	Yes	Yes	No	Yes

Clough, Fang, Bala Vissa, & Wu (2019)	Yes	Yes	Yes	Yes
Cao & Shi (2020)	Yes	Yes	No	Yes

Source: Author's synthesis of the literature

There is no unified list available of what the key resources for entrepreneurs are; see, for example, Table 2 above. However, most scholars recognise that there are other entrepreneurial resources beyond finance and human capital. According to entrepreneurs, the top resource requirements for their businesses are access to the market, human capital, financial capital, mentors, advisors, regulatory framework, training, and universities as catalysis and cultural support (WEF, 2013). Although financial, human, and social capital are the most prominent factors or requirements (Figure 2), all the resources are critical, based on the context and location of the entrepreneurial firm (Cao & Shi, 2020). With regard to the most prominent requirements, some of the scholars raised a number of arguments.

First, finance builds the capacity to create sufficient reserves to fund new entrepreneurial firms; therefore, the growth of the business is limited without capital; hence, entrepreneurial firms look to the environment for their funding resources (Martens et al., 2007). More funding is attracted by a high-growth orientation, which drives the mobilisation of funding to the ecosystem (Guerrero & Urbano, 2017). The provision of capital also unlocks entrepreneurial potential (Sutter et al., 2019). Mizruchi and Stearns (1988) noted that appropriate financial resources are the main driver for board interlocks, even though other intangible resources, such as knowledge as a resource, have also emerged as being critical (Zhou, 2012). Clough et al. (2019) also note that capital resources underpin various forms of resources.

Second, in entrepreneurship, human capital in the form of the relevant individual skills and knowledge is central. Other employees also add much-needed entrepreneurial capacity. Guerrero and Urbano (2017) also find that in emerging economies, universities and research institutions reduce the constraints to perform and improve knowledge-sharing. Lastly, social capital at both the personal and the organisational level facilitates access to other resources, such

as financial capital and access to networks that are critical for entrepreneurial firms to influence numerous decisions regarding where best to mobilise and allocate resources in the ecosystem (Guerrero & Urbano, 2017). Another critical consideration of resource mobilisation is that the initial stock of personal endowment of resources increases as similar resources are accessed from the other actors, culminating in the firm's resource endowments (Clough et al., 2019).

3.5 Entrepreneurs and the Entrepreneurial Ecosystems

3.5.1 Identification of entrepreneurial actors' providers of entrepreneurial resources

Entrepreneurs depend on other actors to perform their roles, as they can only perform limited activities (Brown & Mason, 2017; Thompson et al., 2018; H. Van De Ven, 1993). Therefore, entrepreneurs mobilise resources, and entrepreneurial actors in turn allocate entrepreneurial resources (Audretsch & Link, 2019; Bhawe & Zahra, 2019; Isenberg, 2011; Stam & Spigel, 2015). Entrepreneurs identify entrepreneurial actors who possess the relevant resources for their entrepreneurial firms (Clough et al., 2019). Initially, there is uncertainty of where the resources will come from, but the search is enabled by networks such as family members, and later through new networks that are actively pursued in the formation of new ties. The identified entrepreneurial actors are then perceived to be more valuable, based on the relevance of the resources they possess (Clough et al., 2019). According to Autio and Levie (2017), the identified entrepreneurial actors, such as incubators and accelerators, entrepreneurial financial sources providers consisting of business angels and venture capitalists, and knowledge resource providers, such as universities, all enhance the system and make it effective.

Dedehayir, Makinen, and Ortt (2016) categorise actors into four group roles. These are the leadership roles that include ecosystem leaders; direct value creation roles; value creation support roles; and entrepreneurial ecosystem roles. Other actors are specific to the nature of the entrepreneurial business, such as entrepreneurship in technology. Sussan and Ács (2017) note that the digital entrepreneurship ecosystem includes not only traditional entrepreneurship ecosystem actors but also those peculiar to the digital-environment

entrepreneurial ecosystem. In some cases, especially where there are technology-based opportunities, there is also the presence of technology support actors as part of the entrepreneurial operation (Elia et al., 2020). Entrepreneurs must make decisions and take action on the resource requirements of their entrepreneurial firms and identify what other actors they need to interact with to achieve their goals (Brown & Mason, 2017; van de Ven, 1993).

3.5.2 Entrepreneurs' selection of entrepreneurial actors

According to the RDT, to avoid being taken advantage of, entrepreneurs seek to minimise their dependence on powerful resource holders (Pfeffer & Salancik, 2003). As a strategy, entrepreneurs may have to use multiple resource providers for their resource requirements to mitigate the risk of having a sole provider (Villanueva et al., 2012). However, it is not always possible to have access to varied resource providers; hence, the selection of entrepreneurial actors is also based first on the ability to provide defence through formal contracting arrangements between the parties (Villanueva et al., 2012). On the other hand, the selection is driven by the need to have a competitive advantage through access to unique and critical resources, even where the entrepreneurial firm may be at risk without a formalised defence (Villanueva et al., 2012). Entrepreneurs also select actors based on the reputation and ethical value of the actor. Given the power asymmetry, entrepreneurs are sometimes willing to sacrifice value to gain access to a reputable ethical resource provider, particularly in cases where high-status providers are less likely to take advantage of the entrepreneur's offerings (Clough et al., 2019).

It is not a foregone conclusion that the power imbalance will always translate into entrepreneurs being taken advantage of (Villanueva et al., 2012). However, based on cooperation and a long-term view of relationships by the actors, resource providers do not always negatively disadvantage entrepreneurial firms (Gulati & Sytch, 2007; Piskorski & Casciaro, 2005). Entrepreneurs are also more likely to select actors who are open to mutually beneficial relations, and who do not (ab)use the power imbalance to their advantage. Where there is joint dependence between the entrepreneurs and entrepreneurial actors, then there is

an increased flow of resources to the entrepreneurial firm (Villanueva et al., 2012).

Support by third parties also mitigates against resource uncertainty. With the presence of a third-party social partner to provide defence, the entrepreneurs are able to select and enter into relations where there is an asymmetry of power (Hallen & Rosenberger, 2014; Katila et al., 2008). However, some of the organisations interact with the intention to misappropriate resources; hence, entrepreneurs need to have defence mechanisms in place, such as social defence partners, patent rights, and critical information secrecy or confidentiality contracts (Hallen & Rosenberger, 2014). According to Hallen and Rosenberger (2014), as entrepreneurial firms mobilise resources, these third-party partners provide critical support to mitigate the potential risks because the resource environment may not always be dependable or trustworthy. Third-party partners also play the role of suggesting to entrepreneurs' other actors, and they can also provide guidance on the characteristics of actors who will reduce the resource dependency risk.

3.5.3. Entrepreneurs' linkages with entrepreneurial actors

Understanding various linkages is important to illuminate the critical mechanisms of the entrepreneurial ecosystem (Audretsch, Mason, Miles, & O'Connor, 2018; Roundy, 2020), especially understanding the critical linkages between the entrepreneurs and the entrepreneurial actors to access resources (Abootorabi et al., 2021). Existing studies have argued that understanding how the entrepreneurial ecosystem works also impacts the levels of entrepreneurial activity, as well as the development of the appropriate policies (Alaassar et al., 2022; Germain et al., 2022; Spigel & Harrison, 2018; Stam & Spigel, 2016, Oladele et al., 2022; Roundy & Bayer 2018). Linkages between entrepreneurial ecosystem actors are more pronounced in maturing entrepreneurial ecosystems, improving coordination and impact (Cho et al., 2022; Chowdhury et al., 2019; Roundy & Bayer, 2018; Rawhouser et al., 2017).

Where the entrepreneurial ecosystem is underdeveloped (Roundy & Bayer, 2018), weak linkages (Rawhouser et al., 2017) undermine the efficiency of the

system. Therefore, where entrepreneurial ecosystem linkages are underdeveloped, entrepreneurs have to adapt to mitigate the malfunctioning of the ecosystem (Shi & Shi, 2022; Spigel & Vinodrai, 2021) by developing their linkages to the entrepreneurial actors.

3.5.4. Relationships between entrepreneurs' entrepreneurial actors as resource owners

RDT is a useful lens through which to analyse how actors manage relationships when power imbalances arise (Pfeffer & Salancik, 2003, p. 298). Entrepreneurial firms are more dependent on other entrepreneurial actors, making the resource holders powerful actors (Emerson, 1962). Zheng and Xia (2018) found that the exchange transactions are not only based on the dependence relationship but also on the social relationship. This suggests that the entrepreneurial firm's growth is also affected by its relational capability and ability to develop healthy social networks (Lechner & Dowling, 2003). According to Gartner and Birley (2002), successful entrepreneurs are likely to leverage more networks to grow their businesses.

These relationships are also facilitated by the shared location within the same area, which enables sharing of resources (Colombelli et al., 2019). Entrepreneurs develop their own networks through informal contacts in addition to those mediated through formalised networking (Spigel & Harrison, 2018). Useful interactions that facilitate, for example, knowledge-sharing, depend on the level of trust between the entrepreneurs and the entrepreneurial actors (Bammens & Collewaert, 2012).

As these networks form and grow, the structure of the ecosystem also changes to flexible relations and a less formal climate (Colombelli et al., 2019). The effectiveness of these interactions depends on the level of trust, as they share sensitive business matters (Spigel & Stam, 2018). Where different relationships between entrepreneurs and entrepreneurial actors emerge, they are able to develop institutional arrangements for the flow of resources (van de Ven, 1993), and more external resources become drawn into the ecosystem (Dai et al., 2012).

3.5.5. Entrepreneurs' access to the required resources from the entrepreneurial actors

Even if resources are in the ecosystem, they are controlled by someone, and it will still require the entrepreneur to have the capacity to access them (Villanueva et al., 2012). According to Clough et al. (2019), entrepreneurs can gain access to the resources in a number of ways. Entrepreneurs will attract the attention of the entrepreneurial actors by signalling their quality, particularly given the competition for resources; and by letting others know about their quality as entrepreneurs, they can share this information with actors who possess the necessary resources. Entrepreneurs also use their powerful entrepreneurial stories to gain access to resources (Clough et al., 2019), and to gain access to resource holders who have a bias in favour of certain attributes of the entrepreneur, for example, gender bias.

It is critical for the entrepreneurial ecosystems to effectively enable entrepreneurs to access resources (Spigel, 2018). For resource allocation to be productive, entrepreneurs must be able to know how to effectively mobilise resources obtained in ecosystems (Cao & Shi, 2020). The relative ease of access is also facilitated by coordination supported by a shared vision with agreed goals (Spigel, 2016). Stam and van de Ven (2019) find that actors in the entrepreneurial ecosystem “are mutually inter-dependent as they co-evolve”, for example, when less capital is likely to be allocated to the entrepreneur because of their risk profile, and to be able to raise more capital will require collaborations to achieve syndicate funding (Guerrero & Urbano, 2017).

Entrepreneurs also develop mutually beneficial relationships with resource providers to access resources (Cao & Shi, 2020). These relationships also mediate knowledge spillovers, building on human and social capital (Colombelli et al., 2019). Where there is an increased rate of networks and interactions, there is also an increased pool of resources to access (Beltagui et al., 2020; Elia et al., 2020; Lehmann & Seitz, 2017). Thompson et al. (2018) examined the micro activities of the ecosystem and noted that initial activities are dispersed, and later, they transition to an order that is coordinated and integrated, facilitating improved access to resources. Resource transfer may be put at risk by opportunistic behaviour due to the power imbalance (Clough et al., 2019). However, the social

sanction can contribute to the desire of entrepreneurial actors to maintain their reputation and trust, thus it can facilitate resource transfer to entrepreneurial firms.

3.6 Conclusion of Literature Review

The focus of this study is the contribution to the entrepreneurial ecosystem research from the entrepreneur's perspective of resource access, and how the RDT will be better understood in relation to multiple resource dependencies. As the literature review has expressed, entrepreneurial ecosystem resources are critical for the growth and survival of the entrepreneurs and their firms. In the literature review, it was explained that the entrepreneurial ecosystem consists of many actors who influence entrepreneurs and their entrepreneurial firms. Scholars remain concerned though, that entrepreneurial ecosystems remain under-theorised for their lack of explanations, amongst others, of the micro-mechanisms through which they operate (Alvedalen & Boschma, 2017; Cao & Shi, 2020; Crişan et al., 2019).

In the literature review, it was noted that entrepreneurial ecosystems have similarities, as well as differences, regarding innovation and cluster ecosystems. Specifically, in entrepreneurial ecosystems, the relationship between government and the entrepreneurial actors is that government takes on the role of a facilitator and not a direct actor, such as the one found in clusters and innovation systems (Stam, 2015). The literature review emphasised the importance of the agency of the entrepreneur, with the entrepreneur being the driver for change in the entrepreneurial ecosystem. Drawing from the RDT, which is experiencing a resurgence in popularity, the literature review also emphasised the impact of the external environment on the resources that the entrepreneurs require to access for the growth of their firms and the power dynamics involved. However, there are gaps in the literature regarding the RDT, which include multiple resource relationships by entrepreneurs in the entrepreneurial ecosystem. Although the RDT works predominately with dyadic relationships, the literature showed that directors in board interlocks are in systemic relationships.

The concern remained that practices of the entrepreneur in developing their entrepreneurial ecosystem had not been fully explored. Therefore, this review focused on the entrepreneurs, as they identify the entrepreneurial actors and establish relationships to access the resources. In addition, a resource-constrained context within which an entrepreneurial ecosystem develops has an impact on the success of the entrepreneur in accessing resources. The results gathered from the study will therefore contribute to the understanding of bottom-up entrepreneurial ecosystems and extend the RDT to multiple resource dependencies.

CHAPTER 4 RESEARCH DESIGN AND METHODOLOGY

This chapter sets out the research design and methodology that was used for this research study. The study's objective was to understand how entrepreneurial ecosystems are developed from the entrepreneurs' perspective. The research design, the chosen paradigm, and the research approach, including the context of the study as well as the setting will be discussed. This will be followed by the section on the methodology to explain the population, the sample size, and the unit of analysis. The following section covers how data was collected and analysed. The last section illustrates how data quality was ensured and the limitations applicable to the study.

4.1 Research Design

The purpose of this study was to garner an understanding of how entrepreneurial ecosystems are developed from the entrepreneurs' perspective. To this effect, a qualitative research method was adopted as it offers the advantage of zooming into specific contexts and activities of entrepreneurs with varying circumstances (van Burg et al., 2020). While there are popular templates that have been adopted widely "not all qualitative research in entrepreneurship fits these templates, as they explore different types of phenomena or embrace different (ontological) assumptions" (van Burg et al., 2020). In line with the interpretivist paradigm, this study adopted a qualitative enquiry to advance the knowledge and understanding of entrepreneurial ecosystems. Qualitative methods are appropriate for entrepreneurship research, given their characteristics, which include uniqueness, heterogeneity, and volatility (van Burg et al., 2020). Entrepreneurial researchers are encouraged to be open and embrace a variety of methodologies and pursue novel theorising of entrepreneurship processes.

In this study, the qualitative research design aimed to capture the entrepreneurs' reflections, thoughts, feelings, and perspectives as they make sense of their experiences. The researcher did not formulise any hypotheses or propositions and consequently, the study was inductively driven by data. In deciding on the appropriate design to study the topic under observation, the opportunity was taken to adopt a relatively new approach (Bhakoo et al., 2019; Gehman et al.,

2018). According to van Burg et al. (2020), embracing different methods and approaches facilitates different ways of analysing data.

The basis of the study was that the experience of the phenomenon regarding resource access in an entrepreneurial ecosystem is not separate from the entrepreneur who experiences it (Berglund, 2015). Knowledge is created by individually based experiences of the phenomenon (Creswell et al., 2007). The process is critical with the emergence of themes out of the account of the entrepreneurs' experience. Therefore, it was argued that in seeking to understand the entrepreneurial ecosystem and its nuances, the topic cannot be examined in an objective, scientific, and statistically based study; hence the qualitative phenomenological study was appropriate (Brocki & Wearden, 2006). Qualitative researchers assume that reality is a human creation; it contextualises meanings and it is an advantage to undertake inductive studies as they also consider context to understand the meaning (Cunliffe, 2010).

This research was a phenomenological study employing an IPA approach, a relatively new qualitative approach that focuses on the lived experiences of the participants (Cope, 2011). The aim was to advance rigour in this entrepreneurship research and gain a rich understanding of the phenomenon.

Phenomenology

IPA draws from phenomenology philosophers who developed and further adapted phenomenology. Amongst the key philosophers are Husserl and Heidegger (Smith, Flowers, & Larkin, 2009). The work of these philosophers varied with regard to their main ideas; however, the focus on lived experience was commonly shared. Drawing from their work, phenomenology is defined as an approach to studying experiences and perceptions of things, focusing particularly on human experience. People are regarded as "embedded and immersed in a world of objects and relationships, language and culture, projects and concerns" (Smith, Flowers, & Larkin, 2009, p. 21). Engagement with the world is seen as intentional and people are connected with other people as well as their context (Smith et al., 2009; Berglund, 2015).

According to Berglund (2015), regarding the appropriateness of phenomenology to gain an understanding of entrepreneurship, entrepreneurship is characterised by intense uncertainty and indefiniteness implying “that all situational contingencies – as well as the entrepreneur’s entire life-history of experiences and relationships – is of potential relevance” (Berglund, 2015).

Phenomenology therefore enabled the researcher to garner insights into human experiences (Nizza et al., 2021). Lived experiences encompass encounters with everything within one’s lifeworld (Boden, Larkin, & Iyer, 2019). In addition, it was noted that researching experiences is complex as it requires participants to not only remember but also be able to express their experiences and meaning (Smith, 2011). The aim of this study was to produce a close but not exact account of the entrepreneurs’ experiences.

4.2 Research Paradigm in IPA

Scholars have argued that in addition to the methodology, researchers must clearly articulate their ontological and epistemological positions (Leitch et al., 2010). To explore how entrepreneurs develop their entrepreneurial ecosystems, this research followed an interpretive paradigm, where the entrepreneurship context is critical for understanding the phenomenon (Hlady-Rispal & Jouison-Laffitte, 2014; Leitch et al., 2010). Entrepreneurship is versatile and complex with many different actors requiring varied ontological and epistemological positions (Leitch et al., 2010).

There are varying views on the ontological positions aligned to IPA, which are best seen as a continuum (Cunliffe, 2011; Smircich, 1980). For example, Willig (2013) states that the relativist ontology is aligned to IPA, while on the other hand, Packard (2017) posits that the inherent focus of IPA on personal perceptions makes an interpretive ontology more aligned. The aim was therefore not to objectively describe the entrepreneurs’ experiences in the access to resources in the entrepreneurial ecosystem that reflects external reality. Instead, the study adopted the belief that understanding can be gained from a subjective viewpoint. Therefore, the study adopted the interpretivist ontological view with the underlying assumption of reality as a projection of social construction (Cunliffe,

2011; Smircich, 1980). This study was underpinned by the view that the research of a phenomenon of the social world is not about a detached unconnected truth (Leitch et al., 2010).

Stating in advance the researcher's epistemological stance aligned with IPA, the researcher's perspective was that knowledge can be generated both endogenously and exogenously (Mantzoukas, 2004) as both the researcher and the participants are engaged in an interpretive process. In IPA the researcher actively participates in the creation of knowledge (Jaeger & Rosnow, 1988). IPA adopts an epistemological standpoint that an interpretative approach enables an in-depth view of a participant's world (Biggerstaff & Thompson, 2008). According to Jaeger and Rosnow (1998) and Leitch et al. (2010), each person has the capacity to reason differently, such that the experience of the same phenomena would not lead to the exact same interpretations. Knowledge is gained from human experience of one's reality experienced, individually understood and uniquely interpreted (Leitch et al., 2010). IPA research focuses on individuals within their related context, thus producing varying outcomes (Larkin et al., 2006; Rajasinghe et al., 2021).

In line with the interpretivist perspective that the subjective experience of reality can therefore be known (Hlady-Rispal & Jouison-Laffitte, 2014) and this is the position that this study adopted, generating knowledge both endogenously and exogenously.

4.3. Research Approach

The Interpretative Phenomenological Analysis approach adopted in this study is based on phenomenology and consists of two elements, namely, hermeneutics and ideography. The process involved bracketing, which was necessary to allow for meaning to emerge out of the individual experiences and not the researcher's preconceptions.

4.2.1 Interpretative Phenomenological Analysis (IPA) approach

This study explored the entrepreneur's resource access in the entrepreneurial ecosystem, based on the lived-world experiences of entrepreneurs, following an

IPA approach to understand the entrepreneurs' perspectives (Packard, 2017). Van Burg et al. (2020) further argue that choosing a method should be underpinned by a logical understanding of what is optimal for the phenomenon. This approach enabled the entrepreneurs to give an account of their interpretation of experiences they encountered during the process of accessing resources in the entrepreneurial ecosystems (Pietkiewicz & Smith, 2014). This approach provided for the development of insights, rich details, and thick descriptions of entrepreneurs' experiences, demonstrating that entrepreneurs are not merely passive observers of reality, but they find ways to make meaning out of the experiences (Brocki & Wearden, 2006). Specifically for this study, IPA processes helped the researcher to explore entrepreneurship from a practitioner's perspective and facilitated the appreciation of what happens in the phenomenon under study (Rajasinghe et al., 2021).

Cope (2005) noted that entrepreneurs are not always in a position to fully explain their actions and therefore, the researcher enters a world that may be confusing. As a consequence, the interpretations offered by the entrepreneurs were part of a phenomenological inquiry as an interpretive process (Cope, 2005). To understand how entrepreneurs develop the entrepreneurial ecosystem phenomenon through exploring their perspectives, views and understanding, the researcher immersed into their lived experiences through first enquiring about the type of their ventures (Berglund, 2015). As an interpretive process, the importance of language as a means to express experiences was central and affecting the researcher during the data analysis, as well as the ability of the entrepreneurs to express themselves and account for their experiences (Brocki & Wearden, 2006)

4.2.2 Motivation for IPA

IPA is regarded as a qualitative methodology with rigour (Biggerstaff & Thompson, 2008). For the purposes of the research, IPA was selected for two reasons. First, IPA is suitable when one studies a novel phenomenon (Smith & Osborn, 2003). The entrepreneur's perspective on the accessing resource in the entrepreneurial ecosystem is an area with limited research (Spigel, 2018). Entrepreneurial ecosystem studies had largely followed a top-down approach,

resulting in the unique practices that manifest as entrepreneurs identify, select, and relate in their attempt to access scarce resources missing to provide the understanding of how these systems work (Spigel, 2018).

Second, although IPA is popular in the field of psychology (J. A. Smith, 2004), it has been applied, to a limited extent, in other disciplines, such as social sciences and entrepreneurship (Cope, 2011; van Rensburg & Ogujiuba, 2020). IPA is useful to contribute knowledge that other popular methods might not be able to achieve; by going deeper into the resource access in the entrepreneurial ecosystem's phenomenon through the entrepreneurs' lived experiences, paying attention to both the context and process (Cope, 2011). Pietkiewicz and Smith (2014) argue that the objective of such a study is to identify the key routines and systems; hence, the study aimed to identify the unique practices and experiences of entrepreneurs as they relate to multiple entrepreneurial ecosystem actors. Gartner and Birley (2002) argued that qualitative methods are able to help respond to the 'what is the missing question'. Biggerstaff and Thompson (2008) noted that in health research, health practitioners are "often intrigued and excited when they realise it is possible to analyse, in a rigorous and systematic manner, transcripts from in-depth interviews using a qualitative method such as IPA."

4.2.3 Elements of IPA

Hermeneutics

IPA as an interpretative approach draws from hermeneutics and was initially used for the interpretation of the Bible and has since then been extended beyond to other contexts (Smith et al., 2009). In IPA, sense-making is both at the level of the researcher and the participant described as engaging in a double hermeneutic (J. A. Smith, 2019). This is a complex endeavour that requires attention during the data analysis (Smith, 2011) to focus on the sense-making of the participants and understanding of the text (Smith, 2007). IPA has the capacity to foreground the context for personal meaning and sense-making (Boden et al., 2019) .

Sense-making requires hermeneutics of empathy as well as hermeneutics of suspicion that lead to questioning in an effort to find deep insights (Willig, 2013).

It is about seeking the meaning of the participants' point of view (Smith et al., 2009). Throughout the process, starting from the beginning of the interview, attention was paid to how participants introduced themselves and their businesses. During the initial data analysis, known concepts were not used as a frame to guide data analysis and interpretations (Smith et al., 2009). Contrary, these linkages with the concepts were left for later once the analyses has been concluded (Cope, 2011).

In IPA, the researcher empathetically asks questions, making it a two-way flow of information between the various parts of the data (Smith et al., 2009). To fully appreciate and gain an understanding requires a complete view of the data. In this regard, various units of meaning were analysed separately and holistically as part of the process of overall sense-making and interpretation, highlighting that the process of interpretation in IPA was not linear, but required reiterative engagement with the data (Smith et al., 2009).

Idiography

Idiography is about the analysis of the lived experiences of each participant, focusing on the subjective lived experience of a phenomenon (Love et al., 2020). The process involved inductively analysing the data, which must reach a state of reasonable completeness for each entrepreneur first, before moving on to the next participant and to the multi-case analyses (Smith, 2004). The IPA is idiographic in nature and is suited for small samples, allowing for an in-depth analysis of each participant's account (Smith et al., 2012).

This study first focused on the analysis of the individual experiences of the entrepreneurs (Smith, 2004). In this regard, idiographic outcomes were achieved through a detailed analysis of each individual entrepreneur's accounts (Nizza et al., 2021). A detailed examination analysis of individual entrepreneur's account was concluded before consolidating a write-up that included transcript extracts to highlight individual experiences.

4.2.4 Bracketing in IPA

Boden et al. (2019), argue that understanding a phenomenon requires that what is prior knowledge and expectations to be set aside, to allow data to appear as it is (Smith et al., 2009). Engaging data with pre-assumptions does not allow meaning to show fully; hence, there must be bracketing of preconceptions (Giorgi, 2005). This makes it possible to capture the essence (Neubauer et al., 2019) that indicates the fundamental meaning (Larkin et al., 2006). The argument is that inevitably, people bring preconceptions, assumptions, and experiences into the process of interpretation and thus, this can have an impact on the interpretation process, instead of the interpreter allowing what is being studied to be the focus (Smith et al., 2009).

Continuous engagement in a reflective and reflexive thinking throughout the research was part of the activity of the study (Smith et al., 2009). To bracket, memos were kept reflecting on pre-assumptions and possible unconscious bias (Smith et al., 2009). This process made the pre-knowledge of the entrepreneurship visible and enabled consciousness of such during the analysis. For example, researchers can have been exposed to the work of institutional support organisations. In addition, they can have been involved with entrepreneurs in agriculture and real estate as part of the employment requirements. The bracketing memos were documented during to data analysis. In essence, the stance taken was not for the achievement of transcendental bracketing; however, to be vigilant not to allow subjectivity to bias the analysis or the interpretation (Neubauer et al., 2019). The next section of this chapter will outline and discuss all processes undertaken during the data analysis stage.

Bracketing is a cyclical process, with some of the preconceptions identifiable at an earlier stage, while others only become apparent later during the process (Tuffour, 2017). The view held in this study was that one cannot bracket completely all the prior experience and knowledge. Notwithstanding, this can be aimed for (Smith et al., 2009).

4.2.5 Contextualising with IPA

There is an on-going consensus that context in entrepreneurship research is critical to enable a deep understanding of the phenomenon (Rajasinghe et al., 2021; Welter, 2011). In this study, context also determined the boundaries that assisted the researcher in the study of the phenomenon under investigation (Cappelli & Sherer, 1991). Context is central to entrepreneurship, because of the diversity of entrepreneurs' experiences (Welter et al., 2019). Entrepreneurial ecosystems develop at different levels, and on a national, regional, and city basis (Colombelli et al., 2019). Therefore, IPA focuses attention on a specific context (Cope, 2005). To learn more about the phenomenon, this study was conducted in the Gauteng Province in South Africa, and it focused on the entrepreneurs' ecosystem experiences as the unit of analysis.

Heidegger brought forth the view of locating people within contexts. According to Willig (2013), the context can be historical, situational, cultural, or personal. This research focused on information communication technology (ICT) entrepreneurs' experiences of the entrepreneurial ecosystem phenomenon in a specific context. Gauteng in particular, provided a context with necessary components for ICT, such as funders, education, training, support, and service organisations within reach of entrepreneurs.

4.2.6 Limitations of IPA

IPA assumes that entrepreneurs can describe their thoughts. The "interpretations of experience are always shaped, limited and enabled by language" (Smith et al., 2009, p. 194). The challenge to express with detail and with clarity is also determined by the adequacy of the language to enable such details to be articulated (Jaeger & Rosnow, 1988). People do not usually engage and communicate in a way to fully make sense and meaning of their experiences, thus, making it a challenge (Willig, 2013).

Another criticism, according to Willig (2013), is that it is not given that the experience can be appreciated fully by merely listening to how participants communicate; therefore, the IPA researcher must analyse the communication (Smith, 2011). Notwithstanding the concerns raised by Willig (2013), this study

took the view that through careful listening to the participants talk about their experiences and paying attention to the language and expressions used by the participants, that, in part, can describe the reality they are experiencing of the phenomenon.

Finally, by focusing on understanding the meanings, IPA is limited in explaining the reasons the participants experience the phenomenon the way they do (Willig, 2013). In addition, the researcher in IPA as an active interpreter can be affected by the researcher's own ability to make meaning of the data (Brocki & Wearden, 2006).

4.3 Research Setting

The access to resources in the entrepreneurial ecosystem is influenced by the local environment (Prevezer, 2001). Neck, Meyer, Cohen, and Corbett (2004) also utilised a geographic environment when classifying elements of the entrepreneurial ecosystem. The study was set in the Gauteng region in South Africa. South Africa, although it is one of the leading countries in terms of economic activity, contributing 35% to the African GDP, is also experiencing a high entrepreneurial failure rate, amounting to 75% according to Stats SA. Entrepreneurial activity in South Africa has also been declining (GEM, 2017), possibly because of the history of so many enterprises failing in their first year. In addition, according to Stats SA (2023), the country is currently experiencing a significant economic downturn. To drive positive entrepreneurial activity, various actors, including the government, may have to provide support and services to entrepreneurs. Beyond these raised challenges, it had not yet been proven what the experiences of the entrepreneurs were in interacting with other entrepreneurial actors.

The study's setting was the Gauteng Province in South Africa; however, given the nature of the ICT sector, participants' focus for accessing resources and market access went beyond the province. The region was chosen for this research because it is geographically dense, and it hosts the largest number of entrepreneurial ecosystem actors (Aspen Network Development Entrepreneurs, 2018). According to Stats SA (2020), Gauteng stands out as the economic

powerhouse of South Africa, accounting for over 60% of the country’s value-add. It also accounts for a higher level of official entrepreneurial activity compared to other provinces in South Africa. Most of South Africa’s head offices are clustered in Gauteng. Gauteng also hosts three major universities, the University of Pretoria, the University of the Witwatersrand, and the University of Johannesburg, as well as a number of reputable business schools.

Table 3 below shows that all the entrepreneurial ecosystem indicators are present in Gauteng.

Table 3: Gauteng indicators of the entrepreneurial ecosystem

Indicators	Presence
Human capital	Yes
Funding	Yes
Intermediaries	Yes
Institutions	Yes
Government support	Yes
Capacity building organisations	Yes
Entrepreneurial firms	Yes
Networking	Yes

4.4 Research Methodology

4.4.1 Population

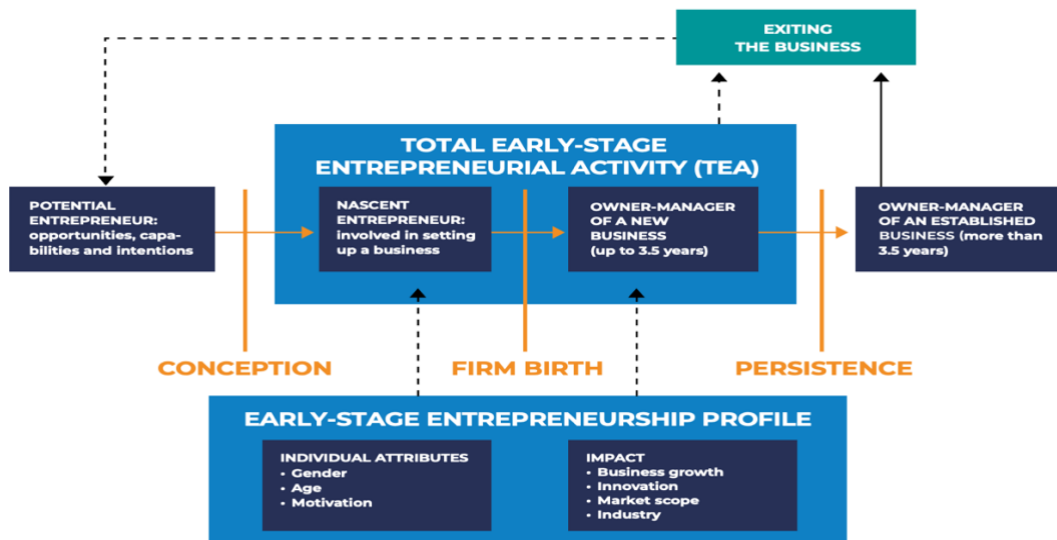
The study population consisted of entrepreneurs in South Africa. As noted, entrepreneurs are generally resource-constrained and have to look to their wider environment to access additional resources (Cope, 2005). As argued earlier in the literature review, the level of entrepreneurial intent in South Africa is high, resulting in increased demand for entrepreneurial resources. However, the developing economic status of a country such as South Africa affects entrepreneurial activities because of inadequate resource availability or limited access to resources. The need for entrepreneurial support is more pronounced in developing economies, where resources are limited (Siqueira & Bruton, 2010).

4.4.2 Sampling criteria

Brocki and Wearden (2006) posited that sampling in IPA is largely purposive and defends the use of small samples to enable the development of perspectives that are underpinned by context (Cope, 2011). What differentiates IPA is the development of interpretive accounts that give attention to detail (Smith, 2017). For this study, the sample criteria included the sector, the stage of the business, and the interaction with multiple actors to obtain resources. First, the ICT sector was chosen because of the intensity of the constraints for firms to grow and survive in this sector; hence, their need to engage and interact with the ecosystem for survival. Bosma and Kelley (2019) make the distinction between business and consumer services in the analysis of new entrepreneurial activity. Most consumer services are relatively low-cost with limited barriers to entry. Businesses such as technology or knowledge-intensive services, on the other hand, tend to be more difficult to sustain without additional external resources. In ICT, the mobilisation of resources is more critical than in other types of firms, as the commercialisation of their products and services is more resource-intensive and requires access to specialised resources (Zane & DeCarolis, 2016). Based on GEM (2019/20), the ICT sector, as part of business services, provides an ideal pool of entrepreneurs who require interaction with diverse entrepreneurial actors for their growth and survival, justifying this sector for selection for the study (Autio et al., 2018; Hallen & Rosenberger, 2014; Howard et al., 2017; Tokman et al., 2019).

Second, in line with the IPA, and in order to adequately respond to the research question and develop deep, rich knowledge, the entrepreneurs were selected consistent with the standardised classification of entrepreneurs by GEM (2022/23). In order to find entrepreneurs with rich experience of the phenomenon, the study focused on new business owners/entrepreneurs defined as those who have paid wages or salaries for three months or more, but not yet for 42 months. The study also included the established owner/managers category, being those who paid the salaries or wages for more than 3.5 years (GEM, 2022/23).

Figure 2: Stages of entrepreneurial activity



Source: GEM (2022/23)

In both stages, entrepreneurs are involved in business activities for the growth and survival of their businesses (GEM, 2022/23) as shown in Figure 2. In an unsupportive environment, it might be easier to start a new business rather than to transition a business into sustained established business ownership. These small and medium-sized companies need to gain resources and network security; thus, they develop inter-firm alliances (Tokman et al., 2019). The number of years in business for these entrepreneurs was three years and more; the stage where the entrepreneurial firm required substantial external resources as the business activities increased and the experiences of these entrepreneurs could provide valuable insights into their ecosystems. Finally, entrepreneurs interviewed were those who reached out to seek resources to establish and grow their businesses. These entrepreneurs have the experience of identifying, selecting, and engaging other entrepreneurial actors to access resources.

Initial plans to find participants through the organisations that the researcher had relationships with did not materialise. Therefore, alternative organisations were approached to introduce the researcher to a list of entrepreneurs who have gone through their support programme. A three-pronged strategy was followed to achieve the required sample numbers. First, a list of entrepreneurs sourced from the entrepreneur support organisation to whom one-on-one requests to participate in the interview were made. After the initial contact via email, a follow-

up call to all of the selected individuals was made. While some agreed to participate, some were non-responsive. The second organisation forwarded a list of entrepreneurs to be approached. All entrepreneurs were approached with a 60% positive response rate. The last organisation sent a generic email to the individuals to introduce the topic and the researcher to the entrepreneurs. Follow-ups were made and the researcher managed to achieve a 40% positive response. The last two selected entrepreneurs were known to the researcher as the company's business service providers. Therefore, the list of participants was sourced from the organisations, where the researcher had existing work contact relationships and other businesses that were pursued having valuable experience relevant to the phenomenon being studied.

Table 4: List of participants

	Name	Nature of Business	City	Source	Tertiary
1	CC	Media ICT	Gauteng	Business contacts	Yes
2	BT	ICT Security	Gauteng	Business Contact	Yes
3	LF	Financial health	Gauteng	Yiedi	Yes
4	XF	Hardware developer	Gauteng	Allan Gray	Yes
5	M B	Entrepreneurship training	Gauteng	Allan Gray	Yes
6	L M	Digitised learning solutions	Gauteng	Yiedi	Yes
7	PV	AI engine Machine learning, DataRobot	Gauteng	Yiedi	Yes
8	JM	Software developer	Gauteng	Yiedi	Yes
9	TK	Solutions developer	Gauteng	Softstart	Yes
10	LO	Property Tech	Gauteng	Allan Gray	Yes
11	ZS	Media ICT	Gauteng	Softstart	Yes
12	HF	ICT media	Gauteng	Business contact	Yes
13	PS	Blockchain	Gauteng	Yiedi	Yes
14	CG	Online integrated buy and sell platform	Gauteng	Yiedi	Yes
15	HB	Software Co. AI	Gauteng	Yiedi	Yes
16	V	Internet Cafe	Gauteng	Service provider	Yes
17	JR	ICT Support and web developer	Gauteng	Softstart	Yes
18	IA	ICT support services/developer	Gauteng	Service Provider	Yes
19	ET	Software Developer	Gauteng	Former Colleague	Yes
20	MM	Software provider	Gauteng	Business Contact	Yes
21	MK	Machine learning and data systems	Gauteng	Business Contact	Yes
22	GT	Environment Tech	Gauteng	Softstart	Yes
23	JB	Website provider	Gauteng	Softstart	Yes
24	Flo	Tech education	Gauteng	Softstart	Yes

25	MB	Training platform	Gauteng	Alan grey	Yes
26	N			Follow-up	
27	T			Follow-up	
28	C			Follow-up	
29	W			Follow-up	

4.4.3 Sample size

The goal of IPA is that every participant's account be given full attention (Pietkiewicz & Smith, 2014). IPA is not prescriptive with regard to the sample size; however, the guidance is that the number is usually small to enable a detailed analysis of each case (Brocki & Wearden, 2006; Pietkiewicz & Smith, 2014). The sample size for the study was guided first by the depth of analysis of a single case; second, by the richness of the individual cases; third, by how the researcher wanted to compare participants; and fourth, by the practical challenges one is working under. J. A. Smith (2004) suggested that it is not possible to do the detailed analysis associated with IPA with a big sample; hence, many studies have qualitative samples of 5-10 individuals or firms.

To be able to include participants who provide a rich account, purposeful sampling was followed. For this study, 30 participants were selected and extended time was taken to allow sufficient analysis per case for a detailed analysis (Brocki & Wearden, 2006). Although 30 individuals were interviewed, 25 were sufficiently responsive to answer the research question. Some of the participants were not responsive enough to provide details to the questions and seemed preoccupied with the state of their businesses during the economic challenges of the economic lockdown (which was perfectly understandable). Five individuals were subjected to a follow-up interview to ensure that the level of sufficient detail was provided as required in IPA. The final, interviewed sample of 25 provided valuable and rich information to gain deep insights from the different entrepreneurs (Gentles, Charles, Ploeg, & Ann McKibbin, 2015). Although the entrepreneurs were all actively involved in the ICT industry, they all differed in their business focus, allowing the study to have common as well as the necessary diversity amongst the ICT entrepreneurs, thus further enriching the study.

4.4.4 Unit of analysis

The study provided an augmentation in that the entrepreneur was central to the accessing of the resources in the entrepreneurial ecosystem. It is the entrepreneurs who engage with their own entrepreneurial ecosystems, who discover the business opportunity, and set in motion the process of building an entrepreneurial firm. To achieve this, the entrepreneurs identify, select, and link with entrepreneurial actors who hold the resources they require. Smith (1999) argued that ‘from an idiographic perspective, it is important to find levels of analysis that enable one to see patterns across case studies, while still recognising the particularities of the individuals’ lives from which those patterns emerge (p. 424). Therefore, the study focused on the entrepreneurs’ ecosystem experiences as the unit of analysis.

4.4.5 Data collection

The level of depth of the phenomenological interviews gives rise to ethical concerns. Informed consents were given by the participants before the interviews could commence. The participants were appraised of the study’s purpose and that the interviews would be recorded. A separate recording tool in Evernote was utilised as back-up (Irvine, Drew, & Sainsbury, 2013). In most of the research studies that used IPA, semi-structured interviews were the preferred method used (Alaassar et al., 2022; Brocki & Wearden, 2006; Rajasinghe et al., 2021).

For the purposes of this study, an effective approach to explore and gain insights into the experiences of the entrepreneurs was the use of in-depth semi-structured interviews (Spigel, 2018). The semi-structured interviews were appropriate for the study as it allowed the researcher to interrogate the participants on important parts in real-time as these topics emerged during the interviews (Pietkiewicz & Smith, 2014; J. A. Smith & Osborn, 2015). The interviews were conducted with selected entrepreneurs who have experience with the phenomenon under study for a period of 6 months from January to June and committed to additional interviews up to August 2021 for an average duration of 60 minutes (Gentles, Charles, Ploeg, & McKibbin, 2015; Guest, Bunce, & Johnson, 2006).

Although IPA researchers gather data using semi-structured interviews as a guide, broad enough questions were asked to facilitate the flow and the generation of knowledge (Cope, 2005). According to S. M. Smith, Cotterill, and Brown (2020), an interview guide is not used rigidly as it would limit and override the interests of the entrepreneur. Therefore, it was important that the interviewees took the lead during the conversation (S. M. Smith et al., 2020). This assisted the researcher with the first stage of bracketing and enabled the researcher to suspend prior knowledge to allow the participants to communicate the meaning of their own experiences. It meant not imposing the researcher's viewpoints to be part of the distinctive environment of the entrepreneur (Hycner, 1985).

4.5.5.1. Interviews

During an IPA interview, the interviewer provides an introductory context and allows participants to freely describe their experiences in detail. The introduction of the purpose of the interview was comprehensive to ensure that participants would contribute their experiences freely and honestly, and thus provide an uninterrupted flow of the interview (Cope, 2005). The aim was not to project the interviewer as one who knows (as much or) more about the topic than the participants (C. J. Thompson et al., 1989). The objective of a phenomenological interview is to attain a description of the experience that is mainly led by the participants (C. J. Thompson et al., 1989). The interview started by asking the participants "Can you tell me more about you, your business," a broad question after the context and the purpose of the interview were explained.

Brocki and Wearden (2006) made an observation that in an IPA review, most of the interviews are face-to-face; however, in this study, telephone and email were also used in cases, where the participants could not be reached for face-to-face interviews. In this study, over 95% of the interviews were face-to-face, conducted virtually on Zoom, and the balance was physical face-to-face interviews. The online face-to-face Zoom interviews enabled the recording of the interviews. Using a semi-structured questionnaire assisted in cases, where participants' engagement was limited. Both physical and zoom face-to-face interviews allowed for real-time engagement. It also allowed for unrestricted and flexible investigation as issues arose (Pietkiewicz, 2014).

The first interview took the form of a pilot interview, which provided critical insight regarding the clarity and the flow of the questions. It was a pilot to test whether the questions were clear and that they would generate the responses to answer the research question through testing for intelligibility, relevance, and completeness prior to the commencement of the rest of the interviews. The pilot test was conducted with a participant who had a similar business profile to the ones the main study was intended for. With inputs from the responses from the pilot test, the flow of questions was adjusted to ensure that the interview guide would be coherent (Kallio, Pietilä, Johnson, & Kangasniemi, 2016). Although the questions were clear (Appendix B below), the flow of the questions was amended to allow the participants to first think about the possible resources their business required in advance to aid the flow of the interview. Second, the researcher adjusted the introduction to explain that in the study, both tangible and intangible resources were referred to under resources. Questions also included demographics and business background. Participants shared personal experiences and all participants were treated with respect throughout (Smith, 2019). Each interview was treated separately so that it could not influence the other participants (Smith, 1999). One participant was interested to know what the others' views the interview were once had been completed. The response was restricted to mentioning the type of resources the others said were relevant for their businesses.

When conducting the introductions, participants were allowed to lead, allowing the researcher to make observations and take note of the expressions as well prepare for follow-up questions. Although covering the areas of interest as per the interview guide, the responses took a different flow from the original semi-structured interview guide as the participants drove the engagements. Occasionally, entrepreneurs were requested to clarify some aspects as they would have already responded to the question that was still going to be asked as per the semi-structured interview. The flow was therefore different from one interview to the other; however, all interviews covered the same questions. In IPA, according to Rajasinghe et al. (2021), semi-structured interviews enable questioning in a suitable manner, depending on the flow of the engagements during the dialogue.

The researcher's approach was to use the interview guide (Table 4 below), consisting of the interview question and follow-up questions (Kallio, Pietilä, Johnson, & Kangasniemi, 2016). The goal of the phenomenological interview was to gain a first-person description, and to allow participants to set the course of the dialogue on how they identify, select, and obtain the required resources from the entrepreneurial actors (Cope, 2005). The interview guide was consistent with the research question to ensure the collection of all relevant information. Because the interview began with broad questions, the interview guide served to ensure that all the critical areas were covered. When questions were asked, they were kept deliberately open-ended to serve as cues with limited interruptions. To avoid researcher bias, the interview questions were open-ended to give voice to the participants and allow for discoveries (Gioia et al., 2013).

Follow-up questions were conducted in such a way that they did not introduce any of the researcher's prior knowledge, except to remind participants of the possible various resources (Smith, 2017), and thus avoid personal bias. Notwithstanding having gained prior knowledge through the literature review, as well as the exposure to working with entrepreneurs in a different industry, the researcher did not have pre-exposure to entrepreneurs' perspectives on how entrepreneurial ecosystems are developed. Most of the reviewed literature on entrepreneurial ecosystem did not have the entrepreneurs' voice or perspective. Therefore, the process of bracketing was not as challenging as anticipated. While it was necessary to apply bracketing to ensure that the researcher's pre-suppositions did not unduly influence the participants' accounts, there was not much literature on entrepreneurial ecosystems from the entrepreneurs' perspective for any preconceived ideas to pose a great concern.

Subsequent and probing questions were derived from the dialogue. The first questions focused on participants to explain the nature of their business to ensure the context of the entrepreneur formed the basis of the rest of the interview. This was followed by focusing the participants on the topic; however, the probing questions were sufficiently 'loose' to allow for flexibility. The follow-up questions gave participants greater opportunities in their responses to share their own experiences. During the interview, novel perspectives arose, which had not been

anticipated and were developed further as the researcher was free to develop such with the participants (Pietkiewicz, 2014).

All interviews were conducted in English. The estimated time allocated for each interview was 60 minutes to allow for sufficient time to probe in line with similar IPA interviews (Pietkiewicz, 2014). Additional time was budgeted for interviewees who required more clarification, especially during the introduction (Irvine et al., 2013). All interviews were recorded. Also worth noting was that there were three participants who preferred a physical face-to-face interview. However, the quality of the interviews was similar to that achieved via the Zoom interviews.

Participants' permission was sought in advance for follow-up interviews, should that be necessary to clarify any section. During the data collection stage, a parallel process of data analysis also commenced. Follow-up interviews were conducted with five participants to garner the missing necessary detail. The additional interviews were over a period 4 months, which was caused by the participants' level of availability. The additional interviewing time taken was 45-60 minutes. One interview was virtual and four were face-to-face. Notably, the participants were much more relaxed, projecting a view that they shared something in common, as the follow-up clarified and elaborated what was already mentioned in the first interview.

4.5.5.2. Fieldnotes

Fieldnotes are regarded as a written record of observations, describing interactions and the context (Mulhall, 2003). They consist of elements such as the setting of the interview, how the entrepreneur conveys the information, the researcher's reactions, and other emerging revelations (Montgomery & Bailey, 2007). During the interviews, fieldnotes were taken for each interview. The notes enabled capturing of aspects that the entrepreneurs emphasised as their experiences. It also provided a space to reflect on aspects that were not clear and required a follow-up.

Additional fieldnotes were made after the interviews to note the overall impression of the interviews, highlighting aspects referred to in the analysis (Hale et al.,

2008). For example, during the note taking, it was observed that as the entrepreneurs were sharing their experiences and thoughts, they were also reflecting on their present entrepreneurial challenges (Montgomery & Bailey, 2007). At times, some of the entrepreneurs were not easy to understand or follow. This made taking of fieldnotes critical to reflect on the sequence of the experiences and the meaning of their experiences.

4.5.5.3. Saturation

IPA does not pronounce on saturation, except to caution that the number of participants should be small to enable in-depth engagement and data analysis (Alaassar et al., 2022; Rajasinghe et al., 2021; Tuffour, 2017). The aim of IPA is to gain rich individual accounts of the participants and not data saturation; hence, it is argued that each person's experiences are unique, and hence, true data saturation can never really be fully achieved (Hale et al., 2008). The view taken in this study was to achieve a detailed analysis of each individual participant's accounts to allow for rich phenomenological insights before moving to a consolidated analysis.

4.5 Data Analysis

"IPA aims at giving evidence of the participants' making sense of phenomena under investigation and, at the same time, document the researcher's sense-making," thus moving between the emic and etic perspectives (Pietkiewicz & Smith 2012, p. 6). IPA follows a well-structured data analysis approach. This study followed six key steps, which involved close reading of the transcribed interviews; writing notes; establishing emerging themes; clustering themes; writing up data for consolidated entrepreneurs' case; and producing a consolidated discussion write-up.

The aim was to write up consolidated theoretical statements regarding the entrepreneurs' experience (J. A. Smith, 1999). For this purpose, the audio interviews were transcribed using Ottei transcription software. The audio recordings provided a complete, concrete, and detailed record. All the recordings were listened to and also compared to the transcript for correctness of the transcription. Most of the interview transcriptions were accurate, except for the

names of the people and of the organisations. Through listening of the recordings, these were corrected. For two participants, a complete line-by-line transcription was needed because the quality of the Ottei translation was poor. In this regard, transcription was done using the Ottei transcript as a base and comparing it to the recordings because the software could not correctly transcribe the accent or language used. Additional work to correct the names was done. The email addresses from prior engagements were used to confirm the accuracy of the names. The internet was used to confirm some of the names. Atlas.ti was used to organise the documents into individual documents, so that each interview could be analysed separately. It enabled the researcher to create codes and the accompanying quotes and comments, which provide the researcher's interpretation to be linked together. A printed Word document format was produced to determine the emerging themes. These were further loaded on to Atlas.ti.

Step 1: Detail reading of each transcript.

Working within each case, the close reading of the transcripts of each entrepreneur was conducted three times to try and make sense of each participant's account of their experiences and observe the use of words (Brocki & Wearden, 2006). Each transcript was read three times, first for correctness, then to check for completeness, based on the semi-structured interview questions, and lastly, for data analysis interrogating each interview transcript, following the idiographic approach (Pietkiewicz, Smith, Pietkiewicz, & Smith, 2014). Except for two transcripts, the software was able to recognise and correctly transcribe most of the interviews. For data analysis, this was done by carefully reading the transcribed material in great detail to help the researcher to immerse into the data, and also to recall the atmosphere and setting of the interview (Pietkiewicz & Smith 2014; J. A. Smith & Osborn, 2015)). Then coding into units of meaning was done, following the data closely so as not to miss the unique insights, and allowing for subsequent notes to emerge from the data (Hycner, 1985). Atlas.ti was used to code the transcripts.

Step 2: Writing of notes.

During the interview stage, notes about the observations and reflections related to the interview experience or any other comments of potential significance were made. First, fieldnotes were taken during the interview to structure and plan for possible follow-up questions. Notes taken allowed for reflection of when and how to go back and seek clarity questions, where there were gaps. Using Zoom also allowed for a balance between taking notes during the interview and benefiting from a face-to-face engagement during interview. This was possible because of the recording facility in Zoom; hence, note-taking did not have to be detailed during the interview.

Second, writing notes during and after the reading of the transcript and during the coding process was detailed and time-consuming (Pietkiewicz & Smith, 2014). These notes reflected on and interpreted what each participant regarded as important. They included the researcher's reflections in the process of gaining meaning on what was involved for each entrepreneur. These notes were written in Atlas.ti, using the space allowed for comments (annexure 4). Notes were also referred to for meaning and sense making that the participant make about the lived experiences of the entrepreneurial ecosystem as well as my own reflections in the process of gaining meaning of the process involved for each entrepreneur (Cope, 2011; Hycner, 1985).

Step 3: Emerging themes

The development of themes reflects a transformation from the code and the note developed in the previous step, using comments in Atlas.ti. These comments from each entrepreneur were formulated into short statements that were theme titles within each case, showing each code and associated comment (Cope, 2011; Smith & Osborn, 2015)). These emerging themes were captured in Atlas.ti. During this step, the original transcript became a set of parts, which were developed through the continuous questioning and interpretation (Rajasinghe et al., 2021). This is an interpretative step that is a step away from the original transcript, while staying true to the initial accounts of the entrepreneurs. To ensure that the emerging themes were free from any bias, while there was further

meaning and sense-making, these themes were grounded in the entrepreneurs' account of their experiences (Brocki & Wearden, 2006; Smith, 1999).

Step 4: Clustering of themes

Themes were clustered to create master themes. This stage involved identifying, interpreting, and connecting themes into a write-up for each entrepreneur's experience (Pietkiewicz & Smith 2014; Smith & Osborn, 2015). Where theme connections were identified, they were grouped together according to similarities; some were dropped, as they did not fit with the emerging structure. Thereafter (Annexures 3a & 3b), a final list consisting of numerous themes and sub-themes was produced for each case (Pietkiewicz & Smith 2014; Smith & Osborn, 2015). The interpretive process of compiling the narratives was supported by extracts from the entrepreneurs' interview transcripts (Smith, 1999).

Step 5: Moving to the next participant's transcript.

In line with IPA's idiographic stance, each participant's case was analysed and went through the four steps above (Cope, 2011). To allow for space to be bracketed from the previous case, the emerging themes and clustering of themes were not analysed on the same day (Rajasinghe et al., 2021). In addition, the search for emerging themes in new cases commenced again with the reading of the transcript (Hycner, 1985). Bracketing continued with careful attention not to start with the themes from the previous case (Rajasinghe et al., 2021).

Step 6: Looking for patterns across all participants' transcripts.

The process to look for connections and patterns across all themes was done after steps 1 to 4 to for each participant were concluded (Smith & Osborn, 2015). Both the unique and general themes from the participants were incorporated (Annexure 4). It involved identifying experiences with shared elements and developing aggregate themes from the accounts of the participants (J. A. Smith, 1999). The outcome was a configuration of themes showing master themes and subordinate themes, which are detailed in the next chapter.

4.6 Case Write-up in IPA

Literature is not prescriptive about this stage of write-up. There is one view that the write-ups can be developed from a list of consolidated master themes (Pietkiewicz & Smith, 2014; Smith & Osborn, 2015). However, another view says that the write-ups of each case, which include extracts from the interviews of the entrepreneurs as well as the researcher's reflections, must be developed first. In this regard, from the entrepreneurs' cases, summary statements of each case were developed. For a consolidated write-up (Chapter 5) on the other hand, the patterns across cases with similarities in the experiences of entrepreneurs formed one summary statement (Smith, 1999). This stage of the analysis evolved into a consolidated shared experience write-up from the consolidated list of master themes in Chapter 6, which according to Cope (2011), involves the researcher's interpretation, which includes the participants' account. Therefore, the framework was grounded on the data, with summary statements added that were true for all cases (J. A. Smith, 1999). This write-up of the analysis included the entrepreneurs' accounts of their experiences, and their own words, as well as interpretative commentary provided by the researcher.

4.7 Data Quality

The data was systematically analysed when applying IPA to ensure rigour and data quality (Brocki & Wearden, 2006), by adopting a framework that ensured trustworthiness, auditability, credibility, and transferability (Morse, 2015).

4.7.1 Trustworthiness

Trustworthiness relates to authenticity and confidence not only in the "ex-post assessment of the truthfulness of the findings", but also in the intrinsic design on the research (Leitch et al., 2010). Most of the IPA data analyses were in the psychology field (Rajasinghe et al., 2021), although Rajasinghe et al. (2021), and Smith et al. (2020) highlight that IPA can be applied in other fields of research. Specifically for entrepreneurship, Cope (2011) and Rajasinghe et al. (2021) developed a useful data analysis process to improve the trustworthiness of the qualitative entrepreneurship research.

Through research supervision, the researcher reflected on own preconceptions to ensure that the data and its interpretation complied with the rules of trustworthiness. Prior experiences of working with property and agricultural entrepreneurs were declared for transparency purposes (Morse, 2015). Brocki and Wearden (2006) noted that awareness of any possible bias by the researcher should lead to the researcher being self-critical and taking extra care to ensure authentic analysis. According to Leitch et al. (2010), spending substantial time on analysis allows for achieving a better understanding of the data. This was achieved through repeatedly going through the data for a period of seven months. The timeline is attached as Appendix B.

Sample selection was done to ensure that there was no bias (Certo et al., 2010). To demonstrate this, in the selection of participants, the selection process was fully documented in Section 4.8.2. To mitigate for any unintentional researcher bias, entrepreneurs from a wide range of ICT fields of operations were selected.

The interviews were open-ended to allow for a self-directed flow depending on the participant, as well as in-depth conversation (Leitch et al., 2010). The interview questions were prepared as a guide. Follow-up questions were based on the participants' initial conversation for clarity and additional information. All participants were asked to forward signed consent forms. All interviews were recorded and transcribed to ensure no bias in the data collection process occurred (Smith, 2017).

To ensure that themes were directly derived from the data, first the fieldnotes and the codes were grounded in the participants' words (Hycner, 1985; Rajasinghe et al., 2021). Preconceptions were mitigated through bracketing, so that the data analysis was not unduly influenced (Hycner, 1985). The transcription process and the detail of the coding process will be explained in the next chapter.

4.7.2 Auditability

To achieve auditability, the systematic procedure for collecting, analysing, and interpreting the data in line with IPA was followed. Beyond following a protocol, Bhakoo et al. (2019) argue for transparency that allows for the steps that were taken to be followed, which enhances auditability. This means that the processes

and decisions made throughout the data collection and data analysis stages had to be documented. An auditable trail of decisions taken at every stage aimed to amplify dependability of the study (Roulston, 2010). In this study, the whole process formed the research design, securing suitable participants, engagements with the participants, collection of data and analysis of the data has been transparently documented. In addition, the data analysis steps were done in Atlas.ti software, which further enabled keeping a systematic audit trail.

4.7.3 Reliability

To ensure reliability, a consistent process of reading, coding, noting, and developing themes was used across all cases (Morse, 2015). For the overall credibility of the study, the first step was the choice of an appropriate research design. The choice of the phenomenology design and IPA approach was guided by the overall research philosophy and the nature of research questions. The appropriate data collection method and suitable process to analyse the data, namely, multiple reading, creating notes, transforming notes into emergent themes, and seeking relationships and clustering themes, were done consistently from one transcript to the other to ensure data credibility. The frequency of similar data amongst the participants also served to lessen any reliability concerns in the study (Greening et al., 1996).

4.7.4 Transferability

Transferability of the findings gained in this study in other similar settings will provide evidence of integrity. IPA focuses on the findings that can provide transferability between varying contexts and experiences specific to the entrepreneurs under study, which can add to existing knowledge and research (Hefferon & Gil-Rodriguez, 2011). To achieve this, the contextualisation of this study reflecting the social setting of the research, as well as how the data interpretation with idiographic details was conducted is set out in the next chapter to enhance the transferability of the results (Klein & Myers, 1999). Furthermore, clear reflection on the characteristics of the sample, demonstrating that the participants are knowledgeable about the phenomenon under study, and how entrepreneurs were recruited, were described in this chapter (Morse, 2015).

4.8 Ethical Considerations

Due to the comprehensive nature of a phenomenological enquiry, a detailed consent statement was reviewed with each participant at the start of the research process. The consent form included the purpose of the study; what participation would involve; as well as the duration of the interviews; and the exchange of the contact details. Before any interviews took place, participants were notified that the interviews would be recorded, with their permission. Participating in the research interviews was voluntary and could be stopped at any time during the process at the participants' request (Rovio-Johansson, 2017). IPA studies are concerned with significant issues; therefore, the interviewer had to monitor the effect on the entrepreneurs throughout the course of the interviews (Pietkiewicz & Smith, 2014). Consent statements contained all the relevant information to avoid any misunderstanding about the study.

4.9 Limitations

First, notwithstanding that the method was suitable for gaining rich understanding of lived experiences of entrepreneurs, this methodology put more control in the hands of the participants, which is seen as a limitation.

Second, limitation of understanding of terminology used in the study remained. Even with great care taken to clarify the concepts and pre-testing the interview questions to test clarity, theoretical terminology, such as the entrepreneurial ecosystem, is not used in everyday language, even by experienced entrepreneurs.

Third, even though the intention of the study was not to delve into trade secrets, but only to ask for openly available information, a limitation associated with the research design was that participants may not have been comfortable to share some information. Entrepreneurial firms are inherently seeking to protect their identified opportunities and their sources of competitive advantage.

Fourth, even with arrangements done prior to the interview to continue to re-dial/reconnect due to poor connectivity until the interview was completed, this concern had an impact on the momentum and flow of some of the interviews.

4.10 Summary on the Research Design and Methodology

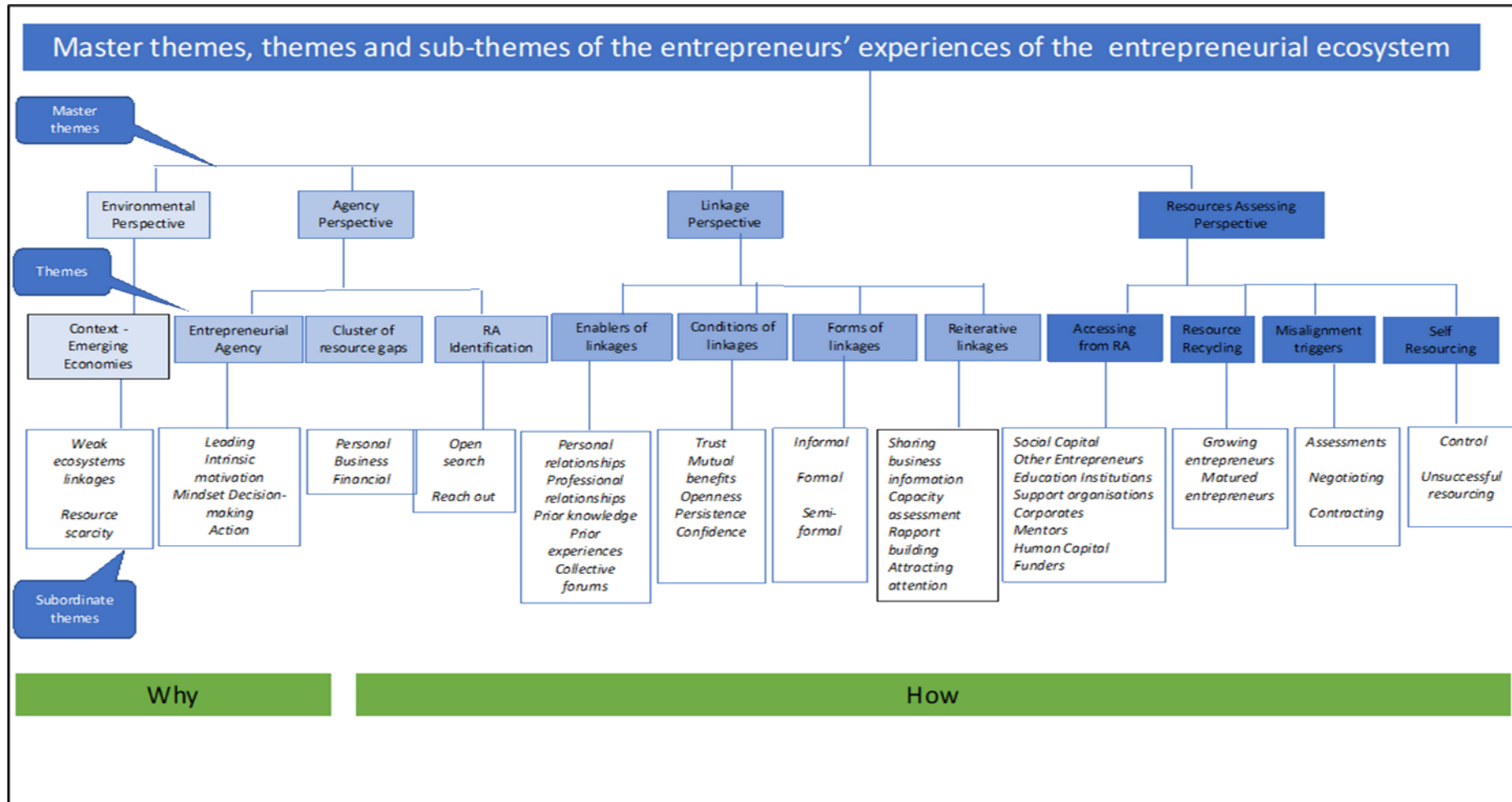
IPA was initially designed for Psychology to investigate lived experiences of the participants. It has since then been used in other fields and in this study, it was used to investigate the lived experiences of 25 ICT entrepreneurs in Gauteng, South Africa on their perspectives on how entrepreneurial ecosystems develop. The data analysis process will be detailed in the next chapter.

CHAPTER 5 RESEARCH FINDINGS

This chapter presents the findings and themes that emerged after a series of analyses using the IPA approach as presented in the previous chapter. After six iterations and weighing up different themes, the following master themes (see Figure 1) were identified. The findings show eleven themes, classified under four master theme perspectives reflecting on the how resource access within the entrepreneurial ecosystem from the entrepreneurs' perspectives. The findings illustrate why, how and in what way the entrepreneurs access resources. The analyses reveal different participants' lived experiences of the accessing resources from entrepreneurial actors, as well as misalignments and unsuccessful attempts. Each master theme, theme, and its subordinate themes, have evolved from the participants' verbatim quotations. This chapter focuses on the findings first of the environmental perspective, second, entrepreneurs' experiences that relate to entrepreneurs' agency; third, how do they link with the entrepreneurial actors, and the lastly, the experiences of how the entrepreneurs access the resources and their emotions and reactions during the process.

Multiple analyses of the data – as indicated in the previous chapter – are provided in the findings in the following sections. The supporting quotations under each master theme, theme and subordinate themes are presented through the IPA, as summarised in Figure 3.

Figure 3: Master themes, themes, and subordinate themes



Each participant's responses were analysed separately before collating all responses for an overall analysis. Working from the individual, a master theme was rationalised for all participants to develop overall master themes. These culminated into four master themes, which represent all the master themes for all participants as shown in the previous chapter. The hierarchy of the themes was developed bottom-up by first organising the quotations into subordinate themes. These were then grouped by summarising the subordinate themes into themes that were further grouped into master themes that shows the different perspectives. Starting with the first master theme, participants' findings show why they need an entrepreneurial ecosystem.

5.1. Master Theme 1: Environmental Perspective

5.1.1. Resource scarcity context

This master theme presents why entrepreneurs in emerging economies take on a greater responsibility in the entrepreneurial ecosystem. Entrepreneurs' own resources are insufficient to meet all their entrepreneurial needs. They are confronted with scarcity of resources, while there is a need to exploit business opportunities for growth triggers the search for additional resources. To address these resource limitations, entrepreneurs look to the external environment and thereby aim to link ecosystems by reaching out to entrepreneurial actors. According to the participants, resource scarcity and prevalent weak entrepreneurial linkages affect their ability to establish and scale their businesses.

While the resource deficiencies appear to be prevalent for most entrepreneurs, it however appears that in the ICT sector, the entrepreneurs tend to contend with increased resource pressures. This is due to the specialised nature of some of the skills required, the high cost of the development of solutions and products and the cost associated with scaling the business. In addition, as shown below, the scarcity of resources and weak entrepreneurial actor linkages create limitations and barriers for growth, and the entrepreneurs' ability to exploit business opportunities as they emerge.

5.1.1.1. Resource Scarcity

Participants indicate that in order to build their businesses, they require the appropriate and capable skills, funding, and business support. Competent skills are not only scarce, but in many cases are also unaffordable due to the high skilled labour costs, as indicated by the following quotations:

“So, I knew what we wanted to do. I know conceptually how to do it. But I don't necessarily have all the skills.” E7

“So, the biggest sort of obstacle and resource we need is skills, number one, high-end skills, not stuff that you find.” E14

“In terms of getting a developer ... because developers have never been cheap.” E3

Most of the participants also discuss securing the appropriate funding as being extremely critical to their businesses, as demonstrated by the quotations below:

“Funding is extremely, extremely important and unfortunately, their [funders] risk appetite is not really that high.” E3

“And there's always a doubt that one can pull off what you actually require funding for, and if it's going to be profitable, and so forth.” E3

Some participants were also concerned that securing funding sometimes comes with the pressure to dilute their shareholding. Therefore, they have concerns on how to protect their vision and manage the pressure that comes with a dilution of ownership if new equity partners were to be introduced.

“They want to give you this funding for this percentage of equity.” E4

“I then understood that if I want to advance to the next level in my business, then I have to dilute myself.” E9

Some of the funders target specific ICT sub-sectors, thus leaving other sub-sectors without financial support. Not all ICT entrepreneurs enjoy an equal access to resources, as indicated below:

“So, if you're not in particular ICT sectors, you are not necessarily going to have a better chance of finding funding.”

E11

Beyond the initial funding, even as the business gains traction, the participants acknowledge that they still experience resource limitations, as illustrated by the quotations below:

“And the two years after that were very difficult. Because we had a lot of unforeseen things with the business. We struggled to make money. It was just tough. All sorts of internal and external challenges.” E12

“I think for three years, I was trying to find the person who could be able to do this, and number two, funding to do this right.” E11

On the other hand, these barriers are seen as opening up opportunities for learning how to survive a challenging business environment and excel, as indicated by the quote below:

“I believe that being African is an advantage when we're used to doing a lot more with a lot less in an environment that is not hospitable. That ... the moment you put us on a level playing field, we tend to excel.” E14

5.1.2. Weak ecosystem linkages: support not easy to locate.

Emerging economies are characterised by underdeveloped entrepreneurial ecosystems that affect the quality of entrepreneurship. Entrepreneurs find it a challenge to identify and interact with the entrepreneurial actors in an environment characterised by weak linkages as indicated by these quotations:

“So, ... a bit of research that you need to do, you need to use your networks.” E6

“So, it was also a coincidence that Zuko was also part of ... he was an alumni in the network.” E18

The results show that weaknesses are also influenced by an environment having a limited number of entrepreneurial actors who are not necessarily visible to each other and often non-complementary. Limited visibility to other entrepreneurial actors means limited diversity of options for entrepreneurs.

“So, it's like that, but in a smaller scale. In business, you can't go it alone. You won't get any far. But being part of a formalised structure, it helps in terms of guidance, advice.” E1

“You need to talk to people, you know, the business community.” E3

Entrepreneurs express concern that there are limited, deliberately coordinated links in the entrepreneurial ecosystem, and that where they happen, it is isolated and requires huge effort to coordinate.

“Ecosystems in South Africa are really hard to find.” E23

“I didn't know that there was such a thing called an incubator. I didn't do a lot of research. I was a senior developer and senior designer for the company I was working for. I figured if there's so many opportunities in an incubator, let me take the chance right now.” E11

Limited local support has led to sourcing support during the nascent stages of the business, well before alliances are formed. Entrepreneurs are able to access international knowledge technology support, especially where there are

technology-based opportunities at various phases of the entrepreneurial process as shown in the quotations below:

“I think South Africa is not there yet, in terms of the funding structures that are prevalent in the country.” E3

“To deal with cash flow, so, in South Africa, again, you start consulting, so basically, we are doing what they call bootstrapping, in terms of growing a business, you basically grow through sweat equity as opposed to money.” E10

“I think the challenges were ... very few people in South Africa who had built tech businesses.” E6

In conclusion, in this master theme, the participants expressed why they need to access the resources and thus, their need to build their ecosystems. This shows that the entrepreneurs' own resources are insufficient to meet all the entrepreneurial needs; hence, the focus is on the external environment to access resources. The next master theme focuses further on the participants agency to achieve positive outcomes.

5.2. Master Theme 2: Agency Perspective

This master theme covers entrepreneurial agency, demonstrating that participants are not passive, irrespective of the internal business challenges and external constraints. Further, through their agency, participants identify their resource gaps and set out to decide on their resource gaps and identify other entrepreneurial actors.

5.2.1 Entrepreneurial agency

The entrepreneurs' agency is demonstrated in this theme through the centrality of the participants in all of the entrepreneurial activities. In this master theme, participants express their motivation, and demonstrate their entrepreneurial mindset as they make critical decisions and endeavour to take the appropriate

actions. Entrepreneurial agency is critical as these activities require time, patience, consistency, motivation, and sacrifices. The subordinate themes below illustrate the sub-elements of the entrepreneurial agency.

5.2.1.1 Intrinsic motivation

Participants discuss why they have the inner motivation or drive to take the initiative and launch or run their enterprises. They project a positive image and demonstrate their determination to create successful businesses and add to the entrepreneurial ecosystem as active actors. It is the entrepreneur who explores opportunities and pursues the entrepreneurial actors, even despite long lead times and the possible associated cost. For some of the resources, it takes multiple pursuits as demonstrated by the following quotations:

“And it takes a lot of growing up for you to get to that point, you will do whatever it takes to put your hand in a million ecosystems and create your own in order for you to thrive.” E23

“Then during that time, I thought of Warren Buffett, Alan Gray and thought of all these guys and I thought about myself.” E23

“I really wanted to create the biggest estate agency of black agents ... just generally professionally doing well in the industry.” E10

“You have to push to make sure that you get ... you get to the two years.” E1

5.2.1.2 Entrepreneurial mindset

The participants believe in persisting, even after experiencing some initial setbacks or even failures and rather see such experience as a step towards the next level. A strong entrepreneurial mindset regards failure as step that leads to higher levels of successful entrepreneurial activity, and this drives them to show their ability to regroup and restart. Setbacks are therefore not seen as the end to their endeavours, but as the motivation to explore and seek other alternative solutions, resources, and entrepreneurial actors. The quotations below show the

determination of the participants to persist, stay true to their entrepreneurial mindset and learn from setbacks:

“I come from a long series of failures. I think after the fourth business failing, I finally got a business that is working.” E23

“It was something that I have thought of, I think 10 years before that actually happened.” E11

“I have seen that it helps to go ... to look for assistance if you haven't shown ... for lack of a better word, I will say scars, almost every single person that I've engaged with knows how many times I've failed, yet I've persisted.” E23

5.2.1.3 Entrepreneurial decision-making

Participants demonstrate their ability to make their own decisions to access the needed resources. Participants state how they weigh up options and make choices that reflect their risk appetite and ambition, as demonstrated below:

“I decided, you know, what, if not me then who else? I decided to fill in that application. Behold, I was accepted to the programme. Now, that I think, became a game-changer for me.” E1

“I want to build businesses whose ideas keep me up at night, and I want to partner and invest in businesses that I started.” E6

“So, I think it's nurturing and it's being intentional with what you want, you know, it's just continuous intentions that you do until something eventually comes up.” E22

5.2.1.4 Entrepreneurial action

Entrepreneurial action is reflected in the actual activities' participants undertake as they see opportunities to access the necessary resources. Some of these

activities do not seem significant at the time, but they build towards the next level of entrepreneurial activity, as shown by the following quotations:

“It seems like you're not getting anywhere when you keep contacting people for no reason, but eventually, it paid off.” E13

“So, we make sure every day, every week, whatever small or big thing is happening, we post so that people can have the image of our brand in their mind every day, so that they don't forget it.” E1

“I literally attend events that I have the slightest of interest in at the convention centre, exchange business cards, just entrenching myself in those relationships, meeting other people through the current relationships.” E12

These subordinate themes demonstrate that participants are motivated, what motivates them and that they have a mindset to persist and make decisions on what to do and subsequently take action. Once they have a goal in mind, are motivated to achieving it, their mind becomes focused, and they then make the decisions to take the appropriate actions. They then take the next step to plan and consider the bigger pool of entrepreneurial actors who could enable them to build their entrepreneurial ecosystem. This is discussed in the next section.

5.2.2. Entrepreneurs resource gap

This theme covers the resources that the entrepreneurs identified as critical for their entrepreneurial firm. These resources can be clustered into three categories that include personal entrepreneurial gaps, business needs and financial needs, which make up the three subordinate themes.

5.2.2.1. Personal entrepreneurial needs

Participants entrepreneurial personal needs are diverse. They are a combination of what they can get out such as control, growth, freedom, and success of being

entrepreneurs as well as what they believe they can contribute to the communities of other entrepreneurs and to the society as demonstrated by the following quotations:

“Yeah. Yeah, we've got control of, you know, our fate and destiny. So, when we want to change something, now, we change it now, you know, and remember that, you know, the development space is great. It's very expensive”. E5

“I've grown to be stronger. So, one thing that I've learned very well these days is to not be worried mostly about things I can't control” E17

“So, when you have people with who you can train them better, the specific methodology is that in your preferences around policies and controls and processes in the businesses, it becomes easier to work with.” E4

“I wouldn't have done it any differently. I've had the most freedom and the most pleasure and the most fulfilment in the six years that I've been trying to build this thing, and I've just grown so much as a person as well”. E5

“They add you after assessment and based on that they can place you and say your business is mature now we just need to mentor you and give you access to the market.” E2

“It's like, it's a general core value of business, it's about one hand, you know, one hand washing the other, somebody's giving somebody else, something that's of value to them. And I think that's also important.” E8

“I think the best home networking is giving and sharing”. E2

5.2.2.2. Business needs

The business need identified by the participants are mainly, access to affordable skilled human capital, access to training for new areas where they are under capacitated, and access to market opportunities.

5.2.2.2.1. Human capital

Being able to find the right human capital is essential for entrepreneurs. Participants' experiences show that human capital in the business is a combination of working with both in-house trained personnel and also looking to education institutions and other local programmes for skilled human capital, as demonstrated by the quotations below:

"I'm invested with the people that work with me and the guys that will, I want to grow them." E2

"So, the biggest sort of obstacle and resource we need is skills, number one, high-end skills, not stuff that you find." E10

"I've introduced to him the aspect of system design, bringing his artistic talent into the IT world." E4

"The incubation also helped us provide us with interns, which also helped a lot in terms of capacity." E2

"I am also part of the grouping of all the IT groups that mainly now communicate via WhatsApp. So, they post many the opportunities there." E23

5.2.2.2.2. Business Training

Most of the participants in addition to tertiary education they have acquired, they pursue additional business training as demonstrated by the quotations below:

"Leading IT industry leaders will tell you that this kind of technology is coming. So, you as an entrepreneur, you go and

dig deep. And quickly you do training on it so that you know it. Then from there, you're covered with that knowledge.” E21

“I went for training within the university, they trained me on the, on the website itself. Because my experience by now I had already now had my own computer. I knew how to build how to do some couple of stuff, it was easier for me to transition to be to learn how to update.” E17

“It is one of the best Enterprise and Supplier Development programme in the country. But it is a lot of work though. You also must attend training at a business school.” E4

“I deliberately target those ones knowing that they also have training accredited trainings, which is very, very important.” E21

5.2.2.2.3. Seeking opportunities for growth

Participants pursue opportunities for growth and expansion in products and solutions. This pursuance also includes exposure to new and bigger markets, as well as business partnerships for collaboration. As demonstrated in the quotations below, the participants express concerns of being unable to access markets and the resultant slow business growth:

“As the incubator if you're going to train me how to do finances, how to do the marketing how to put in place the systems but you do not expose me to opportunities then you're not taking me to where I want to be. Give me the opportunity, once we generate income from those opportunities can control your finances.” E10

“So, the problem is we're growing slower than we should.” E17

“But the point is, we could grow four or five times faster.” E6

“Everybody thinks our biggest challenge as entrepreneurs is funding. I don't think it is, I think it's access to market.” E3

“Give me the opportunity, once we generate income from those opportunities, we are able to control your finances.” E10

5.2.2.3. Financial needs

The participants' experiences suggest that business growth requires more resources. Business growth also introduces new challenges, especially the challenge of accessing additional resources for the scaling stage. Participants discuss that scaling requires a lot of funding, as demonstrated by the following quotations:

“I started experiencing financial constraints ... was when we started to grow.” E9

“So that at the time, we were trying to get funding for this product, because we needed to scale it up.” E9

“And so, we used our early clients for cash flow. So, if it is a big organization, looking for a learning platform to be built from scratch, we knew that we could productize that down the line. And so, we did raise some money through maxing credit cards, friends, and the family because of all the credit we used to rollover, back then because it was just trying to make things work.” E6

“I approached quite a number of funding agencies.” E1

“To date, we still have cash flow problems. And this goes to say, you know, even if I go to any mentor today, I don't think they can solve my cash flow problem.” E17

5.2.3. Identification of entrepreneurial actors

Prior to any engagements with other entrepreneurial actors, the participants identified a pool of entrepreneurial actors from which they were going to identify and select the optimal – or likely – entrepreneurial actors. This theme consists of the criteria the participants follow to determine, which entrepreneurial actors to pursue and how the entrepreneurs conduct the search to identify the entrepreneurial actors for multiple resources that are relevant to address the participant's resource deficiencies.

5.2.3.1. Open search

Identification of ecosystem actors is also done through publicly available information. The participants' responses suggest the use of multiple public platforms to search and identify suitable entrepreneurial actors. These include social media platforms, LinkedIn, WhatsApp websites and Twitter. Participants experienced that open search through social platforms were more effective in locating entrepreneurial actors, as indicated by the following quotations:

"LinkedIn has been my first point of call, and, and through networking and the word of mouth." E1

"A lot of companies ... when you go into their websites, there's always that section of enterprise development." E1

"I googled the programme and realised I know the CEO of the company. I contacted the CEO." E5

"Also, on the articles that you read, if you are following the financial business pages or financial pages on Facebook and Twitter, if you are in this business, small businesses, WhatsApp groups." E5

Participants' responses include the importance of them being at the right place at the right time, where unplanned encounters happen. This suggests that it does not always follow that searching for the optimal resources is a structured process, as illustrated by the following quotations:

“I was at a conference, and I met a young lady randomly and she told me about the programme.” E4

“It just happened that around about that time on social media, the advertisement programme for entrepreneurs, you know, we are a training company collaborating with others. So that's how we selected specifically this one.” E5

“The programme happened to be advertising at the time as well, I don't think we were very, you know, giving a lot of attention to actually finding it. We, we knew that we needed it. So, we're keeping an eye out.” E5

Participants also point out the challenges they can face when searching for entrepreneurial actors. Finding the right entrepreneurial actors is not easy. As mentioned in the quotations below, the participant also note that a successful selection does not necessarily result in a successful outcome:

“Ecosystems in South Africa are really hard to find. You have to literally make so much effort to go and find these ecosystems.” E23

“But it's finding the right people, when you don't have those people in your network is the issue.” E23

“I have learned as a Christian that it is a spiritual thing and God is my provider.” E20

5.2.3.2. Reaching out

Reaching out to the entrepreneurial actors involves taking advantage of the positive environment created through the various interactions with others. It also entails persisting, even where the conditions may not be enabling, and it means “pestering the resource owner” until a suitable

response is solicited. Participants reach out to the specific entrepreneurial actors, as illustrated by the following quotations:

“So, for me to be able to get into the market and to know suppliers, I had to team up with a lady who is in the same business I am pursuing.” E1

“There are people that I'm connected to, that I can reach out to whenever I have an issue, and from the operations as well that one would engage with.” E3

“So, I learned what he wanted. So, I just picked up on him.” E3

Participants tend to reach out to access resources by attracting the relevant other entrepreneurial actors. Through telling their stories, they are able to communicate their entrepreneurial journey, and thereby gaining the attention of those entrepreneurial actors. Some participants believe that it is more effective when entrepreneurial actors note the quality of the entrepreneur, and that they would then be drawn to support the business, as demonstrated below:

“And I think there's something quite attractive when people hear your story. And they can hear and see this cost that you have gotten along the way.” E23

“Attraction for me is much more sustainable than asking. I can tell you now, most of those relationships are not as strong as the ones that I've attracted.” E23

“I love sitting in with people. It's about that social activity as a human being that you need, even when you're trying to promote your products. I love presenting this company.” E7

5.3. Master Theme 3: Linkage Perspective

This master theme shows that access to resources is the culmination of entrepreneurs' active engagement in creating multiple linkages with entrepreneurial actors. To access the resources, participants formulate and drive the linkages with entrepreneurial actors. These linkages are informal, semiformal, and formal. Furthermore, they rely on the enablers to link with the entrepreneurial actors associated with the appropriate conditions.

5.3.1. Forms of linkages

This theme demonstrates that there are different forms of linkages involved in linking with various entrepreneurial actors to access resources. Participants engage at different levels depending on the specific conditions, the mechanism of linkage and the type of resources required. As demonstrated below different form of linkages can be used individually or as a combination.

5.3.1.1. Informal linkages

Some linkages take an informal form. Informal linkages with the ecosystem actors contribute to the entrepreneurs garnering an understanding of the processes, and at the same time letting the actors know about the entrepreneurs, their businesses, and their business needs, as illustrated by the quotations below:

"I had to go and pack chairs when they had events. But that was my way of getting access to really top-notch events." E23

"I literally attend just about all events that I have the slightest of interest in at the convention centre, exchange business cards." E12

Informal linkages are diverse, some precede the entrepreneurial journey as demonstrated by the quote below, while others have emerged and been developed as the business develops:

“One of my friends, now a Chairperson of an organisation is one of the first people that mentored me when I was still in high school.” E22

“I seriously am blessed because my husband is a firm believer of supporting dreams, you know, he supports me like, Sure, all the way and he’s also an entrepreneur.” E20

Linkages can stay informal or can escalate to semi-formal and formal and the opposite can also take place. Formal linkages that are preceded by informal linkages as demonstrated by the quotations below, gives the opportunity to both the entrepreneur and entrepreneurial actors to have varying insights about the other party:

“I’ve made lots of close friends. So, my business partners then, my first business partners were Alan Gray fellows. And so, we began a small investment management business and that was, that was very helpful.” E6

“Because it does seem like most of the people that I’m talking to, I think are some that I already work with and have become my business partner. Some of our clients are my friends now.” E20

5.3.1.2. Semi-formal linkages

These linkages can be both informal and formal however they are not unstructured to the point of been regarded as casual. They require some level structure and coordination when necessary. Participants comment how they are able to link with entrepreneurial actors in an environment that is less formal, but regulated by formal agreements, as indicated by the quotation below:

“So, the story around the angel investor is someone that I’ve known. So, it’s easier for me to convince them, you know, the

convincing part is not very difficult because they're already in the space." E3

"And then a CEO ... randomly ... will just choose who they want to mentor..." E2

"What I picked up is that these calibres of guys that we meet at the orchestra are very different people." E19

5.3.1.3. Formal linkages

These linkages bring the entrepreneurs into a formalised environment that is characterised by entrepreneurial actors who operate in organised structures, where procedures are followed to link with the entrepreneurial actors, as indicated by the quotations below:

"So, for the company where I am in their enterprise development programme is my previous employer who has that program. And when I started my business, when I left, we had an agreement that they would help me set up my new business." E1

"I ended up exiting from all those agreements because they tied me in badly. It's like, it's bad. I had to take a 12 month break just to get out of contracts" E10

'My biggest leverage is the fact that you negotiate payment milestones in the service level agreement". E24

In addition to agreements, as the quotations below demonstrate, there are additional structured processes that are involved in formal linkages:

"Companies when they want to select entrepreneurs for this year's supply development, they sent through an invitation to

our business forum that told us they have an information sharing session.” E1

“You'll get an invite probably because you, you have supplied your details to the Department of Small Business, or they saw your name on the central supplier database.” E1

Semi-formal and formal linkages require participants to pay more attention to who they link with. Therefore, a criterion that include qualities such as transparency, authenticity and being able to align, amongst others is necessary. In addition, prior associations and possessing of critical skills are also seen to be essential. The participants believe that entrepreneurial actors must be reliable and demonstrate their ability to deliver consistent support. The quotations below indicate such criteria, as expressed by the various participants:

“It is the authenticity of your network, you got to have a network, you got to have people that you know, you got to be able to ask questions.” E23

“You test. So, let's say, yeah, it's searching for a person that I can trust.” E11

“I need to work with people who understand me, and who understand my requirements.” E9

Entrepreneurial actors, such as education institutions, where the participants had studied, local people and previous work colleagues who have had previous associations with the participants, are targeted as entrepreneurs identify them, as illustrated below:

“So, together with people who I was close to at the time, we decided to pull resources and do something in ICT.” E20

“So, mostly, I talk to people I know in the industry, so that they now know that I'm on my own. Fortunately, because I was working at this company for so long, a lot of them do know me.”

E8

The participants also focus on resource owners that are known to have the critical relevant skills required for their businesses. The suitable entrepreneurial actors are also identified on the basis of their business experience and knowledge. For example, three participants show a preference for entrepreneurial actors who are knowledgeable, highly skilled and can collaborate. In addition, identifying suitable entrepreneurial actors is also based on their ability to take a long-term view, as shown below:

“So, I will employ somebody that has an entrepreneurial spirit. So, for me, it's somebody that understands and has the ability to think beyond what's available.” E8

“So, you can just imagine the level of intelligence that is required for them to be in the top ten. So, for me to have even got the top five to interview....” E9

“We see beyond the money, what other value they can bring into the company; for example, with 20 to 30 years in the network-based experience that you can bring to us ... the expertise in solutions, the direction we could head into to progress what we have.” E5

The participants also state their need for assistance to manage the cost of doing business. As they identify and select the suitable entrepreneurial actors, they also look for their ability to mitigate against high ICT costs in various areas of the business, as expressed in the quotations below:

“So that's how our distribution partners become valuable because it lowers our cost of acquiring a customer.” E10

“So, we got one of the office spaces, but it was a bit too expensive. I then applied to an entrepreneurial support organisation, giving us very affordable office ... subsidised office space.” E9

*“I wanted to manage the cost. So, I look at people differently.”
E9*

The participants also prefer entrepreneurial actors with experience to strategise for growing businesses. They express alignment with the entrepreneurial actors as being critical, especially so regarding funding as it requires long-term goal alignment, as shown in the quotations below:

“The type of digital e-commerce infrastructure that is going to make it effortless to leverage on others to fill the existing gaps and deficit. So, that's our criterion of who we know is a fit to fund us going forward.” E9

“Does someone see the vision as you see the vision and the pathway to get there? So, for us, it was more so saying, we want to get people who get it and are doing it and have a similar impact and the same level of ambition.” E23

“So, I always look for people that are aligned with what I do. And then to try and actually see how I can learn from that.” E4

5.3.2. Linkage enablers

This master theme follows the participants' decision to reach out for resource ecosystems. The participants look to the bigger pool of entrepreneurial actors, which includes corporates, other entrepreneurs, funders, friends and family, educational institutions, or entrepreneurial support organisations. These resources are owned by entrepreneurial actors who participants identify according to their own unique business resource gaps. The diversity of resources is briefly demonstrated by the following quotations:

“We as entrepreneurs always think we need money, but [the entrepreneurial support programme] they really focus on the entrepreneur themselves...” E10.

“And I think for me, the skills that he imparted on me, was, it's invaluable. It's, it saves you a lot of time, it saves you a lot of energy.” E6

“... the mentors assist in knowing what you should ... or suggest ... you're bouncing off ideas with them.” E6

5.3.2.1. Prior knowledge and experience

Identifying entrepreneurial actors is often based on the entrepreneurs' prior knowledge and information of where to locate some or most of the entrepreneurial actors, the resources they possess and whether they are able to provide the required resources, as indicated by the quotations below:

“I think it's a combination of maybe my experiences and what I do, what I like, and what I thought would be good, from where it worked. And as a combination of what I saw in the workplace, and what I thought I could improve, because back then in the workplace, I never really got an opportunity to be like a manager or anything, or a boss.” E24

“But the reason why we looked for something specific was because with the APP that we were trying to launch, we needed data, and the data that we needed was owned by the company.” E9

“What made me go there was just the level of experts that we would be getting from them.” E13

“You just have to follow the right people on social media, you must make sure that you are following the people that have that kind of information”. E1

When unsuccessful with their first approach, then participants prepare to restart the process again, as demonstrated by the following quotations:

“So, if there's no engagement, then it means that this thing is not working. It's working. I had to learn that it's working to patiently engage with everything.” E1

“We post, so that people can have the image of our brand in their mind every day so that they don't forget it.” E1

5.3.2.2. Personal relationships

Participants acknowledge that they are often assisted through knowing the right people, personal relationships, to get to the entrepreneurial actors to access resources. These personal relationships are especially helpful in the early stages of the business, as the quotations below demonstrate:

“And it's a bit of an unfair advantage for me, because my late sister who led the Environmental Affairs Ministry, was the political muscle in the family. So that's how my wife and I, set up a consulting unit.” E13

“And so, we did raise some money through maxing credit cards, friends, and the family because of all the credit we used to rollover, back then because it was just trying to make things work. E6

“So, we used to just pull resources from our own people that we know, you know, other entrepreneurs that we know, if we needed, you know, judges for something we would just pull from

the people that we've met along the way. So that was helpful.”

E17

Support from personal relationships is critical particularly during the early stages of the business saving the entrepreneurs time and costs. The support from personal relationships covers diverse entrepreneurial needs including business accommodation, marketing and funding as seen in the quotations below:

“And this comes, you know, in various shapes and forms family, friends, and business associates and so forth. So, those are the various ways in which one were to look for angel investors.”

“Even in the marketing process, when we started just having friends, you know, retweet, you know, repost the post for boot camps. We hardly had to advertise, people were now just hearing about it from other people and been inquiring about it themselves. So that was key.”

“I was working on a different product, and a different business over and above Building Blocks at the time, with a few of my other friends from work.”

Personal relationships are also a conduit to further professional relations. To respond to the challenge of having all the necessary information particularly where to locate the resources these personal relations play a crucial role.

“I asked friends to contact one of the board members to escalated to the CEO.” E9

“And then I went to one of my friends who flew to India, to speak to a couple of developers. So, we used one of them.” E10

“One of my co-founders was a classmate of mine was also a scholar, and so we met at a class, the other was from X him

and I were high school friends, then came together to form what the company today.” E25

There is also limit to how far the personal relationships can support the entrepreneurs as demonstrated by the quotations below:

“While our business is ok, the last three months of the year are stressful. There is not much business. We tried to raise funding from the Foundation as well. They are in the ICT space. We were not successful. We also tried the government, Department of Trade and Industry and friends as well.” E23

Personal relationships emerge over time with some relationships having started long below the start of the entrepreneurial journey. Some as demonstrated by the quotations below emerge during the process having started as colleagues and clients:

“It's just talking and building rapport. And I've seen that the connection becomes key rather than needing a service and I go. Because it does seem like most of the people that I'm talking to, I think are some that I already work with and have become my business partner. Some of our clients are my friends now.”

“Yeah. Well, I mean, we are now my friends, like it's not even just one. At the end she said thank you, my sister. I knew that I could count on you.” E19

“I saw some of his art in the gallery and I then met him and became close friends. And I've introduced to him the aspect of system design, bringing his artistic talent into the IT world.” E9

“One of my friends, now a chairperson of an organisation is one of the first people that mentored me when I was still in high school.” E18

5.3.2.3. Professional relationships

The identification of some entrepreneurial actors is indirectly facilitated by others, including other entrepreneurial actors. Participants the role that others play for them to be able to reach out to other entrepreneurial actors. Professional relationships can be a channel to reaching and building other relationships. However, the participants' responses show that even though there might be assistance in establishing business relationships, the entrepreneur is ultimately responsible to develop these relationships further:

“You ask the people that you know, do you know a developer, who does your systems development, and so forth. That's how you ultimately get the right people because you work with other entrepreneurs.” E3

“You got to be able to ask questions, you know, find out from whoever and say, you know, do you know someone who's got money, who can invest in, so someone wants to invest into something.” E3

“So, it is a bit of research that you need to do, you need to use your networks. And then ultimately, it definitely leads exactly to looking for a development company and software development companies.” E3

Some participants speak about being referred and introduced to the right individuals, thus suggesting that the indirect process of finding entrepreneurial actors through referrals is also used effectively by participants, as suggested by the following quotations:

“We were referred to them by the former HR director.” E5

“I then applied to an entrepreneurial support organisation referred to their website by their friend.” E11

“How I found the electrical engineering company was through the introduction of the tech labs, because they know the people in the industry.” E4

This theme shows that participants use their knowledge and experience as well as their relationships of the own resources. Participants are assisted by associations and networks to identify the relevant actors. The next master theme shows the condition under which the linkage with entrepreneurial actors takes place.

5.3.3. Conditions for linkages

This theme illustrates the conditions that have an impact on participants when linking and interacting to build relationships with the entrepreneurial actors. The participants' responses show these relationships require trust and openness. These interactions are multi-layered and some take time and are costly to nurture. While some interactions remain informal, other interactions evolve into formal relationships. Some continue beyond the initial interactions and develop further into close social bonds. However, there are some participants who believe that some interactions are not as effective as they had been projected. Notwithstanding, close relationships offer entrepreneurs an understanding of how the entrepreneurial actors operate.

5.3.3.1. Trust and openness

Participants note that it is critical to relate openly and be reliable in working through complex interactions with entrepreneurial actors. When relating with entrepreneurial actors, it is essential to establish trust and convergence of intentions, as illustrated by the quotations below:

“So, they relate to you based on how reliable you are, that directness, and it makes it central to how you then engage with business partners.” E8

“And if you are straightforward, and people in the industry recognise you and understand that you are a reliable, consistent person, other people will engage with you.” E8

“You still need to build trust, you still need to build confidence, you still need to build a rapport between the two of you.” E8

5.3.3.2. Time and cost

It takes time to build relationships to penetrate the environment of entrepreneurial actors. The participants' responses show that building these relationships is time-consuming: a resource that most entrepreneurs do not have in abundance. They also express that once the interactions have been initiated, it is important to keep them going for possible future access to resources, as illustrated by the following quotations:

“So, I spent a lot of time with her. When I have an enquiry regarding whatever, I would have to go chat to her and she will show me, this is how you do it.” E1

“It requires patience, then we also got opportunities, for two years.” E6

“It was costly because ... the up and down, the up and down and the long telephone discussions.” E1

5.3.3.3. Compatibility

Some relationships go beyond just the occasional check-ins. Some continue and become mutually beneficial. Close interactions also allow entrepreneurial actors to garner a deeper understanding of the entrepreneurs and their businesses. Social bonds improve and influence the process of accessing resources. Building rapport and connecting with entrepreneurial actors leads to close relationships that facilitate the entrepreneurs to access the resources in an effective manner. This enables entrepreneurs to communicate their business needs, as demonstrated by the following quotations:

“It does seem like most of the people that I'm talking to have become my business partners. Some of our clients are my friends now.” E19

“You know you'll find that sometimes you spend the first few minutes talking, not the business.” E19

To have effective social bonds requires continuous interactions, as illustrated by the quotations below:

“We still want to be able to go back to her. It's not a small thing, and we need to keep that relationship going.” E6

“I kept in touch with my current mentor when he moved out to buy into one of the companies. He continues to ask me; what business are you pitching for? We are in contact but on a ... on a like reduced role because he's got limited time. Every time we meet though, he checks.” E3

“I stayed in touch even more with him because I felt like he is better for my vision. And so, even when they were not giving us money, I just ... you know, every now and again, every three, four months, just check in.” E5

Finally, not all close relationships are effective. Some close relationships can also create challenges for the business, as illustrated by the following experience:

“One person who was working there was a close relative to the owner of the place where the internet cafe was situated, so they wanted to take full ownership of the business.” E16

This master theme illustrates how participants try to interact with owners of the resources based on trust and openness. It shows that time and cost play an

important part in engaging in these interactions. It also shows that they can be informal in nature. Equally important is that during the process, some relationships develop into close social bonds, reflecting even greater trust and openness. Some entrepreneurs also believe that some interactions are not as effective, irrespective of how much time and effort they placed into them.

5.3.3.4. Confidence

The current study shows that where the entrepreneurs' level of confidence is high, this promotes linkages between the entrepreneurs and the entrepreneurial actors. Prior knowledge and experience are the main source of confidence.

"I need to go there and see what is happening. I was just running around. I went there and when I arrived, I saw there were so many township businesses, I saw how they presented themselves the language they were using." E2

"Okay, to cut it short, I saw that if I can use this skill and incorporate with what I know, maybe this might come alive." E9

"So, it was me, my experience, my networks in property, because you have to get the stock as well, right. And I learned really quickly." E10

5.3.3.5. Impact of Reiterative Linkages

This theme demonstrates that participants' activities have an outcome that eventually impacts on the ability to access resources. These outcomes include building rapport and being able to attract the attention of the resource owners, being able to assess the capacity of the entrepreneurial actors and sharing critical business information.

5.3.3.6. Attracting attention

Participants tend to reach out to access resources by attracting entrepreneurial actors. Through telling their stories, they can communicate their entrepreneurial journeys and draw the attention of the entrepreneurial actors. Some participants

believe that it is more effective when entrepreneurial actors notice the quality of the entrepreneur and be drawn to support the business, as demonstrated below:

“I think what I have done is attract instead of asking, I've attracted, and attraction for me is much more sustainable than asking.” E22

“Attraction for me is much more sustainable than asking. I can tell you now, most of those relationships are not as strong as the ones that I've attracted.” E22

*“There are cases, where I had to kind of knock-on doors and you know, sort of ask, but I can tell you now, most of those relationships are not as strong as the ones that I've attracted.”
E22*

5.3.3.7. Building rapport

To access resources from resource owners is a process that involves not only being known, but also by showing an interest in the other actors' offerings and letting them see them as being worth engaging. According to the participants, having a positive rapport is critical for their business, as shown by the quotations below:

“And then just in terms of our capacity, so my background, obviously, being the CA allows me to deal with anything business-related, anything tax-related, anything finance-related. And then my partner's background is in finance and economics. But she also did journalism. So, between, so she's able to handle like some of the marketing side of things and just the unit economics.” E6

“And we kept in touch, we had, you know, developed a very good relationship. She owns her own company, a law firm that operates in South Africa and in the UK.” E5

“But you know, XXX will still pick up the phone and say, there's an African HR conference, this is happening, you want to speak at the conference, you know, so and that ... that gives you exposure. So, it might not even be the thing that you start off with when you meet, when you establish this relationship. But continuing, just maintaining those networks definitely helps.”

E13

5.3.3.8. Assessing capacity

Most of the entrepreneurs do not have any excess time. Therefore, knowing that the entrepreneurial actor has the resources and is able to allocate them is an important focus of their efforts. Assessing capacity is not an easy process; hence, having linkages enables the participants to have interactions that open a window close enough to assess the entrepreneurial actors, as demonstrated below:

“The biggest issue that government has now in terms of capacity is they don't allocate appropriate budgets. And that's why you see most good firms or most performing well firms will not compete for government, and they just literally leave.” E23

“They didn't actually give us a hands-on help. Accelerator gave us some money around R300,000. I essentially used it to pay myself a salary because I was attending classes for them to tell me what I came and telling them I needed.” E10

“But I just wish at the beginning, I said, screw all of these smart people. I just need developers. I wish I had focused on that because I wasted two years talking to everyone, convincing people. That's just finance people. They don't care about your business, and they just want a portion of it when it does well.”

E10

“What I realised is, South African developers ... because they are few people with skills, they lie about their capabilities.” E10

5.3.3.9. Sharing of critical business information

Participants view access to critical business insights as being vital for helping them learn quickly. It helps them break into the unknown and proceed with confidence. Therefore, they are willing to invest time and make sacrifices, as demonstrated by the quotations below.

“For me, in terms of business, it has helped a lot just following those like-minded people, being in the same spaces with them, being in the same rooms with them.” E12

“I didn't have any suppliers. So, for me to be able to get into the market and to know suppliers, I had worked with her before, when she was supplying me in my previous employment, where I used to work. It was easy for me to go to her to say, I'm starting this business, how do I do it? Would you be in a position to walk the journey with me, just to sort of orientate me into the business, show me how things work, and all of that.” E1

“..., is someone who's been in the industry for long. She was ... she was happy to guide me. It had to cost me though.” E1

5.4. Master Theme 4: Resource Accessing Perspective

The participants' activities and efforts culminate in access to resources from different entrepreneurial actors. As demonstrated by the quotations below, access to resources takes a variety of forms as entrepreneurs use informal, semi-formal and formal linkages.

5.4.1. Access from resource owners

Participants access resources from various resource owners. These resource owners are associated with the different forms of enablers, namely informal, semi-formal and formal as demonstrated below.

5.4.1.1. Informally accessed resource owners

Participants show that accessing resources using the informal form of linkages is associated with accessing these resources' social capital and accessing resources used by other entrepreneurs.

5.4.1.1.1. Social capital

Participants comment on how friends and family are vital providers of business resources, especially in the early stages of the business. They are part of the ecosystem that is immediately accessible. They provide vital back-up and support, business information and business resources, as illustrated by these quotations:

“When we started, just having friends, you know, retweet, you know, repost the post for boot camps. We hardly had to advertise.” E5

“I went to one of my friends who flew to India, to speak to a couple of developers. So, we used one of them.” E10

Some participants mention how family is able to provide valuable core business skills, including offering critical business advice and a channel to business opportunities. Participants also acknowledge the continued role, beyond the formation stages, as part of the entrepreneurial ecosystem as illustrated by the quotations below:

“I started with my wife only. My wife applies because she is the one who loves research, tech applications, etc.” E2

“My late sister, who led the Environmental Affairs Ministry, was the political muscle in the family. So that's how my wife and I set up a consulting unit.” E13

“I am seriously blessed because my husband is a firm believer of supporting dreams, you know, he supports me like, sure, all the way and he’s also an entrepreneur.” E19

5.4.1.2. Semi-formally accessed resource

Participants show that accessing resources using the semi-informal linkages to is associated with accessing resources through mentors, and other entrepreneurs. Mentors act as a channel that at times can be informal or informal.

5.4.1.2.1. Mentors

The participants seek access to mentors who facilitate access to resources and who have the capacity to provide guidance and motivation. The participants’ exposure to various mentors opens doors to a greater variety of entrepreneurial actors, as illustrated by the quotations below:

“I needed someone who was going to who walk the journey ... relay the skills in product development.” E4

“And then, a CEO randomly will just choose who they want to mentor.” E2

“She offered a space in her office. So, for us to have access to her is a big thing. It’s not a small thing, and we need to keep that relationship going.” E5

5.4.1.2.2. Other entrepreneurs

Participants highlight the role of other entrepreneurs in the ICT industry. Several participants regard the value created by other entrepreneurs as a critical component of the ecosystem. They expose entrepreneurs to opportunities and resources, and they offer advice and support. Other entrepreneurs provide a community that enables them, amongst other collaborations, as illustrated below:

“It’s a community of entrepreneurs that just share opportunities. Whatever opportunity exists, we share it. Whenever someone does something great, we celebrate it.” E22

“We engage with entrepreneurs. So, we used to just pull resources from our people that we know, you know, other entrepreneurs that we know.” E6

“That’s how you ultimately get the right people because you work with other entrepreneurs.” E22

Some of the entrepreneurs who have been supported in turn become part of the entrepreneurial actors. Participants express the intention to “give back” to others and thus respond to some of the entrepreneurs’ challenges, such as the lack of appropriate funding. These entrepreneurs in turn extend business advice to others, for example, an employee who eventually starts a business, becoming part of the ecosystem, as illustrated below:

“Yeah, so, sharing knowledge has always been the core of my business because I believe the more you teach, the more you learn.” E2

“I have the highest mentor hours because what happens now is they reached out to me ... that I reach out to other entrepreneurs.” E25

One participant reflects on how working with other entrepreneurs provides business protection when allowing the value chain to be shared. This results in efficiencies that mitigate against “being taken out”, as illustrated in the following quotes:

“And we try not to own an entire vertical across our various horizontals; we let everyone make money. And that means that

every other business is part of our defensible, you know, business strategy.” E14

“If I own the whole value chain, it’s very easy for someone to come and pick off parts of it.” E14

5.4.1.3. Formally accessed resource owners

Participants show that accessing resources using the formal approach to linkages is associated with accessing resources from educational institutions, support organisations and corporates. As demonstrated by the quotations below, these resources take place through individuals working within the formal organisations.

5.4.1.3.1. Educational institutions

Most of the participants have attended various educational institutions, mainly universities. Educational institutions are a critical source of qualified personnel, and they are vital for developing and scaling of businesses. They are a source of knowledge and a critical point of contact with potential business partners, as illustrated by the following quotations:

“My business partner and I have been to business school and have learned all these models.” E6

“You get there, you find, you know, these amazing individuals that are either students at the business school, or they have ecosystems, and they always engage.” E2

“I started to engage the college if they have engineering students.” E2

5.4.1.3.2. Support organisations

Entrepreneurial support organisations are a source of multiple resources, with some using competitions to provide resources to entrepreneurs. Support organisations are part of entrepreneurial actors and are able to crowd-in resources for the entrepreneurs. For participants, support organisations are also

a connector between entrepreneurs and multiple entrepreneurial actors, as demonstrated by the quotations below:

“I was also part of an Enterprise and Supplier Development programme at one stage.” E14

*“We went into that competition knowing that number one, we will have top expertise. They know how to help people strategise.”
E2*

5.4.1.3.3. Corporates

Participants recognise the role played by corporates in the development of business skills and access to entrepreneurial support programmes. Corporates are a source of direct business knowledge, especially when they operate in the same industry. Time spent in a corporate environment enables some participants to network with people that are vital to their enterprise. There is a spillover of knowledge and skills. Entrepreneurs are able to gain business knowledge, with the aim of later running their own business, as illustrated by the quotation below:

“Little did I know that being in that space of a month or two, I will know almost 80% of all the products, also, with that I got a chance to now mastering the whole technical side of security systems.” E2

Another participant notes that some companies are open to share business knowledge and opportunities. Participants also comment how corporates are responding to support small enterprises by providing business and technical support, as well as access to market, as illustrated below:

“...it's those type of companies that are doing really well that you could almost be a part of their community and ask them like, how did you guys do it?” E22

“In the process of moving to corporates, one corporate client started talking about the enterprise and supplier development programmes.” E12

5.4.1.3.4. Funders

Participants’ comments show that this is a component of the ecosystem that is not easy to secure. Despite this difficulty, participants regard access to funders who are aligned to their business vision as important to be able to grow and scale. Below, the participants express how they have managed to secure funders:

“So, the story around the angel investor is someone that I’ve known. So, it’s easier for me to convince them, you know, the convincing part is not very difficult because they’re already in the space.” E3

“Actually, there’s one angel investor that I know who has been wanting to invest in the company for quite some time.” E3

“The company came on board just to fund the tech, to fund the assembly and the build of the blockchain technology ... in a manner so that it can stand the test of time.” E13

This theme shows who are some of the entrepreneurial actors who make up the bigger pool, which the participants can find in the external environment. Having thought through who makes up the bigger pool, participants turn to taking action to identify specific entrepreneurial actors in line with their business resource requirements.

5.4.2. Resource recycling - sharing

This theme shows that recycling increases the resource pool. The entrepreneurial community also recycles insights as they provide opportunities to collaborate, share information about business opportunities and a platform to share success stories, including where and how to access funding. As demonstrated below, entrepreneurs have the strong desire to help other entrepreneurs.

5.4.2.1. Early-stage entrepreneurs

Participants do not only recycle resources at exit, but they also extend their resources to other entrepreneurs in the ecosystem while they are still developing their own businesses. It shows a parallel activity, where the entrepreneur is also an entrepreneurial actor, which does not commence only just prior to exit or after exit but continues parallel as the entrepreneurs build and grow their own businesses.

“Yeah, so, sharing knowledge has always been the core of my business because I believe the more you teach, the more you learn.” E2

“I was saying, I have the highest mentor hours because what happens now is they reached out to me that I reached out to other entrepreneurs. Just like this thing and for direction, and that's high impact paying it forward and for entrepreneurs, by entrepreneurs.” E25

“... and it's not just entrepreneurs, now, it's also a community of investors, right?” E22

“I had a vision of what I wanted to do, say incubation type of thing for tech products.” E9

5.4.2.2. Growth stage entrepreneurs

Participants state that they use the accumulated knowledge and wealth by successful entrepreneurs investing in other businesses and offering entrepreneurial support through mentorship. This enables nascent and growing entrepreneurs the access to resources that they would otherwise have to self-provide much later or raise capital to finance. For example:

“She offered a space in her office. So that means that we have our own space in her office, and it comes with all the resources that we need.” E6

“Access to capital, for raising capital, access to markets to enter into new markets, thinking of scaling, and then access to human capital. To find the right people even just getting to put together an advisory board. For example, I remember I had my first review interview, I did with B, I remember like it was literally he knew my numbers. He was ... he drilled me, he really grilled me, I was like, Jyoo! Sometimes, it is about that process, you get to meet very smart people who will unpack your business and dig deep and tear it apart.” E25

5.4.3. Misalignments

Participants who had unsuccessful attempts at forming alliances generally express frustration with entrepreneurial actors who are unable to meet their needs, reaching a point of taking extreme action. Participants express negative sentiments with other entrepreneurial actors. Some of these misalignments are unfortunately evident towards the end of the process, when a lot of time has been spent identifying and linking with the entrepreneurial actors. For example, as indicated below, two participants decided to exit the support programme:

“People talk to you and teach you, but they don’t execute. You could tell these people had never been in business.” E10

“You jump for them because you think they are going to really open doors for market access.” E4

“One thing that I think disappointed me is they took forever to pay. To the point where they almost closed my business.” E23

“I realised for my business, it doesn’t help me with my growth and the speed ... the pace that I do things.” E11

Notwithstanding the resource alignment challenges, one participant’s view is that not being able to access the funds made her discover that if she had been successful, she could have not learned important lessons:

“I just wanted to emphasise with the resources, the truth is, if I had gotten the money first, I would have gone with the South African developer, and they would have gotten the bulk ... useless platform.” E10

Regardless of the outcome, participants also reflect on the positive influence of the actual process of accessing resources. Participants gained experience and learned, as demonstrated in the following quotations:

“It helps you to gain the experience, it helps you to understand how the business world works.” E10

“When I look where I started and when I look at it now, I am a completely different person.” E10

If successful in identifying and linking with a suitable entrepreneurial actor, the entrepreneurs access multiple resources as well as the much-needed exposure for their businesses. First, resources can be accessed through structured programmes from individual entrepreneurial actors and through a group of entrepreneurial actors. Second, they can be accessed through and by individual entrepreneurial actors and through a group of entrepreneurial actors without a structured programme. In addition, some entrepreneurial actors use competitions to attract and assess entrepreneurs prior to accessing the resources. The quotations below illustrate the different modes:

“I've been part of a lot of incubators, their philosophy is, whatever it takes, whatever you need in your business, so that we can make you fly, we'll give it to you.” E4

“So, we've recently joined a programme. So, we access a team that side, so we get resources from them, financial and non-financial, to allow us to grow our business and to further solidify our value proposition.” E6

“So, the university programme actually runs a whole programme on how you inculcate an entrepreneurial mindset.” E6

Entrepreneurial actors are not always contacted through structured programmes. Participants access resources as and when the need arises and often based on a relationship with the individual entrepreneurial actors. They also have contact with individual entrepreneurial actors who are close to them, enabling convenient access to resources for the participants as and when the need arises and based on the relationship with the individual entrepreneurial actor.

“I was operating at my parent’s place, where I managed to build a garage for myself because I had another outside room. So, I changed it to be an office.” E2

“After losing my first car, my father said use my car.” E2

“It’s me consulting right now. So, I was also lucky enough to meet a person that says whatever business you start, it has to be within your skills sets.” E11

Participants also pursue competitions to access resources, as indicated below. These competitions require that entrepreneurs take great care to understand the requirements and present themselves and their businesses as best suited to be allocated the resources.

“I started to fall in love with pitching competitions and follow them to check where they are happening.” E2

“We unlocked through competitions, mentors, you know, people that are experts in their field.” E2

“One of the prizes was to be documented in the local newspaper. I was interested in a radio interview as it was going to be the first time.” E2

“After appearing on TV, then we began to be approached by many people.” E2

5.4.3.1. Assessments

To access resources, some entrepreneurial actors subject the entrepreneurs to assessments to confirm their needs and compatibility. Assessments also provide the participants with the opportunity to further enquire about the business environments, as expressed below:

“So, we applied, and it was a rigorous six-month process; then they appointed.” E1

“So, when they interviewed us, they wanted to find out what are you bringing as innovation as they focus on Black innovators.” E9

“When I first applied, they said I must get them lists of things that I want, because they don't give you money, they give you equipment.” E1

Other assessments are conducted through competitions. Some of the resources are allocated as competition prizes. However, in an event where some do not win, they take the process as a valuable experience for businesses exposure and access to other critical business insights. Rigorous assessments are not limited to programmes and competitions. Some individual entrepreneurial actors also follow similar processes. This provides the resource owner with the comfort that resources will achieve the desired impact. The following quotations illustrates this:

“I went to apply for a competition. I think that was some of the ... those very few the first days of me understanding what a pitch is. I started having that experience at that age.” E2

“It doesn't mean other competitions that I've entered I did win, right. No, we didn't.” E2

“We had to go through a very, very rigorous process, we've been convincing the investor that they needed to invest into us.” E3

5.4.3.2. Negotiating

Negotiations are triggered by participants and entrepreneurial actors going into a process of matching and aligning a quantum of resources, what the resources are going to be used for, as well as the timing, as illustrated below.

“I knew that they don't, give up money easily. We had to go through a very, very rigorous process, we've been convincing them that they needed to invest into us.” E3

“We then proposed a 24% stake. And that was just for funding to get our platform certified and accredited with the regulators. And there were a lot of audits that needed to be done, very expensive audits.” E9

“It was a bit of a negotiation that happened because in her mind, it was like, why are you not just coming to work with me?” E1

The duration of the negotiations defers the decisions, depending on the relationship:

“You know, it was just a 24-hour type of a process with the angel investor.” E3

“I said, I did not just want to come and talk. I got a business plan as well. Is that okay? He said, It's fine. How much do you want? I said R140 000. When do you want it? I said, like yesterday. And it's like, okay, it's fine. Come back tomorrow.” E18

“I wanted to get into an office with someone face-to-face so that you can explain to me why I must wait for two years.” E1

Negotiations are also influenced by the possible mutual benefits. Benefits of achieving mandates are also realised in the process of supporting and developing entrepreneurs. Other resources are allocated to entrepreneurs whose businesses are aligned to the mandates of the entrepreneurial actors, as illustrated in the quotations below:

“We are already funded by entities that close the economic gap, meaning that they need more racial participation in supply chain participation in e-commerce and technology, gender, financial gap.” E13

“The world is moving towards impact investing, asking, does your business align with the 16 sustainable development goals? What worldwide problems are you solving?” E4

“I will always go into competitions that their mandate is in solving gender-based violence.” E4

Notwithstanding the need to negotiate, for some participants, nurturing associations that already exist facilitates access to resources rather than strict negotiations, as illustrated below:

“So, I spend a lot of time with him. He would say, come to my house, let me see your modules. Let's see how we can adjust. And then ... so he actually went deeper into what I was doing.” E18

“Okay, okay, CEO carried people of interest to try to grow me.” E18

“But for me to be able to get into the business, I had to make those trade-offs. For me, it was the easiest way and the quickest way to be able to learn. So, I spent a lot of time with her.” E1

5.4.3.3. Contracting

Negotiations between entrepreneurs and entrepreneurial actors are reduced to agreements to facilitate the allocation of resources. For participants these agreements and contracts assure access to resources, as indicated by the following quotations:

“We had an agreement that they will help me set up my new business.” E1

“It's interesting how we got this contract. We're happy to take them with one person when we started. And the contract got renewed until now, where we have four.” E24

“They put me in contact with a foundation with access to a learners database.” E24

This master theme demonstrates how participants reach out for multiple resources and ultimately access resources through various modes. The participants engage in a process that takes agility, depending on who they access resources from. Not all participants are successful in their endeavours, as discussed in the next section.

5.4.4. Self-resourcing

Participants also make sacrifices and self-fund, and use revenue generated from the business to sustain their businesses. Participants comment on how they have to rely on consulting to offer their skills, so that they can fund their businesses – not out of choice, but out of unsuccessful attempts to secure resources. Some use their pre-acquired skills and the new skills deliberately acquired for their business, as shown in the quotations below:

“I've never really got a mentor per se, but I can say, but I could say I read a lot. So, and I've ... I like biographies of people. So, it provides a bit of mentorship of some sort.” E2

“I'm personally working in research and consulting in real estate now just to get money up so that I can pay developers to develop my platform. I'm bootstrapping.” E10

“With at least some realistic financial projections. You know, so we had to build off from what we had.” E6

5.4.4.1. Control

Most of the interviewed participants have a long history of entrepreneurship. The amount of effort they are putting into the business makes them attach high value on having the sole control of the business. Their experiences show that control is important to them, and they rather limit their expansion to mitigate unplanned dilution of control, as demonstrated by the quotations below:

“Yeah. Yeah, we've got control of, you know, our fate and destiny. So, when we want to change something, now, we change it now, you know, and remember that, you know, the development space is great. It's very expensive.” E6

“As the incubator, if you're going to train me how to do finances, how to do the marketing, how to put in place the systems, but you do not expose me to opportunities, then you're not taking me to where I want to be. Give me the opportunity, once we generate income from those opportunities, we can control your finances.” E10

“I've grown to be stronger. So, one thing that I've learned very well these days is to not be worried mostly about things I can control.” E17

“So pushed and I think six months down the line we had complications since it was three people involved, we had complications. The first one was of the people who resided in those premises, they wanted to take some ... take full ownership.” E11

5.4.4.2. Unsuccessful attempts

While many participants achieve success in accessing resources, it is possible to go through the process and still not achieve their ultimate objectives. The participants' experience is sometimes that of disappointment, as illustrated below:

“They were happy with our proposal, but were upfront to say, I don't like you, but I like your work. That was another horrific experience.”

“We've tried to apply to the government all the relief facilities that they have, but we haven't succeeded.”

“At that time, I wanted to inquire ... see if they've got office spaces. They first rejected me.”

“I've grown to be stronger. So, one thing that I've learned very well these days is to not be worried mostly about things I can control.”

5.5. Entrepreneurial Emotions, Reflections, and Reactions

Positive experience of the process has triggered positive emotions of achievements. Unfortunately, some participants found some support to be misaligned and non-responsive to their needs. This also triggers negative emotions and reactions when they then have to try to mitigate unsuccessful outcomes. Some participants revert back to the process and others opt for self-provisioning.

5.5.1. Reflections and reactions

Logically, participants express positive sentiments regarding their experiences of positive outcomes during the process and the satisfaction of having the opportunity to contributing to other entrepreneurs. Some find the process challenging, but still helpful, as illustrated below:

“So that was really helpful. And she continues to be quite helpful.”
E5

“But now I realised the importance of regrouping with those guys. So that has been helpful as well.” E23

“I love giving back, I really enjoy giving back.” E8

“It helps you to understand how the business world works, it helps you understand most importantly, the importance of keeping money in the business.” E17

Participants also express varying emotions of frustration, disappointment, and stress during the process of identifying, linking and trying to access the resources. This is demonstrated by these quotations:

“Ecosystems in South Africa are really hard to find.” E23

“And everyone was saying, Yeah, we're interested, just give us this, this will, we'll get to it, we'll look into it.” E11

“The last three months of the year are stressful ... we tried to raise funding; we were not successful.” E1

“I tried to find out from my family what is going on and did not get support.” E2

“When I look where I started and when I look at it now, a completely different person. If they gave me that money ... because when I first started out, for me, it was just to have money to feed my family and to pay my debts, I wanted to do this or do that. I promise, if they gave me that money, then I wouldn't have built the business, it probably would have collapsed.” E1

“So, that's the problem with them. I actually needed resources in my business, I didn't need an HR person to tell me, you need to have contracts. And these are the contracts to sign. And I didn't need a legal person to tell me I needed them to execute to do that for me. And then it felt like I went back to school for things I already knew because I even had these contracts.” E10

This master theme illustrates that accessing resources from the entrepreneurial actors involves multiple elements. While there are successes, there are also misalignments and unsuccessful pursuits and these lead to participants seeking alternatives.

5.6. Research of the Entrepreneur's Perspective of the Entrepreneurial Ecosystem through IPA

This study is building on the existing studies that focused on understanding how entrepreneurial ecosystems support positive entrepreneurial activity. Earlier studies had focused on the identification of entrepreneurial ecosystem components, their evolution, governance, and the role of specific components of the ecosystem, such as educational institutions and funders, such as venture capitalists. Attention had also been on specific entrepreneurial groups. This study, through IPA, by specifically focusing on the entrepreneur in a developing economy, allowed for garnering a deeper understanding of what entrepreneurs do to access the resources by developing their entrepreneurial ecosystem.

This IPA research has allowed for the experiences of the entrepreneurs to be illuminated as they act to access resources within the entrepreneurial ecosystem. It also illustrated this process from the *why* and *how* perspective. Most of the

entrepreneurs' experience and achieve positive outcomes. However, there are some whose outcomes were not in line with the initial expectations. In endeavouring to understand the process better, the participants' own voices demonstrated how they identify, interact and access resources. The IPA approach allowed for the interpretation of how the participants interpreted their experiences. In the process, their experiences reflect a sense of achievement and success, but also disappointment due to misalignments, failed attempts, and a sense of learning.

5.7. Summary of the Findings

This Interpretative Phenomenological Analysis study of how the entrepreneurs access resources in the entrepreneurial ecosystem found that there are four master themes, which show the entrepreneurs experience ecosystem in ICT in South Africa. The master themes emerged from an interactive process of analysing individual participants sub-ordinate themes and emerging themes, and subsequently analysis of consolidated themes and master themes. The analysis accumulated in a hierarchy of themes with 11 consolidated themes which were grouped into to 4 consolidated master themes which reflect the entrepreneurs' perspective out of 42 subordinate themes Figure 3. The consolidated themes show micro level activities are summarised into the environmental perspective master theme, the agency perspective masters theme, the linkage perspective master theme and the resource accessing perspective master theme. Collectively, the quotations express show the experiences of how the entrepreneurs engage in the process of accessing of the resources; from identifying their needs to ultimate access.

CHAPTER 6 DISCUSSION

6.1. Introduction

This chapter presents a discussion of the data analysed in Chapter 5, compared to existing literature. It reflects on the entrepreneurs' perspective of their experience as they access resources in an entrepreneurial ecosystem in South Africa, a resource-constrained economy. The discussion unpacks the model depicted in Figure 4 of the entrepreneurs' experiences of accessing resources within the entrepreneurial ecosystem. The chapter also compares the findings with the reviewed literature. Overall, the entrepreneurial ecosystem literature points to gaps due to under-theorisation and the lack of explanations regarding the mechanisms (Alvedalen & Boschma, 2017; Cao & Shi, 2020; Crişan et al., 2019). Therefore, the discussion adds to the existing literature. Since research into the entrepreneurial ecosystem from an entrepreneurial perspective is limited, this study was exploratory in nature, the findings of which are discussed in the following sections.

Despite the growing number of research studies being conducted on entrepreneurs, scholars have yet to examine how the entrepreneurial ecosystem works in practice, especially regarding the steps entrepreneurs take to access the entrepreneurial ecosystems (Roundy & Lyons, 2023). The current study identified entrepreneurs' perspectives in exploring this topic in such a way that it advances the understanding of the entrepreneurial ecosystem in a developing, resource-constrained economy.

In Chapter 1, the reader was introduced to the purpose of the study, and the main research question, which was, how do entrepreneurs access resources from the entrepreneurial ecosystems? The purpose of this study was to identify the entrepreneurs' perspective, which has been predominantly written about from other entrepreneurial actors' perspective (Spigel 2018). The literature review highlighted some areas that had previously not been explored, with some initial insights on what could be missing in the analysis of the phenomenon, which was the reason for the qualitative research methodology being adopted for this study. It was highlighted, for example, that an environment with limited system linkages

drives the entrepreneurs to develop their own linkages; a perspective which was not receiving attention, and this had an impact on the understanding of some of the critical mechanisms of the entrepreneurial ecosystem.

Building on recent studies (Bakker & McMullen, 2023; Buratti et al., 2022; Michaelis et al., 2022), and on the work of entrepreneurial ecosystem dynamics on the resource logic and interaction logic (Cao & Shi, 2021), the discussion of the findings commences first, by highlighting the context defined by resource scarcity and weak linkages amongst the entrepreneurial actors. Although context plays a critical role in the entrepreneurial ecosystem, it is often limited to a spatial definition, and neglects the socioeconomic context factors that play a significant role in South Africa and other similar contexts in Africa, which is like other sectors beyond the technology sector and sectors where the challenges may be even more pronounced.

Second, entrepreneurs are the focal actors in the entrepreneurial ecosystem, demonstrating entrepreneurial agency characteristics that include leadership, knowledge, motivation, entrepreneurial mindset, and cognitive abilities to inform the entrepreneur's actions (Isenberg, 2011; Spigel, 2018; Stam & Spigel, 2015). Third, this is followed by identifying the entrepreneurial actors and a discussion on how, in a developing economy, the entrepreneurs are enabled to link and interact through personal relationships, professional relationships, prior knowledge and prior experience, to access critical resource through various forms of linkages. A discussion follows of the resource owners and how the resources were eventually accessed, as well as how resources are recycled. The conclusion of the chapter discusses the various triggers of misalignments, concluding with the entrepreneurs' responses.

Taking the perspective of the entrepreneur and using the IPA approach, allows for the analysis of rich data and interpreting context-embedded data (Nylund et al., 2022). The resulting model consists of themes consolidated into four master theme perspectives, namely, the environment, agency, linkages, and resource access. Overall, the study concluded on 11 themes from the analysis of individual entrepreneurs' experiences. The themes were: resource scarcity, entrepreneurial

agency, identification, forms of linkages, enablers of linkages, conditions of linkages, linkage interactions, access to resource owners, resource recycling, misalignments, and self-resourcing. Each theme and master theme will be discussed in the sections below, underpinned by their sub-ordinate themes as set out in Figure 4.

6.2. Master theme 1: Environmental Perspective

The current study showed that in an emerging economy with constrained resources and an underdeveloped weak entrepreneurial ecosystem, entrepreneurs must contend with elevated resource challenges. Existing studies on entrepreneurship in emerging economies have alluded to the consequences of weak connections of the elements of the entrepreneurial ecosystems (Alvedalen & Boschma, 2017; Cao & Shi, 2021). These, compounded with scarce resources in the ecosystem, exacerbate the challenges for entrepreneurs who operate in such economic context (Alaassar et al., 2022). Although entrepreneurial ecosystems provide valuable resources for entrepreneurs, if these resources are scarce and access is difficult, then this creates a major concern for entrepreneurs and policy makers (Abootorabi et al., 2021; Alaassar et al., 2022; Autio et al., 2019; Oladele et al., 2022).

6.2.1. Weak ecosystem linkages

It emerged from the findings that an entrepreneurial ecosystem with weak linkages triggers the entrepreneurs to establish and drive their own linkages. When ecosystem actors are limited, remain undeveloped and leading to under representation of critical elements, they become invisible to other elements of the system. For example, the findings in the current study suggested that there are more support organisations as compared to other elements, such as funders. Furthermore, even where there are other elements of the ecosystem within these support organisations, there are limited appropriate and suitably qualified technical support skills.

A connected entrepreneurial ecosystem consists of effective linkages to create an impactful entrepreneurial ecosystem (Roundy et al., 2017). It is clear from the present findings that some support organisations offerings repeat what

entrepreneurs argue they had already learned while studying at university. Most of the interviewed participants had studied at institutions of higher learning (Table 3). This suggests the weak link between support organisations and universities in aiming to achieve a coordinated course content. As the study showed, these duplications are a concern as they take away time that entrepreneurs could be investing in areas where they are under capacitated. Linkages will have to align the offerings, so that the of entrepreneurs becomes a complementary process.

Roundy et al. (2017) posit that systemic connections are built upon shared goals at multiple levels of entrepreneurship. Therefore, to achieve the shared goal requires visibility amongst actors, so that there is complementarity and not duplication. Ecosystem thickness requires interaction at multiple levels of entrepreneurial actors (Davidsson & Wiklund, 2001). As the previous studies argued, this coherence includes the contextual location, content density, institutional and social culture of the entrepreneurial ecosystem, policy settings, regulative influences and other interacting economic organisations that provide resources and support to individual entrepreneurs (Alaassar et al., 2022; Cao & Shi, 2021; Germain et al., 2022; O'Connor & Audretsch, 2022).

The current study also showed that there are weak linkages between the institutions such as governments and its entrepreneurial support agencies. The capacity to plan, develop, implement, and monitor appropriate policies is always seen as a challenge in South Africa across several areas and sectors. It has been a concern that while entrepreneurship is regarded as essential to addressing unemployment and poverty in the country, this has not been materialised, partially due to limited coordination and monitoring of policies. The study also found that some of the government officials were seen as non-responsive and often treating entrepreneurs as a homogeneous group that is operating and facing the same constraints.

Similar to the existing literature (McMullen et al., 2021), the study found that entrepreneurs face idiosyncratic challenges, especially regarding the nature and the timing of the resource to flow into the business. The idiosyncratic obstacles are possibly a result of the different business stages as found in this study. Some

entrepreneurs' growth stage requires more funding to develop new markets, while other entrepreneurs require additional tech skills. For example, some entrepreneurs found it easier not to pursue funding from government agencies to avoid long lead times to access these resources. Therefore, attention is required to link diverse entrepreneurial actors in the entrepreneurial ecosystem. The level of uncoordinated links in the entrepreneurial ecosystem requires a huge effort to coordinate the individual efforts. This is important, according to existing research, only a few nascent and scaling entrepreneurs have the capacity to develop relations as well as link beyond their immediate location (Fischer et al., 2022; Gueguen et al., 2021).

Notwithstanding the weak ecosystem linkages, the current study showed that the entrepreneurs draw from their own capacity to establish their own linkages. On the other hand, the current study also showed that although not common, some support organisations compensated for the poor coordination by offering multiple resources to the entrepreneur, including business skills, affordable business accommodation, and platforms for entrepreneurs to develop business networks, albeit less coordinated. Despite this, the study found that there remains a need for entrepreneurs to actively develop linkages to other entrepreneurial actors. Therefore, overall, the current study confirmed that these weak linkages of the entrepreneurial ecosystem, the misalignment found in many cases, limited content of elements and the absence of the most critical elements are common course in a resource constrained economy (Cao & Shi, 2021).

The current study also found that contrary to the emphasis by most existing literature on the spatial boundedness of the entrepreneurial ecosystem (Cao & Shi, 2021; Elia et al., 2020; Shi & Shi, 2022), entrepreneurs seemed to be able to access resources beyond their current locality, especially where there are technologically based opportunities and technology knowledge-based support (Elia et al., 2020) is needed. The findings by Fernhaber et al. (2009) indicated that international knowledge may be sourced through alliance partners. This study, however, found that international support is not only limited to having alliance partners, but can also be sourced during the nascent stages of the business, well before formal business alliances are formed.

In conclusion, these weak ecosystem linkages explain why entrepreneurial agency is more pronounced in the development of the entrepreneurial ecosystem as entrepreneurs compensate for the limited, poorly coordinated, and underdeveloped ecosystem.

6.2.2. Resource scarcity

The current study found that ICT entrepreneurs in South Africa tended to contend with limited entrepreneurial resources in the ecosystem to grow their businesses. South Africa's entrepreneurial firms have to contend with a number of barriers, similar to entrepreneurs in most of the developing economies as indicated by the Global Entrepreneurship Monitor (GEM, 2019/2020). In line with the existing research on emerging economies (Bruton et al., 2008), the current study found that there are limited ICT market-supporting institutions, capital markets and labour markets. Consequently, these deficiencies constrain entrepreneurial activity in this sector and as a result its economic activity (Khanna & Palepu, 2000; Mair et al., 2012). According to Autio, Nambisan, Thomas, and Wright (2018), to create an effective entrepreneurial ecosystem, these components need to interact to share critical knowledge through the various networks of entrepreneurial actors.

The current study showed that by having a limited number of entrepreneurial actors that are non-complementary to each other will also negatively constrain the growth of their businesses. These resource constraints translate into underdeveloped market-supporting institutions, including capital markets, labour markets, as well as institutional voids, which constrain economic, and increase the cost of transacting (Khanna & Palepu, 2000). Firms, individuals, institutions, infrastructure, and networks are essential elements shaping an entrepreneurial ecosystem and they affect the dynamism and responsiveness of entrepreneurs. Ultimately, they also affect the resilience of the local economy (Alaassar et al., 2022; Iacobucci & Perugini, 2021; Germain et al., 2022). The current study also found that limited visibility to other entrepreneurial actors limited the diversity of resource options for the entrepreneurs. Consequently, as shown in the study, entrepreneurs pursued entrepreneurial actors who were not aligned to their businesses, resulting in wasted efforts. South Africa's score of below average

with a low entrepreneurship context index ranking of 49 out of 54 (GEM 2019/2020) in all the framework conditions showed a constrained business climate for entrepreneurs. Addressing institutional gaps should ideally lead to an improved performing ecosystem and increased profitability of entrepreneurial firms (Dau et al., 2020).

There is a view, however, that not all the elements of the entrepreneurial ecosystem are critical and equally important; hence, there is a call for more empirical studies to determine the hierarchy (Audretsch, Mason, Miles, & O'Connor, 2018). For example, in a recent study of Fintech entrepreneurial ecosystems, Alaassar et al. (2022) argue that scarcity of financial capital is a common and critical limitation for entrepreneurs. This suggests that despite the absence of other elements, entrepreneurial activity may thrive with limited but relevant elements. However, the existing literature on the typology of entrepreneurial resources shows that it is not only financial capital that is critical, but that human and social capital are also the most prominent elements of the entrepreneurial ecosystem, as shown in Table 2 in the previous chapter. The current study also found that the support organisations were the most resource accessed element. This may be due to their visibility, although being accessible and visible does not necessarily translate to being the most effective resource.

Second, this resource-constrained environment challenges entrepreneurs business growth as they inherently have resource limitations. This study found that entrepreneurs also need – amongst others – affordable talent, appropriate long-term funding, and stage-appropriate business support to develop and scale their businesses. The current study found that these resources affect the level of the entrepreneurs' activity; hence, it takes longer to exploit growth opportunities when these resources are not available or inaccessible. As entrepreneurial actors are limited, and some are not providing business and stage-appropriate aligned resources, entrepreneurs are forced to wait long between the activities for which they need additional resources and the business stages they wish to scale up to. Scholars have found that entrepreneurs identify more opportunities in environments, where they can be accelerated (Clough et al., 2019; Dencker et al., 2021; Troise et al., 2022). As a result, resource scarcity both inside and outside

the business affects entrepreneurs negatively. Therefore, when the external environment also has limited resources, it creates a double-negative resource-constrained system. The study also found that for technology entrepreneurs, the challenges are compounded by the scarcity of high calibre skilled personnel and the high capital required.

The current study further highlighted that the need for resources goes beyond the initial stages of the business and affects all the stages of the entrepreneurs' business. To mitigate for funding challenges, entrepreneurs believe that although funding is scarce, if they can be supported through alternative ways, such as easier access to the market, they will be able to bootstrap their businesses, mitigating and addressing their funding gap. The inability to access the markets and the resultant slow business growth, exacerbates their need for funding. Technology entrepreneurs in this study believed that especially in an emerging economy, it is challenging to compete globally, given the limited local seed capital market. The cost of building technology businesses is prohibitive in an emerging economy; hence, the need for support in order to be locally and globally competitive.

The current study showed that these barriers could in some cases also be seen as an opportunity or opening up opportunities for learning how to survive in a challenging business environment. In addition, entrepreneurs believed this context set them up to excel in diverse and becoming able to draw from the entrepreneur's agency, discussed in the next section.

In summary, the current study confirms the existing research that weak linkages and resource scarcity negatively impact entrepreneurial activity (Cao & Shi, 2021). Further, the current study extends the current literature highlighting the double-negative resource constrained system that is created by both inherent inside the firm resource gaps and external resource limitation in a developing economy impacting business growth. Lastly, contrary to the view of spatial boundedness in the entrepreneurial ecosystem, the study found that technology entrepreneurs are able to reach out beyond the current locality at different stages of the business to mitigate for some of their resource constraints.

6.3. Master theme 2: Agency Perspective

The result of the study suggested that the level of entrepreneurial agency influences the level of impact that a weak entrepreneurial ecosystem can have. The agency shown in the case of the current study was relatively high among all entrepreneurs. This high level of agency reflected in the activism of the entrepreneurs to constantly evaluate different aspects of the business and actively seek ways to respond appropriately. In the findings, it showed that it is mostly a self-led process that responds to the view that these activities have the potential to capture value. The level of emotions and commitment expressed by the entrepreneurs during the interviews was interesting. This included a sense of pride, frustrations, hope, and pain, strongly highlighting the personal attachment that the entrepreneurs have towards their enterprises.

This finding is similar to previous studies such as Cantner et al. (2020), which suggests that entrepreneurial ecosystems develop when entrepreneurs pursue or discover an unexplored idea and start to exploit opportunities to capture value. This agency is critical, especially so in an environment of weak entrepreneurial linkages, where entrepreneurs cannot rely on a well-coordinated system that is able to share information and seamlessly align the entrepreneurs to the assistance they need. The current study found that in an environment of weak linkages, the entrepreneurial agency goes beyond discovery and idea exploitation, a finding that adds to the existing studies highlighting the activism of the entrepreneurs in formulating and driving the creation if their linkages in the entrepreneurial ecosystem. Specifically, this supports the concept that when entrepreneurs pursue and exploit an idea and thus capture value, they need an effective entrepreneurial ecosystem (Cantner et al., 2020).

Studies that are similar to entrepreneurial ecosystems, for example, innovation systems studies, similarly place emphasis on the centrality of an acting individual (Roundy et al., 2018). The current study showed that entrepreneurs as central agents act to link with the other entrepreneurial actors who are resourceful in pursuing growth (Moss et al., 2022). Rawhouser et al. (2017) posit that the agency on the part of the entrepreneur is key to implement resource access strategies. Equally, as entrepreneurs are central to all entrepreneurial activities

of opportunity discovery, opportunity exploitation, the current study showed that they are also central to proactively identifying and linking with entrepreneurial actors to access resources from the resource owners (Hellmann, Michaelis et al., 2022).

6.3.1. Entrepreneurial agency characteristics

There is little discussion in the existing entrepreneurial ecosystem literature about the qualities of the entrepreneurs, despite acknowledgement of their centrality. The current study showed that despite the multiple demands on the entrepreneurs' time; in order to pursue and protect their entrepreneurial vision, their role in the entrepreneurial ecosystem is critical. This agency is characterised by a motivated and driven mindset that is able to lead and make decisions and take the appropriate action. There are five entrepreneurial agency characteristics that emerged in this study.

6.3.1.1. Intrinsic motivation

Building on the existing research, the current study found that entrepreneurs are driven by inner motivation to take the initiative, and project positive determination to the entrepreneurial actors to build and grow their business (Clough et al., 2019; Michaelis et al., 2022). Irrespective of where their entrepreneurial journey started, for example, for some it started in formal employment, entrepreneurs held the belief that their path would ultimately conclude as entrepreneurs. This inner motivation is important, as entrepreneurs were aware that although they may receive external help, pursuing the entrepreneurial actors was a costly exercise with long lead times, thus requiring commitment. The study also found that entrepreneurs are mindful that reaching profitability in the technology business, whether creating or growing the solution, takes longer compared to retail businesses that resell existing solutions and products, thus, it required taking a long-term view of the business. As the current study showed, entrepreneurs continued to pursue their search for entrepreneurial actors, despite multiple disappointments or setbacks in the hope that they will achieve success.

6.3.1.2. Self-leadership

Emphasis on self-leadership was found in the current study that reflected the entrepreneurs' state of mind and way of operating primarily for their own business survival. Self-leadership is also another area that the existing entrepreneurial ecosystem literature did not focus on. Existing literature's attention is on the leadership in the entrepreneurial ecosystem that drives coordination influencing the ecosystem (Roundy, 2020). In this regard, the existing studies show that it is not uncommon for entrepreneurs to lead in the coordination of entrepreneurial ecosystem, especially as a group of entrepreneurs (Roundy et al., 2018). Further, amongst the scholars, there is agreement that leadership of the entrepreneurial ecosystem at different times can be assumed by different actors, including entrepreneurs and other actors, such as investors, support organisation leaders and universities (Roundy et al., 2018). As the entrepreneurial ecosystem evolves, other entrepreneurial actors may also take the lead (Cao & Shi, 2021). It is clear that entrepreneurs are not passive in the process of accessing resources as they also take the leadership role. More important, in the context of weak ecosystem linkages, they can self-lead throughout the process and not assume leadership only after a successful exit. The current study found that entrepreneurs act mainly as individuals, taking the lead for linking with entrepreneurial actors for their immediate resource requirements. Similar to the existing literature that found that entrepreneurs also act in a group and contribute to the promotion of entrepreneurial ecosystem coordination (Feldman & Zoller, 2012; Stam & Spigel, 2016), entrepreneurs act as a group to promote social networking between themselves and organising themselves to access resources.

6.3.1.3. Entrepreneurial mindset

The current study, in line with the existing studies, showed that entrepreneurs adapt again soon after experiencing failure, and they rather see this experience as setting them up for the next level, having learned for the set-back, thus showing the emotional and mental capacity to step back, reflect and rebound (Bernard & Barbosa, 2016). The entrepreneurial agency involves a mindset that can adapt to different outcomes (Haynie & Shepherd, 2009). Haynie and Shepherd (2009) further argued that an entrepreneurial mindset is multi-dimensional and includes how the entrepreneurs think, their emotions and actions. It is about how

entrepreneurs use information to identify and invent new products or services and assemble the necessary resources to start and grow businesses (Kuratko et al., 2021). As this study showed, it is also about how to use the knowledge and relationships as an enabler to link with other entrepreneurial actors. It is the ability to recognise opportunity, where others see chaos, contradiction, and confusion, exhibiting characteristics associated with bouncing back (Kantur & İşeri-Say, 2012; Kuratko et al., 2021). Specifically, this study found that entrepreneurs saw being able to operate in a challenging resource-constrained environment with weak linkages as an opportunity, setting them up to excel under any condition and faced with many challenges that they aim to overcome.

6.3.1.4. Decision-making

Existing studies show that decision-making by entrepreneurs is influenced by their perception of opportunities and the environment (Shepherd et al., 2015). Entrepreneurs are influenced by their attitudes, abilities, and opportunity costs, as well as by individual aspirations, which may change over time. The current study showed that their decisions are often made without them knowing whether there are prospects of success, only influenced by their perceptions and assumptions. The perceptions, for example, of whether the environment is munificent or resource-constrained in a specific sector, influences the entrepreneurs' decisions (Shepherd et al., 2015). As the current study indicated, despite the scarcity of resources and the effort required to access these resources, the entrepreneurs' decision to proceed is influenced by the perception of opportunity and the commitment to prevail in accessing resources. Further, the study showed that entrepreneurs prioritise, which resources to pursue first, and which resources to access from the entrepreneurial ecosystem. They make decisions on the resource requirements of their entrepreneurial firms and identify what other actors they will need to link with to achieve their goals (Brown & Mason, 2017; van de Ven, 1993). Therefore, as the current study showed, entrepreneurs are constantly making decisions to explore and decide on who to approach for resources and how to approach entrepreneurial actors.

6.3.1.5. Action oriented

Lastly, prior studies demonstrate that the cognitive abilities of the entrepreneurs, how they think and what they know propels them to action (Kuratko et al., 2021). The entrepreneurs' stronger cognitive capacities allow them to reflect on their course of action and adapt their operations when necessary (Dencker et al., 2021). The study showed that entrepreneurs with limited technological knowledge take action to augment their capability shortfalls through partnerships, and thereby to acquire new technological skills or knowledge. In the current study, building on the existing research, entrepreneurs based their actions and decisions on the knowledge acquired, and then they took action to pivot when appropriate, and push to continue with the control of their existing businesses when appropriate. Therefore, while identifying and recognising possible opportunities and the potential of their businesses, entrepreneurs constantly look to identify and link with suitable entrepreneurial actors, even when it seems at that time that the actions taken in this regard are insignificant.

In summary, entrepreneurs are important and central role-players or actors, and they take the necessary steps for the business to progress (McMullen & Shepherd, 2006; Wood et al., 2021). This study adds to existing literature by showing that entrepreneurs are the key actors in an entrepreneurial ecosystem, able to persist and pivot to overcome challenges, even when faced with resource limitations. Therefore, this study showed that the entrepreneurs' agency is pronounced in a resource-constrained environment, where there are weak linkages in the entrepreneurial ecosystem. The next sub-section discusses the entrepreneurial resource gaps found in the study.

6.3.2. Entrepreneurs' resource gaps

According to (WEF, 2013), the entrepreneurs top resource requirements for their businesses are access to market, human capital, financial capital, mentors, advisors, regulatory framework, training, and universities as catalysis and cultural support. The current study found three clusters of the entrepreneurs' resource gaps that impact the entrepreneurs' business. These resources can be clustered into three categories, namely, personal entrepreneurial needs, business needs and financial needs. As the current study showed, entrepreneurial personal

include need for personal growth, freedom, success, control and need to contribute to society. Earlier studies showed that Cunningham and Lischeron, (1991) also noted although not specific that entrepreneurs are driven by the need for achievements. There is limited discussion in the existing entrepreneurial ecosystem literature about the entrepreneurial personal needs. This may be due to the limited research in the entrepreneurial ecosystem focusing on the entrepreneurs as indicated earlier.

There is a perspective resources are not equally important (Audretsch, Mason, Miles, & O'Connor, 2018). For example, Alaassar et al. (2022) argue that financial capital is a critical limitation for entrepreneurs. However, the existing literature on the typology of entrepreneurial resources as mentioned earlier showed that although financial capital that is critical, similarly is human and social capital. Specifically, this study found that entrepreneurs have business needs consisting of human capital, training, and access to market for growth opportunities. Being able to find relevant human capital is essential for entrepreneurs.

The current study showed that of human capital in the business is a combination of both entrepreneurs in-house trained personnel and also looking to education institutions and other local programmes for skilled human capital. High end skills give the entrepreneurs a competitive advantage. Therefore, they regard developing their human capital as critical investment. The study also found that market access for opportunities for growth and expansion in products and solutions are regarded as critical. This also includes exposure to new and bigger markets, as well as business partnerships for collaboration. The current study further showed that entrepreneurs are concerned of being unable to access markets and the resultant slow business growth, hence their pursuance to gain access to market.

At the same time, growth also introduces new challenges, especially the of accessing additional resources for the scaling stage. The current study found that scaling required increased funding. This suggests that business growth requires more resources. Additionally, the study showed that entrepreneurs constantly deal with the challenge to managing their flow of cash. Other support such as

mentors although necessary they still do not mitigate cashflow related risks. These entrepreneurial needs as the study found, drive entrepreneurs to find entrepreneurial actors to gain access to these resources discussed in the next sub-section.

6.3.3. Identification of entrepreneurial actors

The current study showed that despite having to operate in a resource-constrained environment, entrepreneurs continue to identify entrepreneurial actors from the existing pool of resource owners. Previous studies showed that entrepreneurial actors were perceived as being more valuable, depending on the resources they possessed, and their capacity to offer those resources (Clough et al., 2019). The current study found that entrepreneurs identified and created linkages with the key entrepreneurial actors, such as educational institutions, corporates, other entrepreneurs, social capital of friends and family, public and private entrepreneurial support organisations, mentors, human capital, and funders. This finding built on the existing research to show that identifying well-known reputable support organisations and talented partners who can influence and complement the business positively is critical (Villanueva et al., 2012). Further, according to Clough et al. (2019), high-status entrepreneurial actors are perceived as less likely to link up with entrepreneurs. This study showed that entrepreneurial actors are identified by each entrepreneur depending on the state of their business and its needs. To find these entrepreneurial actors, the study showed that entrepreneurs use publicly available information to search and reach out to the various sources by using varying strategies.

6.3.3.1. Open search

The current study found that openly searching for entrepreneurial actors widens the diversity and number of entrepreneurial actors the entrepreneur can link with. This is in line with Troise et al. (2022), who posit that good use of social media for information sourcing is valuable and that entrepreneurs should increase their efforts of using social media as it is a significant source of entrepreneurial opportunities. An open search can be triggered by the entrepreneur feeling a sense of uncertainty of where to locate the specific entrepreneurial actors, and whether they have the requisite resources and are willing to allocate the

resources. Although the search can be planned, the current study showed that there were also unplanned encounters, suggesting that openly searching for entrepreneurial owners does not always follow a structured planned search process.

This study found that entrepreneurs often use publicly available information to search for suitable entrepreneurial actors. Identifying the right support is not a linear process and according to Chowdhury et al. (2019), it depends on the visibility of the relevant entrepreneurial actors. Entrepreneurs found that social media platforms, such as LinkedIn, WhatsApp, websites, and Twitter, enable an open search, and thereby improve their success rate of identifying suitable entrepreneurial actors. As the current study showed, through these platforms, entrepreneurs identify active entrepreneurial actors and discover information about them, as well as how to locate them. Previous studies found that entrepreneurs use the same platforms to make themselves visible to the entrepreneurial actors (Ali et al., 2023; Olanrewaju et al., 2020). In line with the existing studies, a higher rate of exposure will contribute to improving outcomes of an open search.

6.3.3.2. Reaching out

The current study showed that entrepreneurs use varying strategies to reach out to entrepreneurial actors to access various resources. The current study also found that entrepreneurs can directly and indirectly reach out to entrepreneurial actors. To increase the chances of success, existing studies showed that entrepreneurs place entrepreneurial actors into categories so that they can be targeted in an effective manner, which would mitigate against potential unfavourable outcomes (Hellmann, 2007). Some entrepreneurs attempt to increase their chances of a successful outcome by persisting with their contacts of the entrepreneurial actor until a positive response is solicited. However, Hellmann (2007), warned that not all entrepreneurial actors like to be solicited in such a manner for resources; thus, the entrepreneurs need to decide on the most appropriate strategy applied for each of the potential entrepreneurial actors. Adding to the existing literature, the current study found that entrepreneurs are

emboldened to persist with their efforts if there is already a prior relationship with such entrepreneurial actor.

In line with existing studies (Hellmann, 2007), entrepreneurs can either reach out as individuals or as a collective. They assess the entrepreneurial actors' readiness as well as their own readiness and determine the appropriate timing to reach out. As the current study found, the entrepreneurial actors can signal readiness of resource capacity and potential interest through social media and by following up to ask questions about the entrepreneurs' progress of the business. The entrepreneur's readiness needs to be communicated regarding their intentions, needs and preparations to respond to assessments. They also have to convince the entrepreneurial actors that they have the capacity to effectively deploy the resources.

Entrepreneurs can introduce themselves by approaching entrepreneurial actors directly. They can also attend social network platforms that are geared towards entrepreneurs, where the specific entrepreneurial actor will be in attendance. Similar to prior studies, entrepreneurs use their powerful entrepreneurial stories to gain access to entrepreneurial actors and their resources (Clough et al., 2019). Entrepreneurs, through telling their stories, communicate their powerful entrepreneurial journeys and draw the attention of the entrepreneurial actors. As found in this study, the stories communicate the entrepreneur's authenticity, commitment, and abilities. These stories demonstrate an entrepreneurial mindset, showing how they learned from failure and overcame challenging situations.

In summary, the agency perspective showed that despite the centrality and the agency of the entrepreneur, the current entrepreneurial ecosystem literature does not put emphasis on their agency characteristics. This included motivation that entrepreneurs showed despite operating in an extreme volatile sector with multiple setbacks. They are also characterised by self-leadership, a strong entrepreneurial mindset and ability to make decisions and take action. Secondly, the current study showed that entrepreneurs have cluster of needs consisting of personal, business, and financial. While business and financial needs are often

referred to, there is limited reference in the existing entrepreneurial ecosystem literature to personal needs such as personal growth, freedom, success, control and need to contribute to society. This study highlighted that these personal entrepreneurial needs form a critical part of understanding the entrepreneurs' agency in the ecosystem. Lastly, building on to the existing literature that found that well capacitated entrepreneurial actors are regarded as more valuable, this study found that entrepreneurs identify resource owners from a pool of existing of actors. For entrepreneurs to access resources from identified entrepreneurial actors, they are enabled by linkages. These linkages are discussed in the next section.

6.4. Master theme 3: Linkage Perspective

Understanding and explaining various linkages is important to illuminate the critical mechanisms of the entrepreneurial ecosystem (Audretsch, Mason, Miles, & O'Connor, 2018; Roundy, 2020), especially the critical linkages between the entrepreneurs and the entrepreneurial actors to access resources (Abootorabi et al., 2021). Existing studies have argued that understanding how the entrepreneurial ecosystem works also has an impact on the levels of entrepreneurial activity, as well as on the of the appropriate policies (Alaassar et al., 2022; Germain et al., 2022; Spigel & Harrison, 2018; Stam & Spigel, 2016, Oladele et al., 2022; Roundy & Bayer 2018).

This section focuses on the second part of the model. This study highlighted that access to resources requires not only visibility, but also entrepreneurs' linkages to suitable entrepreneurial actors, particularly in a resource-constrained environment with weak entrepreneurial ecosystem linkages. Linkages between entrepreneurial ecosystem actors are more advanced in maturing entrepreneurial ecosystems, improving coordination and impact for the entrepreneurs to access resources (Cho et al., 2022; Chowdhury et al., 2019; Roundy & Bayer, 2018; Rawhouser et al., 2017).

The current study showed that where the entrepreneurial ecosystem is underdeveloped (Roundy & Bayer, 2018), these linkages are weak (Rawhouser et al., 2017), undermining the efficiency of the system. The current study also

showed that in response to weak entrepreneurial ecosystem linkages, entrepreneurs have to use multiple enablers that are supported by specific conditions discussed in detail in the following sections. Where entrepreneurial ecosystem linkages are underdeveloped, entrepreneurs adapt their approaches to mitigate for the malfunctioning of the ecosystem (Shi & Shi, 2022; Spigel & Vinodrai, 2021) by developing their own linkages to the entrepreneurial actors.

6.4.1. Forms of linkages

The current study showed that linkages fall into three forms, informal, semi-formal and formal. In the existing literature, linkages had been examined in isolation (Gueguen et al., 2021); however, given the complexity of entrepreneurial activity, this study found that while entrepreneurs can use a form of linkage in isolation, they also often draw upon several forms of linkages at the same time. Linkages differ according to their form and their content (Swann, 2002; Monjon & Waelbroeck, 2003). For example, according to existing studies, an informal use of sources is associated with the entrepreneurs' capabilities to access and absorb available information immediately, while the information gleaned from formal linkages is associated with the longer-term use (Fernhaber et al., 2009). Existing studies further showed that formal and informal linkages also reflect how actors regard their legitimacy (Gueguen et al., 2021). Informal linkages are generally seen as being short-term benefits, while formal linkages are pursued through collaboration agreements (Freitas et al., 2011).

6.4.1.1. Informal linkages

As the current study showed, informal linkages contribute to exposing and connecting the entrepreneurial actors to the entrepreneurs, and at the same time, they let the actors know about the entrepreneur's business needs. This form of linkage includes contacts with former colleagues, other entrepreneurs, friends and family. The existing literature showed that these linkages are important for an effective entrepreneurial ecosystem (Gueguen et al., 2021). The current study also showed that some linkages are most effective when they are informal, especially when they are used for general enquires, although some linkages may escalate to become formalised. As existing literature showed, entrepreneurs can develop their own networks through informal contacts (Spigel & Harrison, 2018).

This form of linkage was associated with personal relationships and collective relationships. This study found that strategically, entrepreneurs are able through informal linkages to understand the entrepreneurial actors' capacity to mobilise and allocate resources. These informal linkages are strategic, according to Rawhouser et al. (2017), as by the time formal engagements take place, the entrepreneurial actors would have almost decided about whether or not to support the entrepreneurs, their needs and how to support them. For example, this study showed that entrepreneurs used informal events such as business meetings, events, and exhibitions to trigger an opportunity to further connect post the event.

6.4.1.2. Semi-formal

The current study suggested that semi-formal linkages are associated mainly with prior knowledge and prior experience enablers engage beyond informal to demonstrate high level of business insight and intentions. Although not formal, these linkages are not unstructured to the point of being regarded as casual. They require some level of coordination. For example, the current study found that prior knowledge and prior experiences give the entrepreneurs the necessary confidence to link with potential angel investor semi-formally to establish the relationship prior to final decisions being made to formalise the engagements. The current study showed that entrepreneurs with semi-formal linkages improve their chances to gain more insights into the current market, the range of actors, the range of offers available and the likely conditions, which can later be translated to the identification of the most suitable entrepreneurial actor, and similarly for the entrepreneurial actor to decide. These insights included when and how entrepreneurial actors operate, the ability to know the actors' capacity and other information that would probably not be publicly available. This information is then used by entrepreneurs to organise themselves to effectively engage entrepreneurial actors. For example, the current study found that pitching events provide the entrepreneurs with the opportunity to link with the entrepreneurial actors on semi-formal platforms, where entrepreneurial actors communicate what is on offer from their organisations. This form of linkage is important (Fernhaber et al., 2009), it allows entrepreneurs to adapt depending on the conditions prevalent.

6.4.1.3. Formal

Building on existing literature, this study found that formal linkages tend to facilitate long-term engagements that involve intense activities and complex technologies (Fernhaber et al., 2009). These formal linkages are mainly associated with professional relationships. Formal linkages are mainly structured (Colardyn & Bjornavold, 2004). These linkages bring the entrepreneurs into a formalised environment that is characterised by entrepreneurial actors who operate within professional structures. These structured linkages include educational institutions and support organisations, funders, human capital, where formal procedures are followed to link with the entrepreneurial actors. Dependent on the specific institution or organisation, there are further prescribed processes of linking with these support organisations or institutions. For example, the study found that entrepreneurial support organisations have specific open window periods, when entrepreneurs can make formal enquiries before they make their final determination of the organisation they will formally engage with further.

In summary, the current study showed that the three forms of linkages can complement or substitute each other. In other words, different forms of linkages reinforce each other as entrepreneurs tap into different resources that are difficult to access, such as access to resources for product. Complementarity and substitution of formal, semi-formal, and informal linkage enhance the effectiveness of the linkages. Ultimately, the impact of the linkages puts entrepreneurs closer to entrepreneurial actors, as will be discussed in the next sub-section. Furthermore, the study found that both the semi-formal and formal linkages require entrepreneurs to pay attention to who they link with, hence the study showed that the entrepreneurs use criteria that assess the quality of the entrepreneurial actor.

6.4.2. Enablers of linkages

This study found that there are four main enablers of linkages between the entrepreneurs and the entrepreneurial actors in the ecosystem, as shown in Figure 4, namely, personal relationships; entrepreneurs linking with entrepreneurial actors using professional relationships; using prior knowledge; and prior experiences. Entrepreneurs use the linkage enablers as they scan the

environment and search for the link with entrepreneurial actors. These enablers are a mechanism for entrepreneurs to link with the resource owners.

The current study found that the entrepreneurial actors' limited content also had an impacted on their visibility, which resulted in entrepreneurs' frequent dependence on personal relationships to establish the linkages. Therefore, the greater the number of enablers for the entrepreneur, the greater are the chances of success. For example, the entrepreneurs use more personal relationships, the more they can link with a higher number of entrepreneurial actors. Finally, although the study did not show that there is a systematic consistent interplay and coordination of enablers by entrepreneurs, the current study noted that there was an increased level of success when entrepreneurs use multiple enablers.

6.4.2.1. Personal relationships

Successful entrepreneurs are more likely to have larger social networks that they use to pursue and exploit opportunities (Gartner & Birley, 2002). The current study showed that individual entrepreneurs use their personal relationships intentionally to establish additional new linkages with different actors in the ecosystem. These personal relationships are strategic and enable the entrepreneurs to link with critical entrepreneurial actors. The current study showed that to be effective, the nature of the interplay between personal relationships and entrepreneurial actors should be based on an understanding of the entrepreneurs' needs, as well as the knowledge of the entrepreneurial actors' capacity.

Through personal relationships, entrepreneurs link with mentors, other entrepreneurs. Personal relationships are the closest form of bonding social capital (Criaco et al., 2021), showing that family, friends, and colleagues are critical to the entrepreneurs' success, as also found in the current study. The current study also showed that personal relationships are both a direct and indirect link to entrepreneurial actors (Bird & Wennberg, 2016). In this study, family and friends facilitated access to networks and provided valuable information, which the entrepreneurs use to gain access to the entrepreneurial actors in addition to providing resources directly to the entrepreneurs. Support

from personal relationships saves the entrepreneurs valuable time and money. Therefore, these personal relationships are vital, especially where timing is a critical factor for the success of the business and where there are no other external resources accessible.

However, not all personal relationships result in positive outcomes. As the current study showed, this is due to the informal nature of the personal engagements, where it is more about assisting than an obligation. These personal arrangements are often not prioritised, and susceptible to withdrawal of assistance and recalling of assets.

6.4.2.2. Collective relationships

To succeed, entrepreneurs use various ways to link with entrepreneurial actors to respond to the environment they operate in (Michaelis et al., 2022). The current study showed that entrepreneurs also use the *collective* of entrepreneurs to link to entrepreneurial actors by collaborating to form entrepreneurial communities to optimise their chances to succeed. Collective forums often provide individual entrepreneurs with a structured platform to link with entrepreneurial actors (Pustovrh, Rangus, & Drnovšek, 2020). The current study showed that the individuals in the entrepreneurial community often go through similar experiences of an ecosystem that is under-resourced, underdeveloped, and fragmented. Therefore, they have shared experiences, an understanding of the pressure points, and thus, they are more sympathetic to their fellow entrepreneurs. For example, the study found that the challenges of trying to secure funding without the backing of a matured balance sheet is a common experience. They also understand the challenge of long lead times of developing technology solutions instead of selling off-the-shelf products. Entrepreneurs also see collective forums as legitimising and signalling credibility of their businesses to entrepreneurial actors.

Although the focus of the community of entrepreneurs in the current study was on accessing resources as opposed to leading the coordination of the entrepreneurial ecosystem as posited by Feldman and Zoller (2012), it highlighted how entrepreneurs can work together for a critical course. Within the

collective forums, there is knowledge spillover amongst the entrepreneurs as they share their experiences and disseminate information. The current study found that they analyse entrepreneurial actors, so that they can target them more effectively as they assess their own readiness and determine the appropriate timing to reach out. As shown in this study, fellow entrepreneurs in a business forum of local entrepreneurs were able to link with support organisations and corporates. In conclusion, belonging and acting within the entrepreneurial communities is an act of collective agency. The rate of business failure experiences can also incentivise entrepreneurs to collaborate with other entrepreneurs (Amankwah-Amoah et al., 2022). Therefore, when entrepreneurs are not confident enough to be self-reliant and efficient in establishing linkages, they rely on the collective.

6.4.2.3. Professional relationships

The current study showed that relationships, such as with family members and friends play a significant role, especially at the early stages of the entrepreneurial journey. Later, however, additional relationships are actively pursued through the formation of new ties and other strategic relationships. In the current study, entrepreneurs actively built strategic relationships with current and former clients, university and college lecturers, and former colleagues. Their intent was to use professional links when aiming to select entrepreneurial actors and use them to access affordable human capital and affordable funding. These relationships also assist the entrepreneurs to form linkages by transmitting information to a network of entrepreneurial actors. According to existing literature, entrepreneurs build on strategic relationships by also leveraging on their previous positive behaviour and reputation (Bouzahir & Chakir, 2013). For example, a positive reputation gained during entrepreneurship competitions opens doors to build professional relations, which created a bridge to support organisations.

As the current study showed, professional relationships can provide a link to other high-growth entrepreneurs, mentors and funders. This is critical when entering a complex growth phase, for example, aiming to access a university with a support programme to develop a feasibility model and a product pricing model, while simultaneously building a public relations profile for the business. The links

between the entrepreneur, universities and the support organisation were often enabled through a professional relationship with a co-presenter at a conference. This further demonstrates that despite weak collaboration between the elements of the ecosystem, entrepreneurs can find a path through their professional relationships to link with the various elements of the ecosystem to access resources.

The study showed that maintaining these professional relationships was vital. Entrepreneurs deliberately signalled quality, perseverance, and reliability, but they also showed that they devoted hours towards supporting other entrepreneurs, which earned them high status. These professional relationships are also maintained through regular updates on the status of the business, thus signalling that entrepreneurs value the relationships.

6.4.2.4. Prior knowledge

The current study shows that knowledge is acquired both directly and indirectly through multiple channels. The study found that common amongst the entrepreneurs is the formal knowledge primarily acquired through university and education and other semi-formal short course platforms. The knowledge includes foundational, current, and future sector knowledge, and knowledge about business and industry trends. This knowledge is an indicator to entrepreneurial actors of the level at which the entrepreneur operates. The second type of knowledge found in the study is about identifying the entrepreneurial actors, and where and how they operate. This knowledge facilitates linkages by indicating vital details about the entrepreneurial actors, their offerings and capacity. Existing literature also found that media reports as well as other social networks are a critical source of this knowledge (Alaassar et al., 2022; Alomani et al., 2022; Donegan et al., 2019). Entrepreneurs also draw from the knowledge acquired over time through various sources, including from existing, exited and returnee entrepreneurs through knowledge diffusion and knowledge spillover (Cao & Shi, 2021; Ferreira et al., 2022; Yi et al., 2021).

The current study showed that where entrepreneurs have prior knowledge, they demonstrate readiness and better alignment with the entrepreneurial actors, thus

improving the chances of achieving access to resources. This includes the knowledge of the entrepreneurial actors' location, the resources they possess, when to approach them and some indication of whether they are able to provide the required resources. The study also showed that knowledge about entrepreneurial actors' capabilities and their resource endowments can be accessed on social media platforms. It was also found that other entrepreneurs who had been resourced by these entrepreneurial actors can act as knowledge diffusers, telling stories about their experiences, thus providing valuable information to other entrepreneurs. Entrepreneurs prefer knowing exactly who and what kind of entrepreneurial actor they are dealing with. Reliable and relevant prior knowledge offers speed, alignment, and ability to focus the entrepreneurs' strategy, improving the ability to link and create positive interactions.

6.4.2.5. Prior experience

Positive and negative experiences are associated with different processes of learning-by-doing, and both provide valuable lessons for the entrepreneurs (Burke et al., 2018; Siran Zhan et al., 2020). The current study showed that entrepreneurs learn and pursue entrepreneurship by drawing from previous entrepreneurial experiences. They can do so with greater success as long as they have multiple opportunities to gain experience, overcome barriers to learning, and build an entrepreneurial experience (Farmer et al., 2011). Lacking experience and relying on incomplete information will lead to inappropriate decisions (Morris et al., 2022). Building on the existing research, this study showed that entrepreneurs use both their own entrepreneurial experiences and pre-entrepreneurial experiences to link with entrepreneurial actors. Similarly, both existing research and the current study found that most pre-entrepreneurial experiences are gained from previous employment (Donegan et al., 2019; Farmer et al., 2011). Drawing on their experiences, self-efficacy and assessments of risk, entrepreneurs act on their conviction to link with suitable entrepreneurial actors. They demonstrate that they also continuously weigh up options and make choices that reflect their risk appetite and ambition.

The current study found that previous employment experiences imprint nascent entrepreneurs with capabilities for their businesses. Entrepreneurs are able to

link with multiple entrepreneurial actors by using their own diverse pre-entrepreneurial employment experiences. Additional experience was gained during their initial attempts at entrepreneurship, which they then apply to create linkages with entrepreneurial actors. These previous experiences include the ability to align to the context and content of the entrepreneurial actors. This study also found that entrepreneurs capitalise on their experiences in different contexts to link with entrepreneurial actors, thus avoiding setbacks. For example, the current study showed that entrepreneurs are far more confident to pursue new linkages if they already had multiple exposures, including prior employment experience, previous attempts at establishing a business, and success or failure in accessing resources from entrepreneurial actors.

This confirms the view that nascent entrepreneurs with limited or no experience may actually perform worse because of their inability to generalise their experiential knowledge accurately (Toft-Kehler et al., 2014). Siran Zhan et al. (2020) argue that compared to nascent entrepreneurs, experienced entrepreneurs can better manage tensions that arise from their positive and negative experiences. The negative implications of these experiences can be alleviated if the level of contextual similarity between prior and current ventures is high, allowing the entrepreneur to strategise differently (Toft-Kehler et al., 2014).

In conclusion, these five enablers explain how entrepreneurs reach linkages with entrepreneurial actors. They enable the critical link, where the entrepreneurial ecosystem is weak and underdeveloped, or not providing coordinated visibility of the various elements of the ecosystem. The current study also found that the enablers are associated with and operate within varying conditions. The next section explains the various conditions within which different enablers are optimised.

6.4.3. Conditions for linkages

This study found that prevailing conditions in the environment impact the activities in the entrepreneurial ecosystem. The presence of suitable conditions that promote overcoming obstacles cannot be underestimated (Morris et al., 2022;

Shi & Shi, 2022). This study identified four conditions that influence the linkages with entrepreneurial actors. These conditions, namely, trust, compatibility, openness, and confidence, can operate individually or concurrently. The conditions between the entrepreneurs and the entrepreneurial actors can also be characterised by encounters of resistance from other suppliers, regulators, financiers, and even family members and friends (Morris et al., 2022). Therefore, the extent of the enablers' effectiveness is affected by the associated prevailing conditions.

6.4.3.1. Trust

The trust conditions underpin personal relationships as evidenced by the type of information and exchanges between the entrepreneurs and the entrepreneurial actors as found in this study. As the current study showed, based on trust, entrepreneurial actors share their offices, human capital, their business networks and expose entrepreneurs to their business associations and other business activities. Trust creates conditions that make relationships effective and serve as an effective channel for information and resources, reducing the time and investment required to acquire resources (Shane & Cable, 2002). The current study showed that central to personal relationships is the trust between actors that nurture unique linkages between the entrepreneurs and the entrepreneurial actors. As found in the current study, personal relationships are usually close relationships that create a platform to benefit the entrepreneurs. They can then link with entrepreneurial actors, which results in sharing business information, including trade secrets without concerns of being taken advantage of. As P8 puts it, "mutual trust enables assistance". Trust is essential for all dealings, and especially so with entrepreneurial actors in the entrepreneurial ecosystem (Ben Spigel & Harrison, 2018; Rawhouser et al., 2017). Useful linkages that facilitate resource access depend on the level of trust between the entrepreneurs and the entrepreneurial actors (Bammens & Collewaert, 2012). However, while such ties can entail advantages, such as fast access to various information and resources, new businesses could become dependent on these trusted intermediaries; hence, constrained in their future growth. According to Villanueva et al. (2012), most entrepreneurs prefer to have multiple resource providers in order to mitigate dependency risk.

6.4.3.2. Compatibility

The current study demonstrated that compatible conditions underpin linkages between the entrepreneurs and the entrepreneurial actors that are enabled by collective relationships. Existing literature showed that commitment to collective relationships can be costly, as it takes more effort to support and sustain (Doering & Wry, 2022). Compatibility, as the current study showed, is a critical condition needed between the entrepreneurs and the entrepreneurial actors to sustain collective relationships and access resources. Compatibility enables convergence of intentions. The current study showed that compatibility within collective relationships goes beyond the occasional check-ins, opening possibilities of mutual benefit also influences resource negotiations. The current study also showed that achieving mandates by entrepreneurial actors can lead to mutual interdependencies. In this regard, the study found that entrepreneurial actors are also dependent on the entrepreneurs who might become suppliers or legitimise the entrepreneurial actors as compliant to government policies that aim to improve entrepreneurial activity.

6.4.3.3. Openness

This study found conditions of openness promote linkages between the entrepreneurs and the entrepreneurial actors that are enabled by professional relationships. Therefore, extending relations beyond personal relationships requires openness not only to new linkages, but also openness by entrepreneurial actors to engage the new entrepreneurs. These conditions mean openness by both parties, the entrepreneurs, and the entrepreneurial actors. Extant literature found that if the entrepreneur has more information than the entrepreneurial actors, such that they cannot assess the true nature and value of the business, they then cannot determine the level of support required (Scholtens, 1999). As the existing research further showed, not opening to assist entrepreneurial actors understand the business can result in the business being incorrectly regarded as one that does not need support.

Openness also attracts a deeper understanding of the business, mitigating against insensitive perceptions or the lack of empathy for the circumstances of entrepreneurs in stressful economic conditions (Durkin et al., 2013). The current

study showed that professional relationships do not always have access to entrepreneurs; hence, the need for intentional openness. Once the linkages have been initiated, even though not rewarding yet at the time, entrepreneurs indicated that it is important to keep the linkages active for possible future access to resources.

6.4.3.4. Confidence

The current study showed that the entrepreneurs need to be confident in the application of their prior knowledge and prior experience, and similarly, the entrepreneurial actors' confidence in the entrepreneurs' ability to apply their knowledge and experience promotes linkages. Where there is confidence in what the entrepreneur knows and, in the experience, they have gained over time, there is optimism (Shepherd et al., 2015). The existing studies revealed that under these conditions, entrepreneurs are committed and willing to take business risks (Gabay-Mariani et al., 2023). The current study found that under conditions of confidence, entrepreneurs are able to work their way through complexities and establish the relevant linkages. They confidently rely on their prior knowledge and experiences as they link with entrepreneurial actors.

In summary, the current study showed that trust, compatibility, openness, and confidence create positive conditions for linkages between entrepreneurs and entrepreneurial actors. These conditions optimise linkages. Lastly, these varying forms of linkages as highlighted in the next section are reiterative and have positive impact on resource access activities.

6.4.4. Impact of reiterative linkages

The current study showed that the multi-layered linkages take time to develop before transitioning to facilitate access to resources. In addition, not all linkages result in a positive outcome; hence, it is reiterative and interactive as entrepreneurs revert to identify other entrepreneurial actors and choose to integrate other enablers. For example, the current study showed that entrepreneurs can combine two or more enablers at the same time or add an enabler later to reinforce their linkages. An entrepreneur using personal relationships may reinforce this with a collective relationship. As discussed

earlier, the entrepreneurs in this study expressed concerns that they found the South African economy to be an extremely demanding environment for building business linkages. However, entrepreneurs have shown their willingness to sacrifice to gain access to impactful, knowledgeable, and reputable entrepreneurial actors. The impact of interactive linkages, as discussed below, facilitates the sharing of business information, the ability to understand the capacity and readiness of entrepreneurial actors, the creation of a platform for building on rapport and to attract attention.

6.4.4.1. Sharing of business information

Effective linkages facilitate the sharing of sensitive business matters (Spigel & Stam, 2018). In line with existing literature, the current study showed that entrepreneurs have relationships with few but critical entrepreneurial actors who they engage with regularly (Rawhouser et al., 2017). Through these interactions, entrepreneurs also gain information that enables them to adjust and refine their businesses (Bammens & Collewaert, 2012). The current study showed that when entrepreneurs interact with entrepreneurial actors over a longer period, they establish solid foundations upon which they feel confident to share critical business information and converge intentions. The current study also found that entrepreneurial actors expose entrepreneurs to their trade sources, business associates and networks.

6.4.4.2. Assessment of capacity

The current study showed that through the interactions, effort and time are invested into gaining an understanding of the entrepreneurial actors' capacity and readiness. There is an opportunity cost involved as entrepreneurs go through multiple engagements (Stam et al., 2014). In the existing literature, Villanueva, van de Ven, and Sapienza (2012) found that the nature and the quantum of the resources required for successful entrepreneurial activity is unlikely to be concentrated in only one or even a few entrepreneurial actors. Therefore, entrepreneurs need to link with multiple entrepreneurial actors and engage in various interactions to access resources successfully. As a strategy, according to Villanueva et al. (2012), entrepreneurs prefer to have multiple resource providers to further mitigate the risk of having to rely on a sole provider. The

current study showed that most entrepreneurs pursue multiple actors to cover their resource shortfalls. Once the linkages had been established, even though some providers did not have capacity at the time, it was important to keep the relationship active for possible future access to resources.

6.4.4.3. Rapport building

In this study it was also found that building rapport with entrepreneurial actors can lead to forming close relationships that facilitate access to resources more effectively. For example, interactions that took place at a social event facilitated deeper conversations and established the entrepreneurial rapport. Zheng and Xia (2018) state that transactions built on rapport that is created, facilitate access to resources more effectively. Rawhouser et al. (2017) conclude that associations mitigate uncertainty and provide positive information to entrepreneurial actors. Social bonds improve and influence the process of accessing resources. Building on the existing studies, it was also found that entrepreneurial actors who are close to the entrepreneurs and their businesses, enable convenient access to resources as and when the need arises, as long as they have already built the rapport of being reliable entrepreneurs. Entrepreneurs can communicate their business needs without needing a protracted protocol through social bonds. To have effective social bonds requires continuous interactions as found in this study. Entrepreneurs have to constantly maintain interactions that update the ecosystem about their progress. Continuing nurturing interactions assists the entrepreneurs with letting the entrepreneurial actors know more about them, thereby highlighting the importance of flexible interactions, rather than entrepreneurs accessing resources through strict negotiations, (Rawhouser et al., 2017).

6.4.4.4. Attracting attention

Some entrepreneurs believe that it is more effective when entrepreneurial actors note their quality and be drawn to support their businesses because of such quality (Clough et al., 2019). According to Rawhouser et al. (2017), without information being projected, the entrepreneurial actors are not incentivised to allocate their resources; hence, entrepreneurs have to send out the relevant signals. The current study showed that entrepreneurs put effort into being seen

positively by entrepreneurial actors, and to be actively engaged in entrepreneurial activities. This is in line with Rawhouser et al. (2017), who found that entrepreneurs convey positive messages to entrepreneurial actors. The current study also showed that entrepreneurs aim to attract the entrepreneurial actors' attention during competitions and achieve elevated business pitch platforms. Entrepreneurial awards legitimise the distinctiveness of the entrepreneur and their business.

In summary, this master theme linkage perspective showed how entrepreneurs go about establishing critical linkages. The study confirmed that compared to developed economies, linkages in developing economies with underdeveloped entrepreneurial ecosystems are weak. This study extended further and showed that entrepreneurs actively create informal, semi-formal and formal linkages. These linkages allowed the entrepreneurs to establish critical connections to access resources. As the current study found, the diversity of entrepreneurial actors requires varying enablers operating in different conditions. The current study also showed that the entrepreneurs' linkage activities are both iterative and integrative to access resources for their businesses. Eventually, this culminates in entrepreneurs accessing the critical resources as discussed in the next section.

6.5. Master theme 4: Resource Accessing Perspective

This master theme sets out three frameworks associated with the entrepreneurs' resource access perspectives. The first shows that the various forms of linkages are associated owners and their resources Figure 4. Entrepreneurs through different forms of linkages and the enablers link with the resource owners to access resources in the entrepreneurial ecosystem. Therefore, the study found that to reach to a resource, there are critical relevant forms of linkages associated with an enabler discussed in sub section 6.4.2 as well as relevant conditions sub section discussed in 6.4.3. In this section we therefore discuss access to the resources from entrepreneurial actors through the various forms of linkages. Figure 4 shows these different forms of linkages associated with accessing different entrepreneurial actors. The secondly the current study shows a reiterative resource access framework by entrepreneurs in the entrepreneurial ecosystem Figure 5. This framework shows that, entrepreneurs when not

satisfied with the resource's outcome, they are able to go back to identify and link with other unentrepreneurial actors.

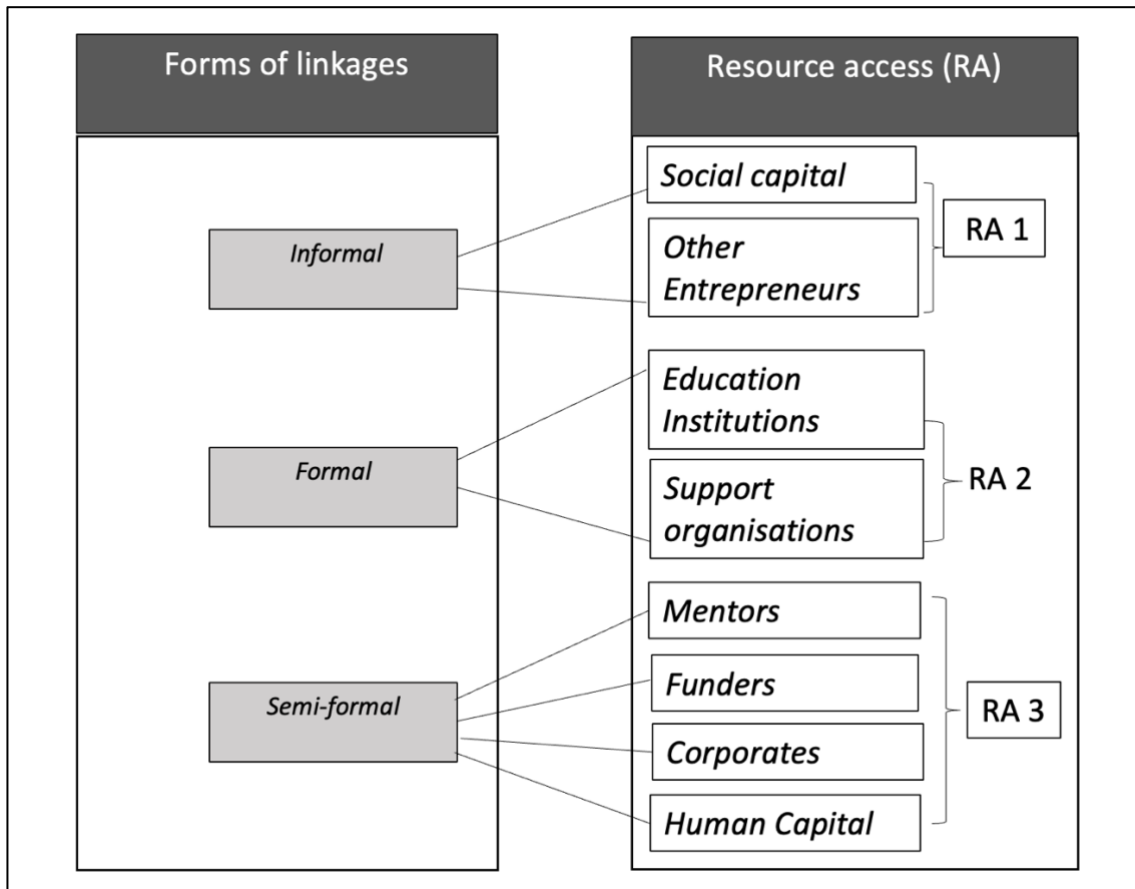
6.5.1. Accessing from Resource Owners

The current study found that different resources are accessed differently through various linkages from the different resource owners leading to a multiple relational framework Figure 4. This framework shows that entrepreneurs can optimise their changes to access resources through various forms of linkages and their associated enablers by directing their efforts to multiple resource owners. This sub-section commences with resources that are associated with the informal types of linkages, namely, social capital, RA1 in Figure 4. Thereafter, will discuss access to mentors, and other entrepreneurs associated with semi-formal linkages, RA2. Lastly, support organisations, educational institutions and governments, support organisations, funders, corporates, and human capital associated with formal types of linkages will be discussed as shown RA3. In addition, the type of resources that are associated with these entrepreneurial actors will be discussed. This section also discusses the reactions of the entrepreneurs after being unsuccessful in their efforts to access resources, thus showing a reiterative process associated with the various forms of linkages.

6.5.1.1. Informal resource access

The study showed that entrepreneurial actors, such as social capital, are associated with informal forms of linkages. *Social capital* provides business with resources, especially in the early stages of the business. Prior studies found that social capital is significantly and positively related to the enterprise firm's performance (Stam et al., 2014). Social capital facilitates access to resources, for example, financial capital and networks, which are critical for entrepreneurial firms. It also influences numerous entrepreneurs' decisions relating to where and how best to mobilise resources (Guerrero & Urbano, 2017).

Figure 4: Forms of linkages and the associated owners and their resources



Source: Multiple resource accesses associated with various forms of linkages

This study found that social capital, and especially family and friends, offer valuable and often critical business resources, such as advice, funding, business accommodation, marketing, and direction to potential business opportunities. Building on the existing research, it was found that while social capital offers diverse support and continues beyond the formation stages of the business, it is also a risky capital. Entrepreneurs' expressed concerns and acknowledged that environmental changes affect the availability and consistency of social capital support. For example, entrepreneurs noted that during challenging economic times, access to social capital resources was affected. The ability of family and friends to respond to changing conditions can also become affected. Therefore, despite their willingness to help, they are also constrained and do not have a contractual obligation to offer support. This may be due to the informality associated with social capital entrepreneurial actors.

6.5.1.2. Semi-formal resource access

The current study found that access to mentors and other entrepreneurs are associated with semi-formal linkages. To access these semi-formal resources, there must be a level of structures between the entrepreneur and the entrepreneurial actors. First, according to existing literature (Stam & Spigel, 2016), *credible mentors* are required at all stages and all sectors, and they are vital for access to advisors, markets, and potential financiers. The current study showed that the *mentors* work both independently and as part of support organisations. The mentors' roles are diverse, and they come in at different stages of the business. Some entrepreneurs take a long-term view on mentors, keeping a long relationship as part of the entrepreneurs' journey. Some offer generic mentorship, and some mentors focus on specific business areas. Mentor relationships can be bi-directional and do not depend only on the entrepreneur to consistently initiate engagements. The study also found that mentors provide guidance and motivation, and they expose entrepreneurs to a variety of other entrepreneurial actors. Some go further to open doors and facilitate access to additional resources and opportunities.

As found in the study, the challenge for entrepreneurs is how to stay top of mind of the mentors, with some entrepreneurs' use persisting with regular calls, giving regular updates, and asking for feedback as their strategy to keep their mentors engaged. Most mentors tend to be responsive, while a few were found to be non-responsive. Despite the unresponsiveness, entrepreneurs seem to adapt to find ways to stay connected to extract value. For example, instead of a direct one-on-one mentorship that was hoped for, an entrepreneur decided to gain business insights from the book a mentor had recommended.

Other entrepreneurs, either as individuals or as a collective network, create a community to guide and offer support to entrepreneurs. The current study showed that individually and as a collective other entrepreneurs work directly to encourage and some mentor others. The existing research found that other entrepreneurs offer alliances and partnership opportunities, joined networking opportunities, and information about where to find support. In addition, and in line with existing literature (Alaassar et al., 2022), the current study noted that

entrepreneurs also positively impacted the perceptions of individuals towards entrepreneurship through spillover effects, such as the transfer of knowledge, start-up spirit, and other resources. Existing literature also found that entrepreneurs work indirectly to lead the of the entrepreneurial ecosystem (Feldman & Zoller, 2012; Miles & Morrison, 2018; Stam 2015).

As found in the current study, other entrepreneurs are part of the entrepreneurial actors and also provide multiple support resources to entrepreneurs. Extant studies have showed that entrepreneurs come back to the ecosystem as part of the entrepreneurial actors, especially after a successful business exit (Roundy et al., 2018; Spigel & Harrison, 2018). These studies showed the critical role of entrepreneurs who are passionate about entrepreneurship to improve the ecosystem. Others return to the system as community of investors and mentors, while others participate as part of the entrepreneurial support organisations and to drive the entrepreneurial culture over time (Roundy et al., 2018).

In addition, the current study suggests that nascent, growing entrepreneurial businesses also play a critical role in the support of entrepreneurs' fellow nascent entrepreneurs who are on a journey of growing their businesses. Matured entrepreneurs often also give back to the ecosystem by investing in nascent entrepreneurs. For example, the study found that entrepreneurs are convinced that it is important to create a platform to bring together tech entrepreneurs and hold each other accountable. Further, their strong desire to help other entrepreneurs also includes self-organising to help themselves. Roundy and Lyons, (2023) noted that this critical practice is not visible due to limited focus of entrepreneurial research on entrepreneurs. Furthermore, the current study found that without the support of other entrepreneurs, business complexity can leave entrepreneurs discouraged if there are no other entrepreneurs to refer to during challenging times.

However, the study also found that entrepreneurs find it extremely challenging to access other entrepreneurs and their resources if they are not part of their networks. Being outside such networks also means receiving incomplete

information, which creates delays for the entrepreneur to advance to the next level.

6.5.1.3. Formal resource access

The current study showed that entrepreneurial support organisations, educational institutions and funders, corporates, human capital and government's entrepreneurial support are associated with formal forms of linkages. These include formalised agreements of private and public entrepreneurial *support organisations*, which are a source of multiple entrepreneurial resources. Dencker et al. (2021) attribute the high value being created by the entrepreneurial ecosystem to the presence of supporting organisations in developed countries that provide a lever for high levels of entrepreneurial activity. Building on existing literature (Martens et al., 2007), the current study found that these organisations offer diverse support, including mentorship, business premises / offices, business support, networking opportunities and funding support for entrepreneurial. Extending the current literature, the current study showed that support organisations are both a part of entrepreneurial ecosystems as well as a sub-ecosystem within themselves that operate to crowd-in and connect the entrepreneurs with multiple entrepreneurial actors. Support organisations direct resources to entrepreneurs and also act as a channel for entrepreneurs to access further other diverse entrepreneurial actors. Both the existing literature and the current study showed that support organisations operate over the lifespan of the business cycle from pre-start-up, during start-up and, during the growth stage of the business. Therefore, entrepreneurs at various stages can gain support from these organisations and access to further resources.

The first resource, as the current study found, *educational institutions* through recently qualified graduates, is a critical source of affordable human personnel critical for a developing and a scaling business. Entrepreneurs requested their former tertiary institutions to assist them with capacity-building for their businesses with particular technical skills. Further, existing research demonstrated a range of positive results that entail the relationship between education and entrepreneurs (Chimica & Tor, 2003). As found in prior studies, academic experience engenders slow, steady, long-lasting growth (Donegan et

al., 2019) and that institutions are not only a precondition for increased economic activity; they also affect the way entrepreneurship is pursued (Stam & van de Ven, 2021). Similarly, the current study found that most of these entrepreneurs had studied through an educational institution, either a college, university and or a business school. Building on Dencker et al. (2021), entrepreneurs use their cognitive capacities obtained from education and experience for observing and learning from other businesses and entrepreneurs. With strong cognitive capabilities, entrepreneurs are able to take into account a multitude of observations and feedback in the process of operating their businesses. The current study further found that educational institutions are also a point of contact for the creation of business partnerships and are a common location suitable for opportunity exploration. Furthermore, entrepreneurs attribute high value to business partnerships developed at education institutions. For example, P14 already had a product strategy that allowed him to collaborate with a technically skilled partner from the university, creating a competitive advantage for the business. However, the study also showed that where there are more than two business partners, it is a challenge to sustain such partnerships. For example, one multiple partner business only lasted a few years, suggesting that sustaining multiple partner business relationships is more complex as compared one partner.

Building on existing research, the study found that when more *funding* is made available in the ecosystem, it increases the number of opportunities that entrepreneurs can exploit, thereby increasing the likelihood of success (Dencker et al., 2021). The current study found that funders can include family members, grantors, investors, or the banks for short-term loans. For example, the study showed that scarcity of funding options is compounded by the low levels of risk appetite that constrains funding flows to entrepreneurs at the level needed to support them to be competitive. As a result, entrepreneurs found that access to funding resources remained inaccessible, and they have to adjust their business schedules because they were unable to overcome the funders' perception that entrepreneurs could not deploy the funding effectively and be profitable. However, while funding is regarded as one of the major constraining resources, not all entrepreneurs in the current study pursued funders, despite being in need

of funding. The current study showed that entrepreneurs evaluate and weigh up the cost of misalignment, particularly during the early stages of the business. The entrepreneurs' experiences show that it is not always easy to secure funders who are aligned to the vision of their business or who afford them the space to grow.

This study found that entrepreneurs regard *corporates* as a source of direct business knowledge and insights, especially when entrepreneurs are operating in the same industry. They provide learning spaces from which entrepreneurs later use the acquired skills and knowledge in their own businesses (Pugh et al., 2019). Entrepreneurs can gain such business knowledge even when the organisation is operating in a different sector (Dencker et al., 2021). The current study showed that some companies' support went beyond sharing business knowledge, as they deliberately created opportunities for the entrepreneurs. Interestingly in South Africa, supporting small entrepreneurs with business and technical skills is also in response to government policy. Although the study found that entrepreneurs may gain access to the corporate senior management, they found it challenging to get to the relevant people because they could not set aside the time. Therefore, linking does not always result in resource access. The study found that entrepreneurs regard the policy by government for corporates helpful to develop emerging entrepreneurs as suppliers and to develop their businesses. For some entrepreneurs, most value gained from corporates was achieved while still in formal employment with them, where they had visibility of various processes and gained business insights.

The current study found that it is a challenge for entrepreneurs to secure *affordable skilled human capital*. Developed and matured entrepreneurial ecosystems as opposed to nascent entrepreneurial ecosystems continuously generate new knowledge, and create pools of skilled workers (Qian, 2018; Benjamin Spigel, 2016; Martens et al., 2007). The current study showed that entrepreneurs' efforts to attract human skills and capacity are also affected by staff members rapidly moving to better paying jobs. The availability of knowledgeable human capital in an ecosystem is also linked to the presence and quality of education and research institutions, which raise the level of competence (Neck et al., 2004; Nicotra et al., 2018). Brown and Mason (2017) state that

established organisations play a vital role in ecosystems because they attract human capital and as they exit, the companies create a pool of skills that entrepreneurs can attract to their businesses.

The current study showed that entrepreneurs develop their in-house trained personnel and also look to educational institutions for recently qualified graduates. Further, the current study found that entrepreneurs lose skilled personnel to big companies with financial muscle because these companies can offer higher compensation. In this regard, the power is not balanced in favour of the nascent entrepreneurs due to their lack of financial muscle to attract and retain skilled personnel. However, some entrepreneurs creatively succeed in developing and keeping skilled personnel. For example, the current study showed their employee value proposition includes a flexible work culture, and a life-work balance, since there are fewer employees therefore, they are exposed to a broader scope of activities, and gain increased knowledge and scope for broader skills transfer by the entrepreneur.

The last resource, governments also develop policy interventions to stimulate business growth (Spigel & Harrison, 2017). As the current study showed, in South Africa, government also offers business support through funding, grants, training and platforms for networking to connect with potential funders and mentors. Worth noting, however, are the concerns over the quality of the support experienced by entrepreneurs, based on their participation in the government support programmes. While entrepreneurs question the efficiency and effectiveness of these programmes, they acknowledge the value stemming from the policies and the positive environment they aim to create, promoting entrepreneurship. For example, this study found that in South Africa, notwithstanding concerns about the programme's effectiveness, entrepreneurs participate in corporate-led entrepreneurial programmes that are established in response to government policies that aim to promote entrepreneurial activity.

This is in line with Stam (2015) that in the context of entrepreneurial ecosystems, the relationship between government and entrepreneurial actors is one where government should take on the role of facilitator and not as a direct actor. As this

study showed, some entrepreneurs receive grant funding from government agents, which is aimed at enabling and increasing entrepreneurial activity, even though some of these resources did not align with the pace of entrepreneurial activity. If not improved, this support can put the businesses at risk, especially if government is the sole source. This underperformance of government interventions may be explained by the appreciation that government's primary role should be that of a facilitator and not directly administering support (Stam, 2015).

Lastly, while the current study showed that these linkages put entrepreneurs in a favourable position to link with entrepreneurial actors and access resources, it showed that this takes place at varying levels of success for the entrepreneurs. Notwithstanding, the entrepreneurs showing loyalty to their entrepreneurial community, endeavour to recycle resources. Furthermore, resource recycling also increases the pool of resources as entrepreneurial actors are approached again for different resources. Hence, the discussion that follows in the next section also explains the recycling of various forms of resources as well as the reiterative resource access activities.

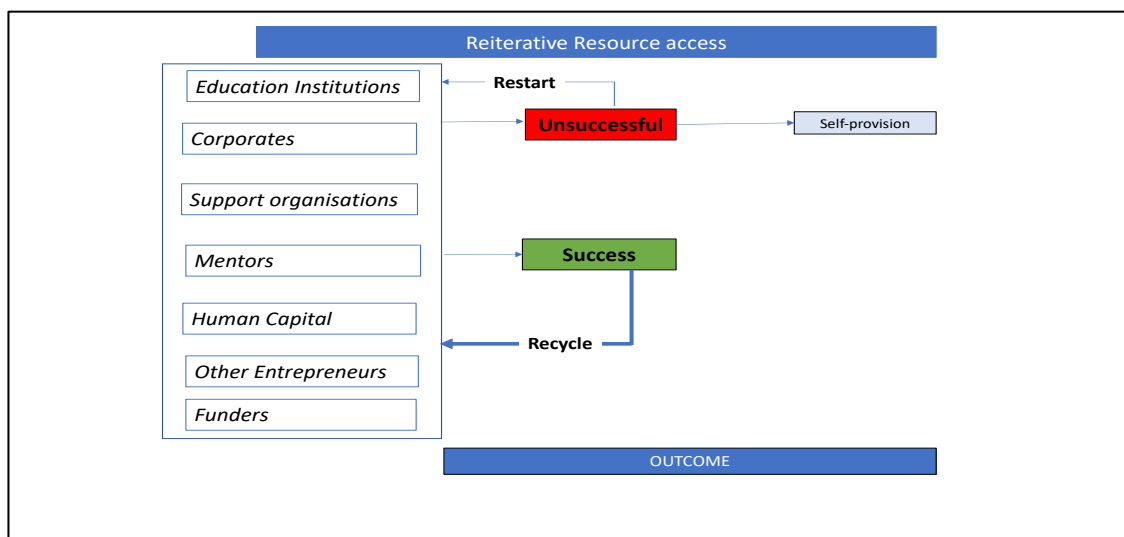
6.5.2. Reiterative resource access

The current study found the resource recycling is part of the reiterative resource access process, Figure 5. The reiterative activities are triggered by both success and unsuccessful outcomes. This shows that the accessing resources is not a linear process and there are opportunities for entrepreneurs for multiple engagements with entrepreneurial actors. According to the existing literature, resource recycled in the entrepreneurial ecosystem creates a pool of vital resources for the entrepreneurs addressing varying entrepreneurial needs (Mason & Harrison, 2006; Spigel & Vinodrai, 2021). As the current study showed, both early stage and growth stage entrepreneurs recycle to be part of the community that creates a pool of resources for entrepreneurs. For example, extant studies show that exit entrepreneurs use their accumulated knowledge and wealth on entrepreneurial activities, investing in other businesses and offering entrepreneurial support through mentorship. According to Spigel and Harrison (2018), entrepreneurs have social ties to their community of

entrepreneurs and tend to stay and help newer generations of entrepreneurs. The current study adding to the existing literature, found that recycling also takes place while entrepreneurs still in their business stage and not only after an exit stage. Therefore, participation by the entrepreneurs in the ecosystem as an entrepreneurial actor does not commence only after exit but can continue parallel as entrepreneurs build and grow their own businesses. In this regard, adding and making available to the entrepreneurs the recently gained business knowledge and insights.

The study found that recycling also includes entrepreneurs going back to the same entrepreneurial actors as shown in Figure 5, to reach out for more resources and therefore access multiple resources. For example, where a mentor is approached again as a potential funder. This highlight optimising the existing sources as the processes of linking with new entrepreneurial actors takes time and costly, thus maximising the already established relationships.

Figure 4: Reiterative resource access framework in the entrepreneurial ecosystem



The study showed that entrepreneurs recycle the same entrepreneurial actor for different resources. Making these recycling choices suggests adapting and mitigating for limited availability of the entrepreneurial actors in the ecosystem. This may also be due to entrepreneurs being mindful of the cost and time involved in linking with new entrepreneurial actors, and therefore opting to optimise the

existing relationships. The study, however, showed that another reason for reverting to the other entrepreneurial actors is in response to negative experiences, where entrepreneurs were not able to access the business support, technical support, and funding they required. This misalignment will be discussed in the next sub-section.

In summary, entrepreneurs are guided by their resource gaps that are uniquely aligned to their specific businesses. To access these resources, they identify, link, and interact with entrepreneurial actors. They have varying levels of success, and some are unsuccessful. Unsuccessful attempts trigger a reflection and review of the next course of action, and as the study showed in the next section, this is non-linear reiterative. As shown below, when entrepreneurs are unsuccessful, they return to identify other possible entrepreneurial actors or may decide to pursue self-provision option.

6.5.3. Misalignments and their Triggers

Not all attempts to access resources end up successfully. The current study found that misalignment affects the entrepreneurs' attempts to access resources. While misalignments can emerge at any time, the current study showed that they mostly emerged when the process went beyond the initial encounters. First, the study found that misalignments emerge during *assessments* to confirm the needs and compatibility to the provision of the resources. During informal engagements, the entrepreneurial actors can observe and note critical attributes about the entrepreneur. However, in-depth assessments are often necessary, such as competitions, as also found in the current study, used by entrepreneurial actors as a mechanism to assess entrepreneurs (Stam & van de Ven, 2021). These provide the entrepreneurial actors with the comfort that resources allocated will achieve the desired impact.

Second, the current study found that misalignments emerge during the *negotiations* mainly due to differences regarding the terms and conditions of the offers. Although these relationships are not hostile, the power imbalance reflects that entrepreneurial actors hold more power to dictate the form, process, the quantum, and the pace than entrepreneurs. According to Hellmann (2007), the

entrepreneurs tend to “beg” entrepreneurial actors for resources. The current study showed that negotiations entail entrepreneurs and entrepreneurial actors matching and aligning the quantum of resources required and confirming how and when the resources are going to be deployed. The study also showed that the duration of the negotiations differs, depending on the nature of the relationship and the size of resources required.

Third, the current study found that *agreements and contracts* confirm resource access expectations. However, if there are substantial misalignments and disagreements, neither of the parties can move forward. In line with the existing research, this study found that entrepreneurs incur substantial cost identifying, linking, and interacting with the entrepreneurial actors with the hope of a positive outcome of ultimately accessing resources (Elitzur & Gavious, 2003). Contracting mitigates the risk that after a costly and time-consuming and sometimes protracted process, resources are eventually not allocated, which could lead to a business failure. On the other hand, as found in the study, contracting gives some assurance to the entrepreneurial actors that the resources will be appropriately deployed as agreed. It also shows that after negotiations, the agreements and contracts give certainty to the entrepreneur and enable appropriate planning for the utilisation of resources. The study also found that misalignments emerge when there are misrepresentations by resource entrepreneurial actors who did not correctly represent their capabilities. This causes frustrations, impairs relationships and impact on the entrepreneurs’ performance.

6.5.4. Self-Resourcing

The current study showed that there are concerns some entrepreneurial actors exaggerate their capabilities. As showed above, misalignments may become evident towards the end and during assessments, resource negotiations, and contracting, when already considerable time has been spent on the process. In Figure 7, the study showed that misalignment may cause a restart process by entrepreneurs. To mitigate the risks, some also choose self-resourcing through bootstrapping, thus relying on their own limited resources. This may lead to limited entrepreneurial activity and a slower than desired business growth pace. For example, some entrepreneurs use their time offering consulting services to

generate income, so that they can fund their businesses, thereby reducing the time spent on the business.

This study also found that looking to the external environment for resources introduces a threat to entrepreneurial *control*. During these negotiations and contracting engagements, entrepreneurs balance the need for resources and the need for control. Entrepreneurs' need for autonomy is influenced by a strong need to retain control. Although control can protect the vision, as shown in the current study, an internal focus of control can lead to a preoccupation with controlling everything. The study found that this can lead entrepreneurs to limit their ability to access external resources. Thus, the same characteristic that entrepreneurs need for successful business creation also contains a destructive element if the opportunity costs are too high (Kuratko et al., 2021).

In summary, not all attempts to access resources end up successfully. *Unsuccessful attempts* may be due to misalignments and at times non-responsiveness by entrepreneurial actors. Triggered by these misalignments, entrepreneurs seek alternatives, often go back, and spend more time scanning the environment for alternative resources. In the current study, entrepreneurs reacted with frustration at the support organisations' inability to meet their needs, with some responding by taking the extreme action to cancel the contract. In response, some entrepreneurs changed course to pursue different business opportunities, and some accepted a slow-paced growth that is self-resourced.

These outcomes have a negative impact on the entrepreneurs because the process to access resources involves substantial cost and time taken to reach this point. It was further found that there are negative sentiments towards some entrepreneurial actors who are seen not be understanding of the entrepreneurs' business and not showing that they are making any effort to be more responsive. Therefore, some entrepreneurs opt out of the process in favour of self-provisioning due to being frustrated by the process. Some entrepreneurs chose to self-resource intentionally by contributing individual capital, mostly financial, to avoid dilution or a vision misalignment. This study showed that entrepreneurs often have to make difficult choices and continue operating without external

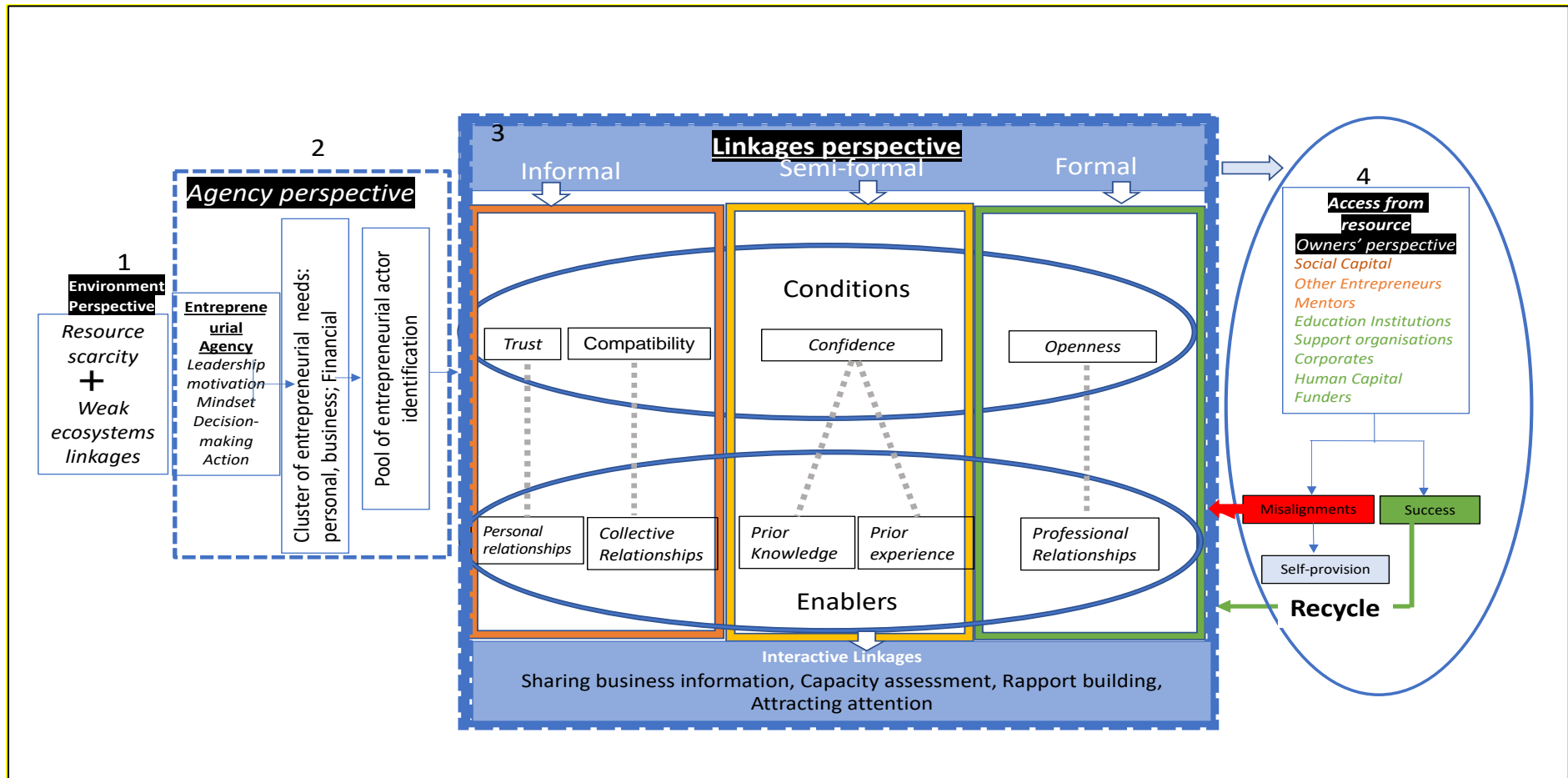
resources, as they are not able to align to the pressure that comes with some of the contracts' conditions.

In summary, entrepreneurs reflect, react, and consider alternatives in case of unsuccessful outcomes when trying to access external resources. As discussed, this is amplified by entrepreneurs being weary of ownership dilution. This view is supported by existing studies that some entrepreneurs may choose to forgo growing their businesses, so that they can maintain control (Michaelis et al., 2022). Therefore, despite the high dependence of the entrepreneurs on the external environment, they do not passively accept conditions that may be unfavourable for their business or their own value system. Entrepreneurs not succumbing to the resource limitation may become bricoleurs, combining opportunity and ecosystem resources to achieve their goals (Scazziota et al., 2023). The culmination of the discussion in the sections and sub-sections above is a model of the experiences of the entrepreneurs' accessing resources in the entrepreneurial ecosystem. The model is discussed below.

6.6. A Model of the Entrepreneur's Experiences of Accessing Resources in the Entrepreneurial ecosystem

The result of the current IPA study regarding the entrepreneurs' experiences of accessing resources in the entrepreneurial ecosystem is a model that consists of four master theme perspectives with eleven themes, as shown in Figure 6. The model extends the existing ecosystem research putting the entrepreneurs at the centre by clearly suggesting that entrepreneurs look to the external environment because of their inherent entrepreneurial resource constraints (Alaassar et al., 2022) to access resources. The external environment is affected by the munificence level of the environmental ecosystem. Lesser endowed environments where resources are scarce with weak ecosystem linkages makes the entrepreneurs to mitigate by establishing their own linkages to access resources.

Figure 5: A model of the Entrepreneur's Experiences of Accessing Resources in the Entrepreneurial Ecosystem



Source: Author's illustration of model

The entrepreneurial agency drives entrepreneurs to take the lead and are motivated to take the decision and actions to find ways to address their resource gaps. The need for the resources triggers a process to identify resource owners from the pool of entrepreneurial actors. In the current study, the entrepreneurs' identified a pool of entrepreneurial actors consisting of educational institutions, corporates, other entrepreneurs, social capital, friends and family, public and private entrepreneurial support organisations, mentors, human capital, and funders endowed with the resources they are willing to allocate resources.

Entrepreneurs identified entrepreneurial actors through an open search using publicly available information. The study found that publicly available information is accessible through various social media platforms. In addition, entrepreneurs reach out to other resource owners who they have already relationships with. Once the resource owners are identified, the entrepreneurs endeavour to establish linkages. All the linkages as shown by the arrow toward interactive linkages serves to attract their attention, build rapport, and share business information and also assess their capacity to allocate the required resources. According to the model these linkages are in three forms: namely, informal, semi-formal and formal. The linkages are also enabled by personal, professional, and collective relationships, the knowledge, and the experiences of the entrepreneurs.

There are varying conditions that are associated with these linkage enablers. Specifically, informal linkages are enabled by personal and collective relationships under conditions of trust and compatibility. Semi-formal relationships are enabled by prior knowledge and experience under conditions, where entrepreneurs are showing their confidence, based on their gathered knowledge and experience. Lastly, formal linkages are enabled by professional relationships under conditions of openness to share information. Successful access to resources also opens the opportunity of resources being recycled, as entrepreneurs use their insights and wealth to invest in the entrepreneurial ecosystem. The model culminates in entrepreneurs successfully accessing the required resources. In the event of unsuccessful attempts, as directed by the arrow back to the master theme 2 and 3 to eventually either restarted the search

process, or they look for alternative means by self-resourcing as directed by the down arrow. Unsuccessful attempts mainly emerged due to misalignments during the period of assessments, negotiations and contracting. Clearly depicted in Figure 6.

Finally, the model suggests that the forms of linkages are also associated with the different types of entrepreneurial actors although not exclusively. Social capital is associated with informal linkages. Mentors and other entrepreneurs are associated with semi-formal linkages and human capital, education institutions, support organisations, corporates, and funders are associated with formal linkages. As the model demonstrate, accessing resources is not a linear process as the entrepreneurs are therefore involved in a reiterative process of identifying, linking, accessing, adapting to self-resource and recycling.

6.7. Summary of the Discussion

Although entrepreneurial ecosystem research continues to receive attention, there has been limited focus on the entrepreneurial ecosystems from the entrepreneurs' perspective. One specific area is how the entrepreneurs formulate and drive the of their own linkages in an underdeveloped entrepreneurial ecosystem. This study used the interpretative phenomenological analysis and found that there are four perspectives, consisting of eleven master themes, which show the entrepreneurs' experience on how they link with the entrepreneurial actors in the entrepreneurial ecosystem in South Africa's ICT sector.

The current study identified the model of entrepreneurs' experiences of the entrepreneurs' resource access in the entrepreneurial ecosystem. The model consists of entrepreneurs' context and resource scarcity, entrepreneurial agency, linkage perspective, resource accessing perspective. The entrepreneurs' context, their entrepreneurial requirements, and their agency prompt them to seek entrepreneurial actors and develop linkages to access resources. Any stage of these activities, and the outcome may be successful or unsuccessful. The negative outcome is mitigated through entrepreneurs reverting to restarting their venture's approach or self-resourcing.

As discussed earlier, entrepreneurial activity involves entrepreneurial agency, and it is an emotional experience. Existing studies show that entrepreneurs' emotions manifest in high stress levels as entrepreneurs confront high risks. At the same time, there are feelings of pride when experiencing success (Kuratko et al., 2021). The current study found that entrepreneurs display emotions of pride when gaining traction, making progress and achieving success. On the other hand, they display tension and stress when dealing with challenging resourcing risks. In contrast to earlier findings, this study did not find signs of destructive egos amongst the entrepreneurs as suggested by Kuratko et al. (2021). This may be due to entrepreneurs being aware that they have not achieved much business traction yet, as their growing businesses still require support.

The study also found that the entrepreneurs have high levels of absorptive capacity, participating in multiple support programmes and coordinating parallel support from different support organisations. When opportunities arise, they also forge strategic alliances with other entrepreneurs. The next chapter concludes the findings by discussing the theoretical contribution, the practical contribution and the study's limitations and recommendations for future research.

7. STUDY CONTRIBUTION AND CONCLUSION

7.1. Contributions

The current study contributes to the entrepreneurial ecosystem research by responding to calls for further research regarding under-theorised entrepreneurial ecosystems in the context of developing economies (Cao & Shi, 2021). The study contributes to entrepreneurial ecosystem research which endeavours to work towards a coherent theory (Audretsch, Mason, Miles, & O'Connor, 2018), by focusing on the entrepreneur resource access endeavours in the entrepreneurial ecosystem.

The current study also brings attention to the bottom-up approach of the entrepreneurial ecosystem where the entrepreneur is the central agent in accessing the resources. This also brings to light the practices and the mechanisms of entrepreneurs as they formulate and drive linkages in the entrepreneurial ecosystems responding to a system with weak linkages. Adding to the recent research of micro foundations by Roundy & Lyons (2023), the study contributes a model of entrepreneurs' experiences to showing the four perspectives, namely, the environmental perspective, entrepreneurs' agency, linkage perspective and resource access perspective that are involved. Additionally, the gap filled by the current study's theoretical contribution is regarding the use of RDT in a multi relational dependence relationships, thus, extending the theory which previously concentrated on dyadic relationships, focusing on big companies with limited application to the context of developing economies.

The current study used an Interpretative Phenomenological Analysis approach in response to calls to explore other methodologies to understand what might be missing in the existing entrepreneurial ecosystem research (Audretsch, Mason, Miles, & O'Connor, 2018; Roundy & Lyons, 2023). In this chapter, both the theoretical and practical implications for entrepreneurs, entrepreneurial actors and policymakers will be suggested. In conclusion of the chapter, the limitations of the current study and future areas for research will also be suggested.

7.1.1. Contribution to theory

The key contribution of the current study is the model of the experiences of the entrepreneurs' accessing resources in the entrepreneurial ecosystem in a resource constrained environment characterised by weak ecosystem linkages Figure 6. The model is centered on the experiences of the entrepreneur, therefore extending the grounded a bottom-up approach by Spigel (2018). Specifically, the current study adds to the recent work of Roundy and Lyons (2023) theorising the six practices, mechanisms, and micro foundations discussed below of how entrepreneurs access resources in the entrepreneurial ecosystem.

Firstly, is the practice by entrepreneurs as active participants in the ecosystem using their agency to mitigate for the weak linkages in the ecosystem to orchestrate, formulate and drive new linkages to access resources. They are driven by their entrepreneurial agency thus showing leadership, motivation, ability to take decisions and to act to address their critical needs. These needs are diverse, depending on the stage of the business (GEM, 2022/2023) and can be clustered into personal, business, and financial entrepreneurial needs. To access resources to address these critical needs, entrepreneurs identify the resource owners from a pool of entrepreneurial actors through open search in various platforms such as social media, networking and use publicity available information as well as reaching out to the entrepreneurial actors.

The second study model contribution is the practice of establishing and using linkages to reach entrepreneurial actors. There are three types of linkages. These linkages have enablers operating under particular conditions. The various types of linkages, namely, informal, semi-formal and formal operate individually and as well as jointly. Informal linkages are associated with the early stages of the business, likely to be unstructured but quick to access. Although they are risky because this linkage can be easily withdrawn because of not formally contracting between the parties, it is a critical component linkage to access resources. Semi-formal linkages associated mainly with mentors and other entrepreneurs; they are flexible yet structured. Semi-formal linkages save time for both the entrepreneurs and the resource owners because they do not follow a rigorous process assessment and contracting. This linkage has not received much

attention in prior studies including recently by Herrmann et al. (2022) which focused on informal and formal linkages. There this study adds to the existing literature by highlighting all three linkages. Finally, the formal type of linkages is structured and mainly contractual thereby ensuring that there is alignment of expectations from both the entrepreneurs and the entrepreneurial actors. In addition, there is certainty of the exchange and flow of resources. As shown in the study, all the three forms of linkages are necessary to access diverse resources.

Third, linkage enablers are a further contribution through the model, demonstrating another practice by entrepreneurs to establish linkages through personal and collective relationships, prior knowledge and experience and professional relationships, to creating unique multiple linkages that are associated with specific conditions of trust and compatibility, confidence, and openness. Personal and collective relationships, mainly operating as informal linkage enablers supported by the conditions where there is trust and compatibility between the entrepreneurs and entrepreneurial actors. Prior knowledge and experience operate as semi-formal enablers. These enablers are maximized under conditions where both the entrepreneurs and the entrepreneurial actors have confidence in the others knowledge and experience. Professional relationships, on the other hand as a formal linkage enabler, operate under conditions where there is openness allowing for sharing of critical business information. Formal linkages are contractual and generally operate for an agreed period compared to informal linkages which can continue indefinitely. Additionally, through interactions, capacity assessment, rapport building, and attracting attention between the entrepreneurs and the entrepreneurial actors take place.

The fourth model contribution, is resource access from multiple resource owners. The multiple entrepreneurial actors like support organisations, funders, social capital providers like family, education institutions, mentors, and other entrepreneurs. In this regard, the entrepreneur depends on different multiple relationships. This study thus extends the Resource Dependency Theory to a system where a resource constraint entrepreneur accesses resources from

multiple entrepreneurial actors, in a resource constrained external environment. This creates a multiple dependency system where the entrepreneurs depend on multiple entrepreneurial actors to access resources. Previous studies mostly focused on dyadic dependencies in a system where the relationship is between a dependent and an independent organisation (Pustovrh, Rangus, & Drnovsek, 2020; Zheng & Xia, 2018) in developed economies. This study conducted in a resource constrained developing economy is best placed to bring to light the practices where the entrepreneur establishes multiple linkages for multiple resource access and dependencies as a result of weak entrepreneurial ecosystem linkages.

Equally important is the fifth model contribution of resource recycling of entrepreneurial actors as an entrepreneurial ecosystem practice which increases the pool of resources and the diversity of resources in the entrepreneurial ecosystem. Resource recycling enhances knowledge spillover in the ecosystem, an important source of entrepreneurial resources that emerges out of the practice of entrepreneurs. Resources are recycled when entrepreneurs approach the same entrepreneurial actors for other resources and when entrepreneurs contribute resources to the ecosystem. These entrepreneurs can be those currently existing or exited the ecosystem. The recycling of resources provides more resources and saves the entrepreneurs time of identifying new actors.

The last model contribution is a respond to unsuccessful resource access attempts and misalignments between the entrepreneurs and the entrepreneurial actors. In response, entrepreneurs can either restart or adapt by self-provisioning. Additionally, self-provisioning is also a response to the need to preserve control until the opportunity is right to dilute. Misalignments emerge mostly during assessments, negotiations and contracting. These activities ensure that the process culminates in assurance that the agreed resources will be accessed and that they will be utilised effectively. In conclusion, as elaborated above, these practices and mechanisms operate at a micro level of the ecosystem and are therefore the micro foundation of the entrepreneurial ecosystem (Roundy & Lyons, 2023).

7.1.2. Contribution to the Interpretative Phenomenological Analysis approach

This study's approach provided unique insights into the entrepreneurs' experiences and their practices. This approach illuminates the entrepreneurs' agency in the entrepreneurial ecosystem, a deviation from the typical results that show the ecosystem elements' interactions without entrepreneur as the central actor and contribute to IPA extending it to a different field of research. Gartner and Birley (2002) argued that qualitative methods can help respond to the 'what is missing question'. IPA is popular in the field of Psychology (Smith, 2004), and has been applied to a limited extent in other disciplines, such as Social Sciences and Entrepreneurship (Cope, 2011; van Rensburg, & Ogujiuba, 2020). This study explored the entrepreneurs resource access in the entrepreneurial ecosystem, based on the lived-world experiences of entrepreneurs thus extending the approach by Smith (2004) firmly to Entrepreneurship.

The current study also adds to IPA by positing that the routine of the regular researcher debriefs should become an integral part of the methodological practice of IPA. IPA requires the researcher to immerse themselves in the data equally making sense of the experiences and the interpretation of the entrepreneurs. This exposes the researcher to entrepreneurs' emotions operating under conditions of uncertainty and consequential extremes outcomes (Shepherd et al., 2015) due to personal close nature of the entrepreneurial firms to the entrepreneur. IPA highlights the emotions and reactions associated with success and unsuccessful outcomes. It further built on Love et al. (2020) as it acknowledges a connection between entrepreneurs' narratives and their emotional, mental, and contexts This approach therefore allowed entrepreneurs the space to interpret and discuss their experiences. By so doing, entrepreneurs not only expressed what they know, but also expressed their feelings, for example: What I feel, what I believe, my view is. Equally, the researcher needs space to debrief the absorbed emotions of the entrepreneurs. In this study the supervisor in several meeting created a platform to debrief the overwhelming emotions of deep frustrations and fear of the future may hold for some of the entrepreneurs. While for some entrepreneurs there were evidence of huge successes, for some a sense of the possible end of the road was evident after years of massive investment of time and money.

7.1.3. Implications for practice

7.1.3.1. Entrepreneurs

Entrepreneurs are active participants of the ecosystem and have agency to mitigating for weaknesses of the entrepreneurial ecosystem. The implications are that in addition to working on their businesses, in an environment of weak system linkages, entrepreneurs need to take leadership, be decisive in pursuing entrepreneurial actors and be flexible to explore various linkage enablers. Furthermore, the practice of identifying and selecting and linking to entrepreneurial actors, thus creating multiple linkages using enablers to access resources. In addition, supporting other entrepreneurs is a practice that is no longer left for after exit, therefore the entrepreneurs adjust their plans and recycle resources parallel to growing their businesses.

There is a need for entrepreneurs to work as a collective, especially in underdeveloped entrepreneurial ecosystems. Entrepreneurial ecosystems evolve and mature over time (Audretsch et al., 2021). Early stages of development of an entrepreneurial ecosystem are characterised by fewer entrepreneurial actors and they are associated weak linkages. Such circumstances require entrepreneurs to also work as a collective to identify and link with the specific entrepreneurial actors. Therefore, entrepreneurs may decide to work as a collective depending on the context and nature of the resources they need to access. They also work as a collective to form networks to learn from each other. Secondly, some entrepreneurial actor's preference to work with the collective of entrepreneurs and not with individuals. This implies that the entrepreneurs must create or become part of networks and establish relationships with other entrepreneurs.

The current study showed that entrepreneurs should regard their relationships as endowments that they can use to establish critical linkages for further resources from the entrepreneurial actors. Therefore, in an entrepreneurial ecosystem, entrepreneurs need to understand their resource endowments and those of the entrepreneurial actors. Lack of these insights may cause loss of critical time as the entrepreneur moves from one entrepreneurial actor to another without traction. Often, entrepreneurs start businesses based on their own resources and

that of the team consisting of education, experience, reputation, contacts and industry and knowledge (Brush et al., 2001). The study showed that these resources also serve as enabling tools, which can be aligned to target entrepreneurial actors. Entrepreneurs can use their previous knowledge and experiences to attract entrepreneurial actors. Further, entrepreneurs should have a flexible long-term perspective (Gabay-Mariani et al., 2023) when establishing linkages, and continuously assess their relevance, as well as nurturing the right conditions. The current study also suggested that the time required for these efforts may differ from one entrepreneur to the other; hence, entrepreneurs need to consciously take a long-term view because accessing resources is not a linear process.

Entrepreneurs will benefit from differentiation when identifying entrepreneurial actors. For example, the study found that entrepreneurs trading in less complex ICT services required less entrepreneurial ecosystem resource support than those developing solutions (Brush et al., 2001). The level of business complexity differs between the entrepreneurs. Some services are more complex, hence require unique complex support (Fernhaber et al., 2009; Ferreira et al., 2022). Therefore, as the current study showed, an awareness of the different types of resources and how they can be accessed by entrepreneurial actors is critical. It is the entrepreneurs' responsibility to identify, select and link into entrepreneurial actors either with an individual resource owner or a programme that will optimise value for their business. Further, accessing multiple resources at the same time is a challenging position, where all the activities must be effectively managed and aligned. As the current study showed, the entrepreneur must ensure an effective resource orchestration, where multiple resources are required from different entrepreneurial actors at the right time to achieve the desired outcomes.

As found in the current study, having multi-capacitated entrepreneurial actors provides opportunities for resource recycling. Because such entrepreneurial actors are already invested in the success of the enterprise, not only are they open to offer support for other resources; they are able to understand the needs of the entrepreneurs. In the South African context, where entrepreneurship is not at the optimal level, it is an open call for existing and post-exit entrepreneurs to

be a critical resource and to remain in the ecosystem. Working from an established relationship makes it easier for entrepreneurs to enquire about accessing other resources from the same entrepreneurial actor. Therefore, entrepreneurs should use the period of interacting to assess the capacity for other resources to optimise and leverage the already existing relationship. It is not always apparent, which other resources the entrepreneurial actor might be able to offer; the entrepreneurs must therefore conduct due diligence and be ready to negotiate access to other resources.

The current study found that there are misalignments between the entrepreneurs and the entrepreneurial ecosystem. If these misalignments can be identified early in the process, it allows the entrepreneurs to respond on time. The most challenging misalignments are when resources are already allocated, yet not aligned to the needs of the entrepreneur. The implications are twofold, namely, first, having to restart the process completely or partially. Second, the option is to abandon the process to access resources from entrepreneurial actors in favour of self-provisioning. Both outcomes have a negative impact on the entrepreneur. As the current study showed, the first option translates into more time having to be spent on identifying entrepreneurial actors and creating new linkages. Similarly, the second option implies a less-than-desirable slower growth pace for the business. Therefore, as the study also showed, to minimise misalignments, entrepreneurs may need to identify and ensure connecting with the right and relevant entrepreneurial actors.

7.1.3.2. Policymakers

First, this study confirmed the calls for the primary role of government in entrepreneurship to remain that of facilitator and not implementor. As found in the current study, where government acts as the implementor, there are concerns that the government is not appreciating the speed at which it must respond and intervene on time. This suggests that it may contribute to the inability of some entrepreneurs to survive (Abootorabi et al., 2021). The amount of time spent seeking appropriate responses from the government is costly to the entrepreneurs. Therefore, for government to play a more meaningful role in entrepreneurship, policies must be developed with a close understanding of the

context. This can be enhanced by constantly convening focus groups of entrepreneurs and the appointment of advisors who are practising entrepreneurs or successful entrepreneurs who have exited their businesses (Mason & Harrison, 2006). Second, there is a need for differentiation when facilitating support to ensure that supported programmes are aligned with the stage and nature of business needs. Therefore, policymakers need to focus on enabling the implementation of policies by addressing all of the current barriers. This requires proactive monitoring to ensure the agility of policy amendments.

Businesses differ in their complexity and therefore require differentiation that enables due attention to be provided to complex businesses. Targeted policy to differentiate varying complexities should be fit for purpose and not generic. As the study found, entrepreneurs with complex solutions had to identify support beyond the borders of South Africa, where neither the support organisations nor government were regarded as fit for purpose. Hence, there is a high concentration on services and not software and hardware solution development. Technology development businesses require policies that offer long-term support and capital flows that allow for early-stage development. Entrepreneurs expressed concerns that there are misalignments, which make even the existing resources not relevant for their businesses. In South Africa, the government has direct intervention policies in place to promote entrepreneurial activity. This involves agencies to direct entrepreneurs as to where to find help in creating and scaling their companies, as well as government-run incubator and accelerator programmes.

In addition, the government's policy is also to incentivise the private sector to contribute to enterprise development and developing access to the market through supplier development programmes. It is these policies that require a constant review to ensure that they achieve the intended goal. Entrepreneurs expressed the need for all these interventions to be responsive in terms of understanding the time it takes for an ICT company to gain traction, the international competition they face and the call to be responsive. The further policy implication is to incentivise coordination of the multiple entrepreneurial actors. Improved linkages amongst the ecosystem actors should improve its

performance. The policy should take into account the entrepreneurial agency and enable the entrepreneurs and the entrepreneurial actors. The study contributes to informing the development of effective policies to stimulate economic growth and avoid developing inappropriate policies and interventions that do not empower the entrepreneurs' initiatives.

7.1.3.3. Entrepreneurial actors

In supporting and extending the work by Germain et al., (2022), notwithstanding the efforts by the entrepreneurs to establish linkages, as found in the current study, there is a need for in-between entrepreneurial actor linkages. These linkages would be more effective because the power imbalances are not at the same level as with the entrepreneurs. Any of the entrepreneurial actors can take the lead and this leadership can be assumed by different entrepreneurial actors at different times. The current study found that support organisations can direct entrepreneurs to other entrepreneurial actors if coordinated efficiently. Entrepreneurial support organisations can help build a sufficiently dense financial support network by introducing start-ups to other actors (van Rijnsoever, 2022).

The current study found that the efficiency and effectiveness of the processes of the entrepreneurial actors affects the entrepreneurs. To be efficient and effective, entrepreneurial actors must therefore predict demand before it exists. Such alertness and judgement require entrepreneurial actors' proactiveness (Packard & Burnham, 2021; Shepherd et al., 2023). Therefore, the various elements of the ecosystem are more efficient when they connect, creating a high-performance entrepreneurial ecosystem (Germain et al., 2022). Entrepreneurial actors should design programmes that differentiate entrepreneurs based on their business stages and the complexity of the businesses and understand the vision of the entrepreneur. For example, the study found that tensions arise, when there is an attempt to adjust the vision of the business if the entrepreneur is not convinced to materially change their objectives.

Entrepreneurial actor programmes can be more effective through a tight assessment before contracting the entrepreneur and later discovering that there are misalignments that cannot be reconciled, setting both parties back in terms

of opportunity cost because of the time taken to reach this stage. Entrepreneurial actors should also communicate the details of the programmes clearly and widely. The study found that entrepreneurs rely on social media and websites to identify entrepreneurial actors. The study confirms what Ali et al. (2023) found recently, that the effective use of social media by entrepreneurial actors can improve their understanding of entrepreneurial challenges and open up more channels to provide support. Entrepreneurial actors need to pay more attention to the timing of the programmes to respond to the stage of the business development. There is a need to crowd in entrepreneurial actors in the ecosystem. Increased numbers mean increased options and increase entrepreneurial activity support.

7.2. Limitations

Entrepreneurship is associated with strong sentiments to succeed against all odds (Love et al., 2020); hence, it invokes extreme emotions. The design of this study, by focusing on the lived experiences of the entrepreneurs, enabled a closer understanding of the expressions of such sentiments. Most of the interviews were virtual, and the entrepreneurs shared both their negative and positive emotional experiences virtually, which is a limitation when there are connectivity challenges disrupting the flow.

Recalling past experiences requires reconstructing the events that happened in the past. Therefore, there is a risk of entrepreneurs not remembering everything that took place in the past, even when the IPA approach is used, which allows for the flow of the conversation without many interruptions, thus encouraging effective recalling of events. Although the IPA also allows for follow-up questions to probe further, there is a possibility that the entrepreneurs may not recall certain information.

In the current study, the researcher's prior knowledge was declared. In addition, the process of bracketing was followed to ensure that each case analysis is not influenced by the other. Further, the analysis of the discussions was kept very close to the voice of the entrepreneurs, with the quotations provided to inform the reader. However, notwithstanding the above, within IPA the researcher's

interpretation is also part of the process. Therefore, views of the researcher are part of the analysis. Hence, the inherent limitation as the analysis may be influenced by the researcher's prior knowledge and another researcher may reach different conclusions.

In the interest of appropriately defining boundary conditions of the study and its impact on the studies generalisability (Simons, Shoda, & Lindsay, 2017), the study focused on the entrepreneurs in the environment of resource scarcity. These entrepreneurs operate in a developing economy and a developing entrepreneurial ecosystem. Secondly, the duration of the entrepreneurs experience in operating their enterprises ranges between 3-8 years. Third by focusing on their idiosyncratic lived experiences and nature of their businesses, the generalisability may be impacted when the subjects of the study are from a different economic context as well as a sector that has developed over many years.

7.3. Future Research

The following future research proposals are based on the assertion the research on the entrepreneur's perspective on the entrepreneurial ecosystem and the associated practices lags. Further, the system-level dynamics of the entrepreneurial ecosystem have dominated the existing studies leaving the micro-foundations with limited focus (Roundy & Lyons, 2023). Therefore, the following are proposed for future entrepreneurial ecosystem research:

Master theme 1: Environmental perspective

It will be beneficial for future research to discover additional entrepreneurs' practices in the ecosystem. A study with a different sector will extend the understanding of this phenomenon even further. These practices are critical to provide entrepreneurs with tools to engage the system effectively. This will make the research on entrepreneurs and entrepreneurial ecosystem enhancing their cumulative generalisability.

Master theme 2: Agency perspective

Although this study did not select participants based on the level of their education, all the participants happened to have studied at tertiary institutions.

Therefore, entrepreneurs with different educational levels might have different experiences and highlight different entrepreneurial practices.

Master theme 3: Linking perspective.

It is more than likely that different categories of entrepreneurs will have a different path in developing linkages, which is a possible future area for research. The study identified 5 enablers. Future research may bring to light more linkage enablers and inform the mechanisms in the entrepreneurial ecosystem.

Master theme 4: Resource access perspective

For entrepreneurs, time and cost play a critical role. Therefore, an area that requires more research is understanding deeper the triggers for misalignments from both the entrepreneur, the entrepreneurial actors, and the ecosystem. The current study found two triggers of self-resourcing. First, self-resourcing is a response to unsuccessful attempts and second, some entrepreneurs elect which entrepreneurial need to self-resource without being triggered by an unsuccessful attempt. This is motivated by their need to retain control, as well as expose the business only at a stage when they are ready to scale. Future research can unpack more of these triggers of self-resourcing.

7.4. Researcher's Reflections

IPA enabled the researcher to interpret the entrepreneurs' perspectives of their experiences. At the same time, this interpretation of any qualitative data was influenced by the researcher's subjective views, notwithstanding the need to bracket especially during the data analysis. To support the reader, the study documented the context of the study in detail and provided the participants' quotations to allow the reader the opportunity to draw own their conclusions.

There was an overwhelming amount of data to work with. The volume of data increased because the sample was increased from the normal 5 to 8 individuals to 25. In addition, the 4 follow-up interviews also added to the volume of data. This introduced the challenge of working with massive quantities of data, although the increased numbers improve the potential of generalisability of the findings. The increased number of participants, which is greater than the IPA demands,

enhances access to varied perspectives represented by multiple experiences. Despite the volume of data, one felt the responsibility to allow their experiences to contribute meaningfully to other entrepreneurs and other entrepreneurial actors through this study.

The entrepreneurs' different journeys made me admire the multiple activities the entrepreneurs are involved in, as well as the extreme uncertainties they face. Often one's emotional capacity was stretched. At the same time, there were moments of breakthrough, which had a positive impression on me.

8. References

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9. Appendices

Appendix 1: Semi-Structured Interview questions to guide.

1. Background questions

- Tell me about yourself?
- What are the various resource requirements for your business?
- What is your experience in getting resources from **multiple** entrepreneurial resource owners?

2. Selecting questions

- Who are the resource owners you interact with to obtain resources?
- How do you select the resource owners you interact with to access resources once you identified them?
- Can you tell me more about your experience with the selection of entrepreneurial actors?

3. Interacting questions

- How do you engage the various multiple actors you have selected to access resources?
- How do you relate with the multiple entrepreneurial resource owners you have selected?
- What are your experiences of relating with the multiple actors?

4. Access questions

- How do you access resources from the resource owners you have selected?
- Can you tell your experience of how you have managed to access the resources?

5. Concluding questions

- Is there anything else you would like to discuss about your experience of identifying, selecting, engaging and accessing the resources for your business?

Throughout the interview, the researcher will ask follow-up questions where necessary.

Follow-up questions:

- What do you mean?
- Can you provide examples?
- Can you elaborate further?

Appendix 2: Research Timeline



Appendix 3: Informed Consent

Participant Consent form

Research topic: Development of the entrepreneurial ecosystem: The entrepreneur's perspective

I am a doctoral student at Gibbs, conducting research on entrepreneurs and entrepreneurial ecosystems. The objective of the research is to understand how the entrepreneurs develop their entrepreneurial ecosystems.


Researcher: Mankodi Moitse
Email: Mankodim@yahoo.com
Supervisor: Prof. Anastacia Mamabolo
Email: Mamaboloa@gibs.co.za

Consent to take part in research

- I, Sizwe Vela Cele voluntarily agree to participate in this research study.
- I understand that even if I agree to participate now, I can withdraw at any time or refuse to answer any question without any consequences of any kind.
- I have had the purpose and nature of the study explained to me in writing and I have had the opportunity to ask questions about the study.
- I understand that participation involves assisting the researcher to gather information on how do I access the resources I need for my entrepreneurial firm in order to understand my entrepreneurial ecosystem.
- I understand that I will not benefit directly from participating in this research.
- I agree to my interview being audio-recorded.
- I understand that in any report on the results of this research and the storage of the this interview transcript, my identity will remain anonymous. This will be done by changing my name and disguising any details of my interview which may reveal my identity or the identity of people I speak about.
- I understand that disguised extracts from my interview may be quoted in *dissertation, conference presentation and published papers*.
- I understand that if I inform the researcher that myself or someone else is at risk of harm they may have to report this to the relevant authorities - they will discuss this with me first but may be required to report with or without my permission.
- I understand that signed consent forms and original audio be retained in Gibbs until *the exam confirms the results of the dissertation*.
- I understand that a transcript of my interview in which all identifying information has been removed will be retained for 10 years.
- I understand that the duration of the interview will be 1 hour.
- I understand that I can contact the researchers supervisor for further clarifications

Mankodi M. Moitse

Signature of research participant




17 October 2022

Signature of participant

Date

Signature of researcher

I believe the participant is giving informed consent to participate in this study



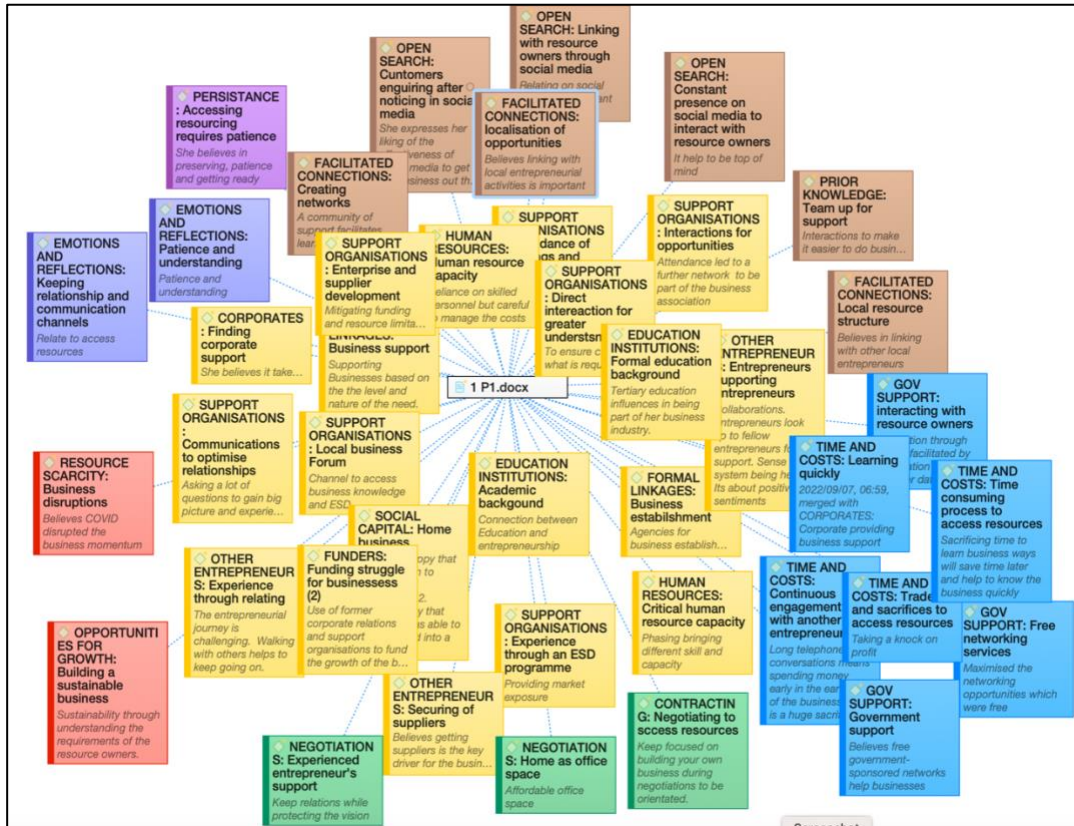
17 October 2022

Signature of researcher

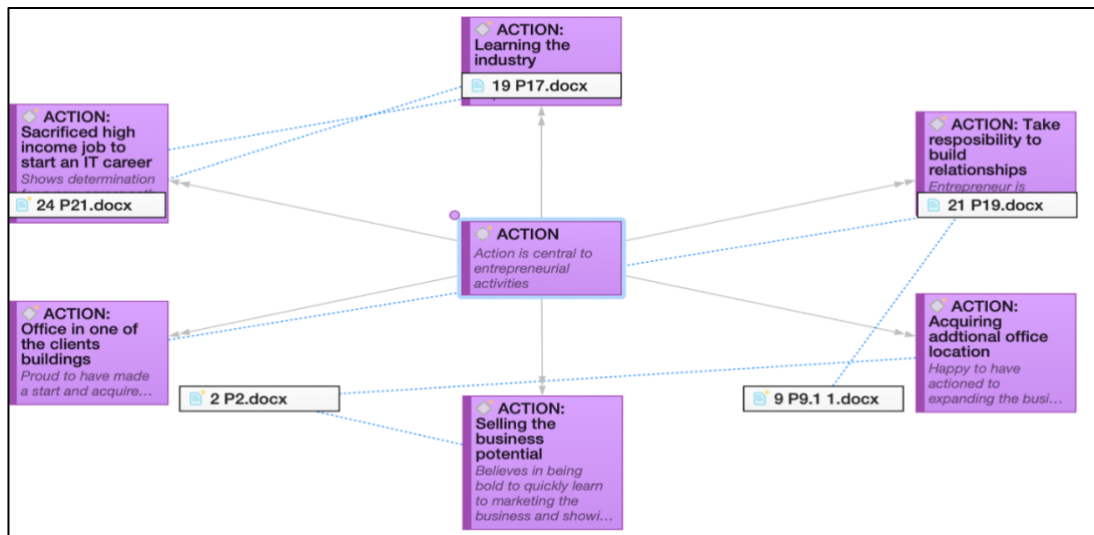
Date

Appendix 4: Codes

1. Example of Codes with comments



2. Example of mapping a sub-theme to the participants



3. Codes | sub-codes | researcher's interpretations | per participants

Codes | sub-codes | researcher's interpretations | per participants

1 P1 Connie.docx

41 Codes:

- **ACQUIRING RESOURCES: Accessed business equipment**
- **CONTRACTING: Negotiating to access resources**
 - Comment:**
Keep focused on building your own business during negotiations to be orientated.
- **CORPORATES: Finding corporate support**
 - Comment:**
It takes time and persistence
- **EDUCATION INSTITUTIONS: Academic background**
 - Comment:**
Connection between Education and entrepreneurship
- **EDUCATION INSTITUTIONS: Formal education background**
 - Comment:**
Tertiary education influences in being part of her business industry.
- **EMOTIONS AND REFLECTIONS: Keeping relationship and communication channels**
 - Comment:**
Relate to access resources
- **FACILITATED CONNECTIONS: Creating networks**
 - Comment:**
A community of support facilitates learning. Positive sentiments
- **FACILITATED CONNECTIONS: Local resource structure**
- **FACILITATED CONNECTIONS: localisation of opportunities**
- **FUNDERS: Funding struggle for businesses (2)**
 - Comment:**
Use of former corporate relations and support organisations to fund the growth of the business.
- **GOV SUPPORT: Free networking services**
 - Comment:**
Maximised the networking opportunities which were free
- **GOV SUPPORT: Government support**
- **GOV SUPPORT: interacting with resource owners**

4. Codes | sub-codes | researcher's interpretations | Quotations | per participants

Entrepreneurial Ecosystems experience

Codes grouped by Documents

+ 1 P1

Subordinate themes	Comments	Codes	Quotations
ACQUIRING RESOURCES	Believes there is a connection between her formal educations and her entrepreneurship	Accessed business equipment	"54 ¶57, When I went to GPF, I applied to them as well. They said wait until the two years has passed"
CONTRACTING	Keep focused on building your own business during negotiations to be orientated.	Negotiating to success resources	<ul style="list-style-type: none"> ● 1:48 ¶50, Would you be in a position to walk the journey with me, just to sort of orientate me into the busine... in P1 ● 1:49 ¶50, She was she was happy to guide me. It had to cost me though, because it was her suppliers. It was he... in P1
CORPORATES	It takes time and persistence	Finding corporate support	1:62 ¶55, A lot of companies when you go into their websites, there's always that section of supplier developm... in P1 ● 1:63 ¶55, , I sent them my proposal, and they were happy with it, and they approved it. And we're able to do... in P1
EDUCATION INSTITUTIONS	Connection between Education and entrepreneurship	Academic background	<ul style="list-style-type: none"> ● 1:10 ¶9, That's actually nice because I saw myself as a marketing professional. But I think over the past few... in P1 ● 5:1 ¶6, study at UCT studied accounting, the CA route. And then after finishing my postgraduate degree, in P5 ● 6:1 ¶7, Technicon for a National Diploma in accounting. I am 36. 2016 got married. I live here in Johannesb... in P6 ● 10:1 ¶8, my journey in entrepreneurship started during my first degree, I studied a Bachelor of Business scie... in P10
EDUCATION INSTITUTIONS	Tertiary education influences in being part	Formal education background	● 1:3 ¶9, I am a marketing graduate from a

5. Consolidated Master themes

